Security and consumer adoption

• Experience affects opinion
• Opinions affect adoption

• But it’s complicated—and incentives are important, for all participants
• Consumer Experience

• 5% of respondents reported a debit card lost or stolen; 5% reported a credit card lost or stolen.
• In each case about half reported fraudulent charges
• Most with fraudulent charges incurred no financial liability (99% for credit cards; 85% for debit cards)
• One-quarter of consumers reported that they or someone they knew well had been a victim of identity theft during the previous 12 months.

(based on Boston Fed survey 2015-17)
• Consumer attitudes towards payments platforms

• Credit cards get highest ranking for acceptance, convenience payments records, and security; worst ranking in terms of perceived costs.
• Cash gets highest ranking for setup and cost, scores poorly for security.
• Prepaid cards score similar to cash for security
• Debit cards score lower than credit cards.
• Importance of payment characteristics (2012)

- Security: 70% Most Important, 30% Important
- Convenience: 60% Most Important, 40% Important
- Cost: 50% Most Important, 50% Important
- Acceptance: 40% Most Important, 60% Important
- Records: 30% Most Important, 70% Important
- Set Up: 20% Most Important, 80% Important

% of consumers
• Security assessment

• In surveys, consumers claim security is the most important feature of a payment system.

• While it affects usage, effects are not as strong as effects of cost or convenience assessment.

• Some evidence that experience of identity theft affects payment behavior. Neighbors’ experience of identity theft affects perceptions of security but limited effect on behavior.
• New technologies

• US has been slow to adopt mobile payments, but growth finally is apparent

• In 2017, one-third of all consumers made a mobile payment, compared with just one-fourth in 2015.
• Mobile apps adoption (ApplePay, Android Pay, Samsung Pay) grew from 40.4 percent in 2015 to 52.1 percent in 2017.

Perception remains that Mobile payments are “very risky"
• Other changes

• In 2017, 92.3 percent of U.S. consumers had a bank account and three-quarters of consumers used online banking; half used mobile banking.
  – However, most common use of mobile banking is to check account balances.

• In 2017, 44.9 percent of consumers had a nonbank payment account; the most common was PayPal. Paypal payments can be funded with credit or debit card, or with bank account; notably more than 20% of users pay with money stored with Paypal.
If perceptions have little force, perhaps it’s due to incentives

• If risk of loss is mild, no incentive to avoid risky platforms or risky behaviors
• Applies to all participants
• Incentives, Security and Payments Platforms

• Interaction between end users, intermediaries, competing system operators, (and bad guys)

• Incentives affect each

• Spillovers of damage and spillovers of protective actions crucial to understanding behavior
• Example: “Eggs In One Basket”

• How many separate accounts do you hold?
  – On the one hand, each entails its own fixed costs (including security procedures)
  – On the other hand, damage from security breaches will be limited.

• How do your security precautions change with size or vulnerability of account?
• Effects on the broader system

• How do intermediaries and system providers’ incentives differ from those of end users?
• Threat diversion vs threat reduction
• Threats tied to aggregate account holdings vs threats tied to frequency of use
• Users’ incentives to employ outside technology (password managers, unsecured access channels, alternative systems)
• References on consumer payment activity


