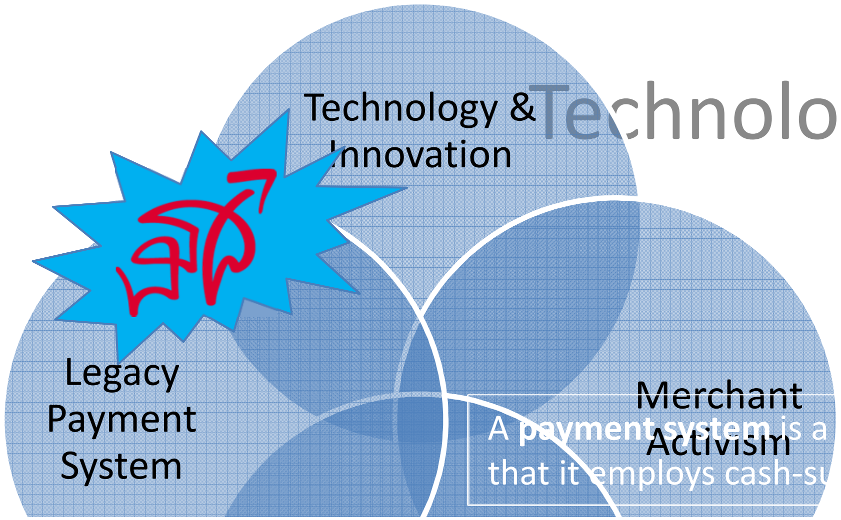
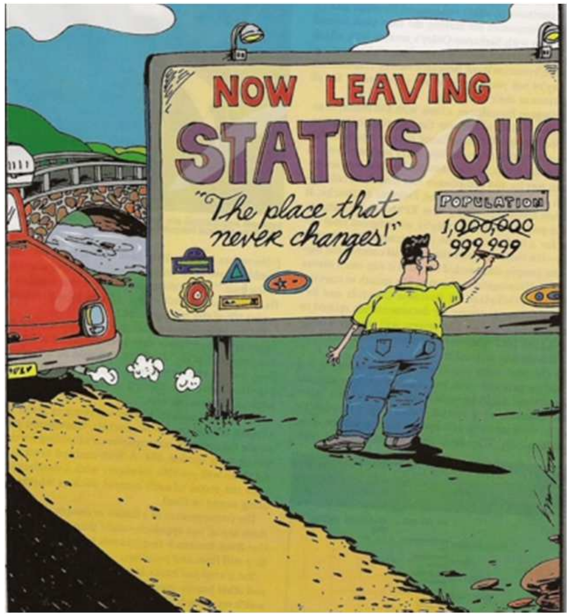
The Future of Payments

Technology's Promise



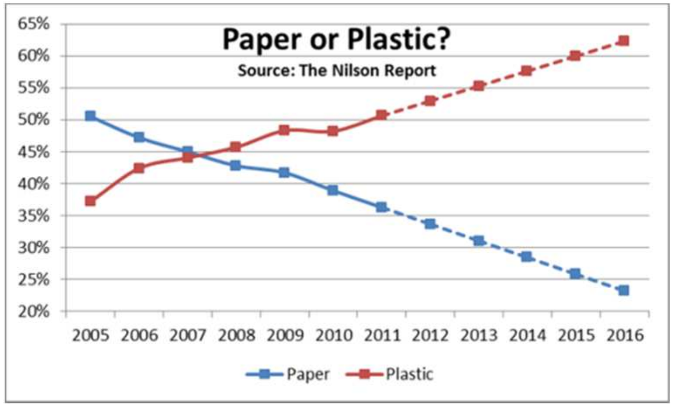
Payments Today

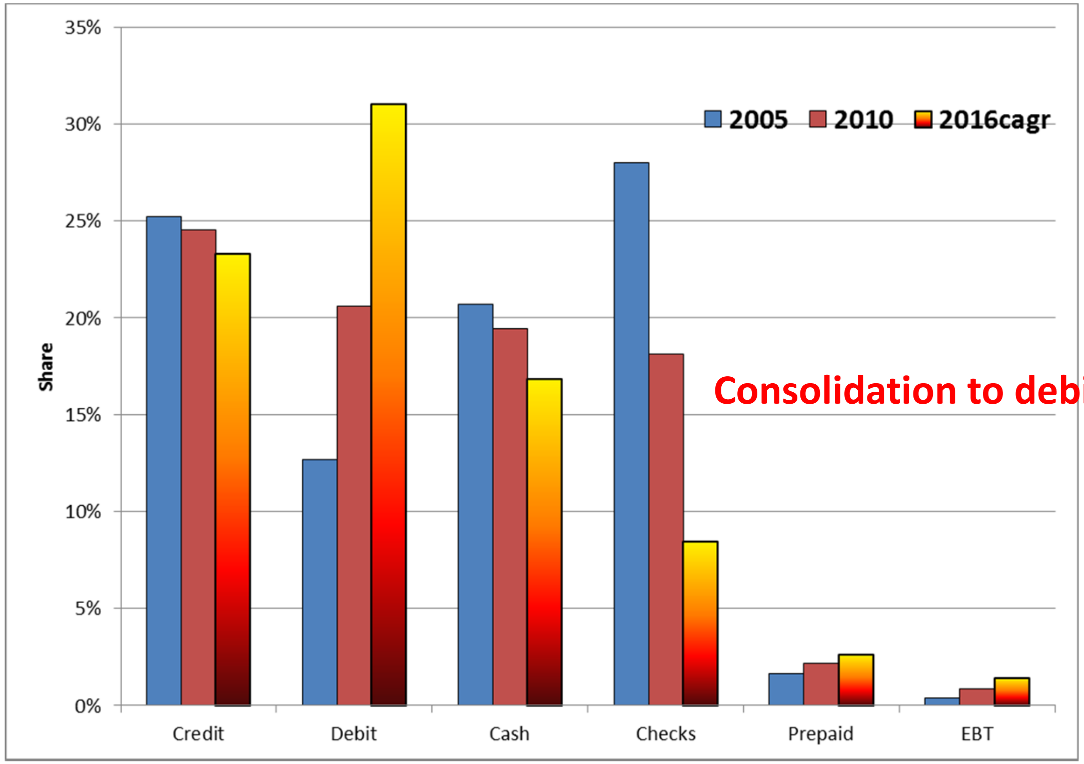
- Our systems are antiquated & fragile
  - Static data, little authentication, fraud, inefficient
  - Consumer segregated from choice & merchant
  - EMV is “last man in” proposition for U.S.
- Modern technology market rules do not apply
  - Lip service to innovation, incrementalism = hegemony
  - “Better, faster and cheaper do not apply
- This inertia is coming to a head
  - Even market powers cannot ignore macro disruptors…



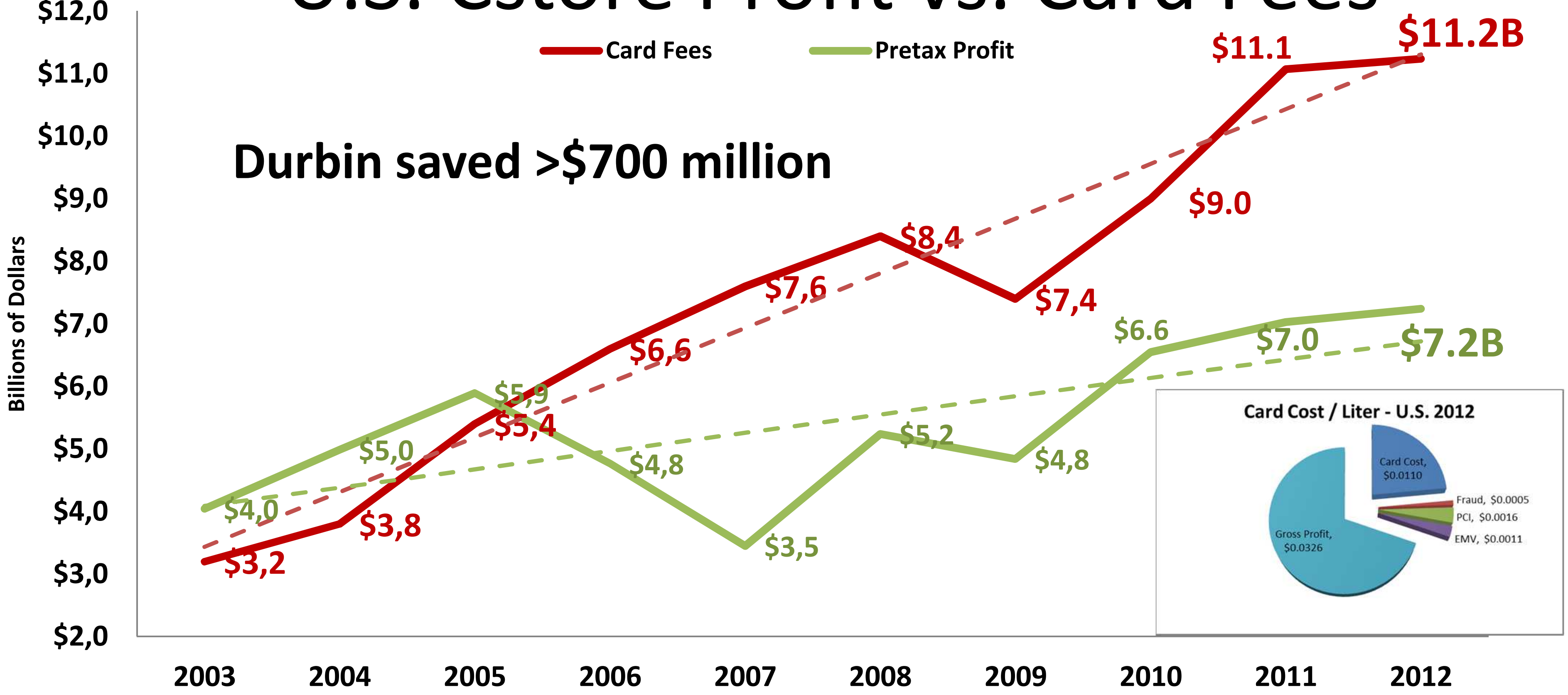
US Payments SOI 2016

- Over $10 trillion in payments
  - $2.4T in paper
  - $6.4T "plastic" or privatized
    - > $60B in transaction costs
  - $1.6T electronic & EBT
- Technology, consumerization, pricing driving systems & funding



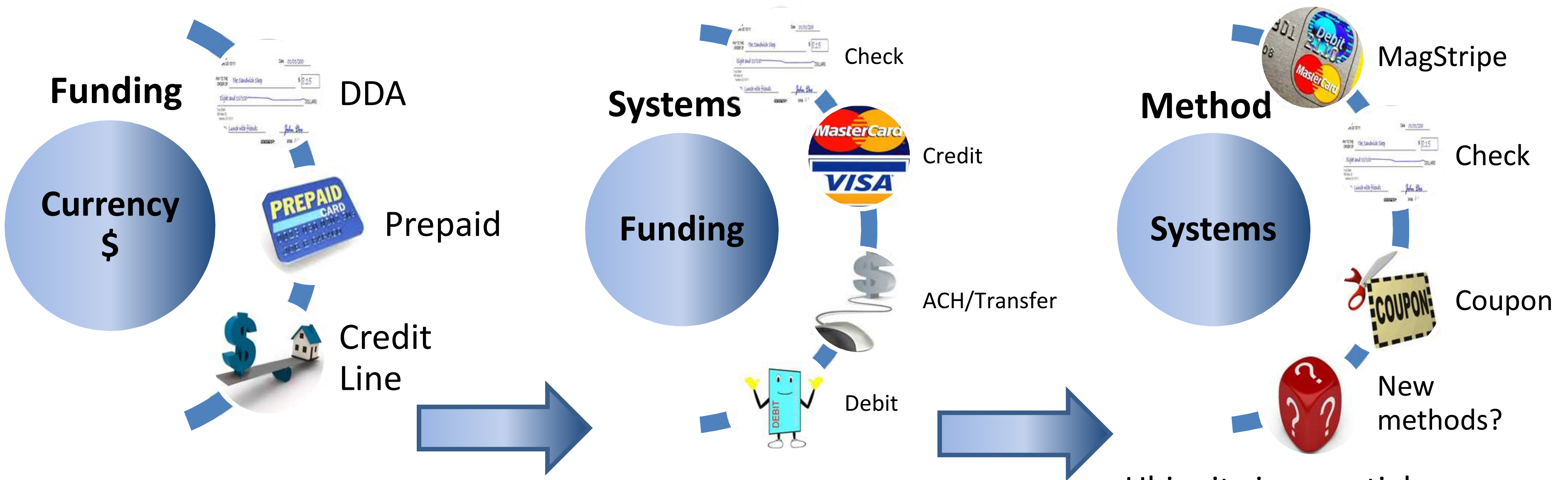


U.S. Cstore Profit vs. Card Fees



Source: NACS State of the Industry Survey of 2012 Data & CSX, LLC.

Payments Ecosystem – Business & Consumer



- Can be consumer or business
- Does not have to be a bank
- Not dynamic - regulated

- Ubiquity is essential
- Settlement essential
- Little change, but some OPPORTUNITIES HERE

- Ubiquity is essential
- Standards essential
- Security essential
- Authentication is essential
- HIGHLY DYNAMIC

Trust and Identity

Payments in Flux – The Perfect Storm

Big Theme

1. Digitization of payments
2. Redefining retail banking
3. Consumerization
4. Authentication
5. Many to many, “Cloud”
6. Standards absent, regulation spotty

Risk/Opportunity

1. Digital = “for profit”
2. Consumer attitudes on payments
3. BYOD defining payments platforms
4. Analog to digital ID, new “trust”
5. Traditional structure destroyed
6. “Wild West” scenario

Standards create opportunity out of risk

Consider this – Digital Identity

Standards Revolutionary Role

Creating Competition & Innovation

- Building blocks of best practice
  - Security needs to be common & consistent
  - Startups need to have a toolset to serve customers
- Uniform datasets
  - Financial transactions are not that unique
- Defined integration point data exchange
- Comprehend “out of the box” use cases