The Mobile Money Revolution in Kenya: Can the Promise be Fulfilled?
An Efficient Financial System

- Decades of research: efficient financial systems are key to economic growth and poverty reduction

- One major reason financial markets in the developing world lack efficiency is high transaction costs
  - Traditionally, financial systems have been bank based: branches are few and far between and accounts expensive to maintain

- How can we lower transaction costs?
Mobile Money: First Four Years
The Industry: Next Four Years
Household Survey

- Large household panel survey across most of Kenya (92% coverage)

  - Last two rounds excluded Nairobi
M-PESA Adoption by Households
What Did Mobile Money Do?
Financial Health/Wellbeing

- A core component of financial health/wellbeing is resilience, the ability to respond to unexpected negative events, or shocks.
Resilience and Social Economies

• Little private insurance and few public sector safety nets

• Instead: social ties create an insurance network to pool risk: is this efficient?
  – Ideal network is as different in risk profile from you as possible
  – But transactions have to cross geographical space which has costs
Financial Intermediation
Transaction Costs

- Kenyans faced large costs of transacting with the financial system
  - The distance to the closest bank branch in 2007 was 9.2 km
  - 32% of households lived more than 10 km from a bank branch
  - 19% of households lived more than 20 km from a bank branch

- M-PESA lowered transaction costs dramatically
  - Costs: for average distance of 200 km, KShs 35 vs. a KShs 460 bus
  - Distance to an agent was 4.9 km in 2007 (fell to 1.9 km by 2011)
  - 46% of households lived within 1 km of an agent
Financial Service Points, 2007-2011
The Effects of Lower Transaction Costs
Resilience: Overall

- No Shock: M-PESA Users +4.6%
- Negative Shock: Nonusers -7.4%
Resilience: Remittances

Likelihood of receiving remittances

M-PESA Users

No Shock

Nonusers

Negative Shock

+4.8%

-3.7%
Resilience to Health Events

- **M-PESA Users**
  - No Shock
  - Total Expenditure
    - Non-Food: -13.7%
    - Food: -4.4%
  - Medical: +29.6%
    - Non-Food: +10.2%
    - Food: +4.7%

- **Nonusers**
  - No Shock
  - Total Expenditure
    - Non-Food: -2.7%
    - Food: +4.7%
Eight Years Later….

- **Better access to M-PESA:**
  - Increases savings
  - Increases consumption and reduces poverty
  - Does not increase (physical) assets
  - Increases use of a bank account
  - Changes occupational choice (less likely to be a farmer, more likely to be in a business), especially for women in the household
Can the Promise be Fulfilled?
Financial Service Points, 2007-2011
## Access, 2007-2015

### Average Distance to Closest Financial Institution

<table>
<thead>
<tr>
<th>Year</th>
<th>Bank Branches</th>
<th>Bank Agents</th>
<th>Mobile Money Agents</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>9.2 km</td>
<td>NA</td>
<td>4.9 km</td>
</tr>
<tr>
<td>2011</td>
<td>7.0 km</td>
<td>5.2 km</td>
<td>1.9 km</td>
</tr>
<tr>
<td>2015</td>
<td>6.0 km</td>
<td>1.9 km</td>
<td>1.4 km</td>
</tr>
</tbody>
</table>
Few Spillovers

- By the end of 2014, outside Nairobi, 96% of households used M-PESA for P2P transactions

- Less than a third use it for:
  - Paying bills
  - Receiving payments or wages from an organization
  - Paying for other goods or services

- Only 5% use it to repay loans

- Little P2B, B2B, G2P
Conclusions

• Lowering the transaction costs of interacting with the financial system has improved the lives of Kenyans
  – Resilience and vulnerability
  – Savings and investment
  – Occupational shifts for adults, especially women

• Financial markets interact with all other markets: little evidence of spillovers

• Still a long way to go and a much harder way to go