Discussion of
A Quantitative Theory of Information and Unsecured Credit
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Summary.

Comments:
- Timing of events.
- Can the model replicate
  - Who are borrowing and defaulting.
  - Who are borrowing and defaulting more.
Summary

- Nice combination of data, theory, and methodology.

- Observed changes between 1980s and 2000s.
  - ↑ Availability of credit (credit limit, credit card).
  - ↑ Debt.
  - ↑ Bankruptcy filings.
  - ↑ Discharge rate.
  - ↑ Dispersion of interest rates (New!)
  - ↑ Sensitivity of interest rates to credit history (New!)

- Show that all are quantitatively consistent with improvement of financial institutions’ ability to observe and use more information on borrowers.
Model

- Model is based on Livshits et al. (2007b):
  - General equilibrium incomplete-market life-cycle model.
  - Labor income shock.
  - Option to default on debt.
  - Equilibrium borrowing interest rates reflect probability of default.

- Unique features:
  - Individual information that financial institutions can use to price loans are exogenously restricted.
  - Stigma shock instead of expenditure shock.

- Experiment:
  - 1980s: Partial information.
  - 2000s: Full information.
  - Steady state comparison.
Intuition

- In 1980s... (Adverse selection)
  - Bad types mimic good types to avoid high borrowing interest rates.
  - Financial institutions charge the same interest rates to both types.
  - Cross-subsidization between good types and bad types.
  - Good types borrow less.
  - Bad types follow.
  - At the end: low debt, low default, low dispersion of interest rates.

- In 2000s...
  - Financial institutions can fully observe types.
  - Financial institutions charge lower interest rates to good types and higher interest rates to bad types.
  - Bad types borrow less, default less (?).
  - Good types borrow more, default more (?).
  - At the end: high debt, high default, high dispersion of interest rates.

- Similar story as Narajabad (2006) (Banks have better information)

- Complementary to Livshits et al. (2007a)? (↓stigma + ↓cost of loans)
Comment [1]: Timing

<table>
<thead>
<tr>
<th>Statistic</th>
<th>1980s</th>
<th>1990s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit card holders</td>
<td>?</td>
<td>↑</td>
</tr>
<tr>
<td>Credit limit</td>
<td>?</td>
<td>↑</td>
</tr>
<tr>
<td>Defaults</td>
<td>↑</td>
<td>↑</td>
</tr>
<tr>
<td>Debt</td>
<td>↑</td>
<td>↑</td>
</tr>
<tr>
<td>Discharge rate</td>
<td>↑</td>
<td>↑</td>
</tr>
<tr>
<td>Interest rate dispersion</td>
<td>No change (?)</td>
<td>↑</td>
</tr>
</tbody>
</table>

- The paper offers a quite reasonable story.

- But interest dispersion started in 1990s, while defaults and debt started increasing since 1980s.
Comment [2]: Who are Defaulting?: Model vs Data

(a) Model: Full information

(b) Data: Livshits et al. (2007b)
Life-cycle profile:
- Data: Hump-shape with relatively flat profile between 30 and 50.
- Model: Peak between 20 and 30 and decline quickly.

According to Budría et al. (2002), the proportion of defaulters (all chapters) in 1998 SCF is:
- 0.9% for HHs with no high-school diploma
- 2.3% for HHs with HS diploma
- 1.3% for HHS with some college

Too much borrowing and defaults from young and high types?
Comment [2]: Who are Borrowing?: Model vs Data

(c) Model: Full information

(d) Data: SCF2004
Source: Negative net worth in 2004 SCF Public Data.
Comment [2]: Who are Borrowing?: Model vs Data

- Model does a good job in replicating:
  - Relatively flat profiles except for "college" group.
  - Average debt is larger for HHs with more education.

- The inverse-hump in the model for "college" group is too pronounced.

- Proportion of borrowers among high education groups is not necessarily high (except for 20s).
### Comment [2]: Who are Defaulting More?: Data

<table>
<thead>
<tr>
<th>Age</th>
<th>1991</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;25</td>
<td>3.4</td>
<td>3.8</td>
</tr>
<tr>
<td>25-34</td>
<td>6.8</td>
<td>8.9</td>
</tr>
<tr>
<td>35-44</td>
<td>6.5</td>
<td>9.8</td>
</tr>
<tr>
<td>45-54</td>
<td>5.2</td>
<td>8.1</td>
</tr>
<tr>
<td>55-64</td>
<td>2.7</td>
<td>4.1</td>
</tr>
<tr>
<td>≥ 65</td>
<td>0.6</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Source: Replicated from Livshits et al. (2007a)

- Increase in defaults across all age groups.
Comment [2]: Who are Borrowing More?: Data

(e) Data: SCF1989

(f) Data: SCF2004

- Increase in debt across all age and education groups.

