

Automation and Disruption in Stolen Payment Card Markets

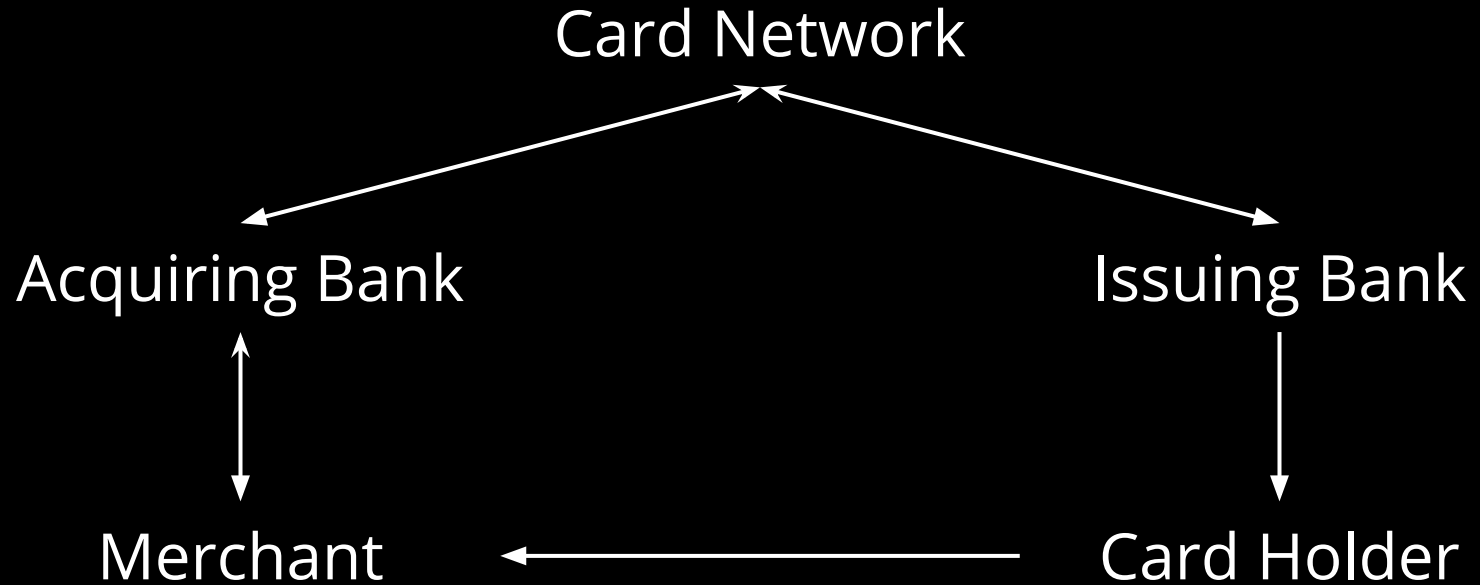
Timothy Peacock

Shape Security

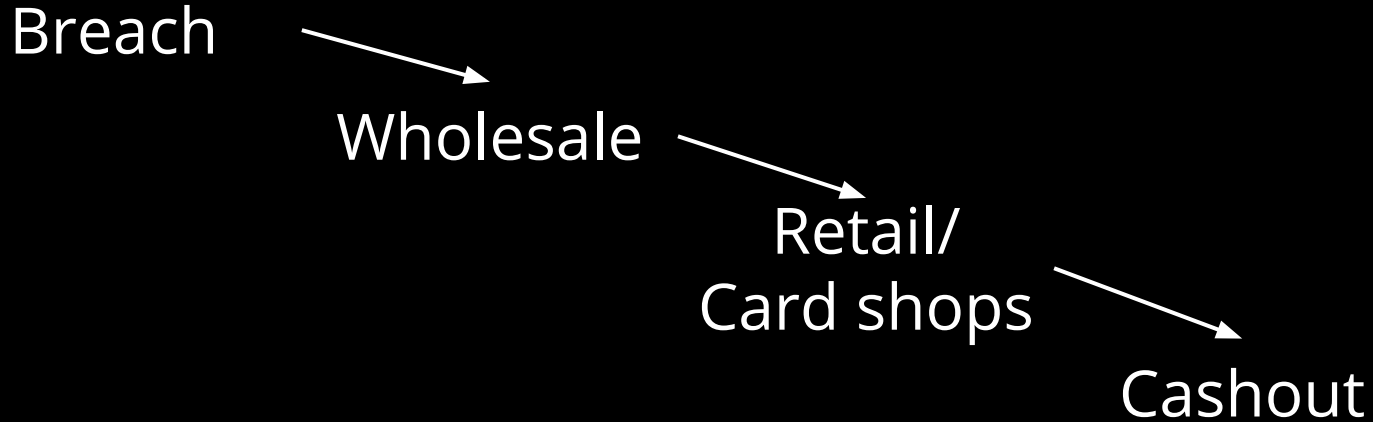
Allan Friedman

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Payments System Model



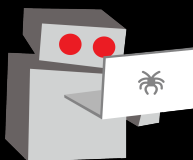
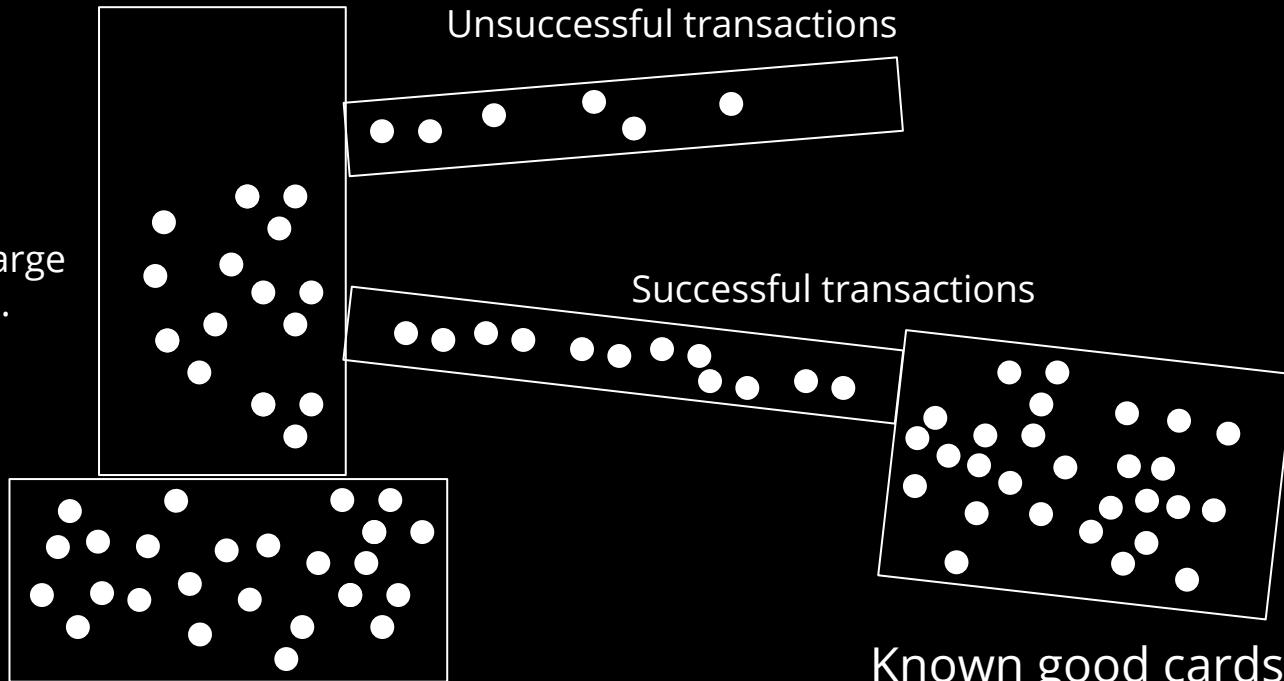
Card Value Extraction Chain



Refining

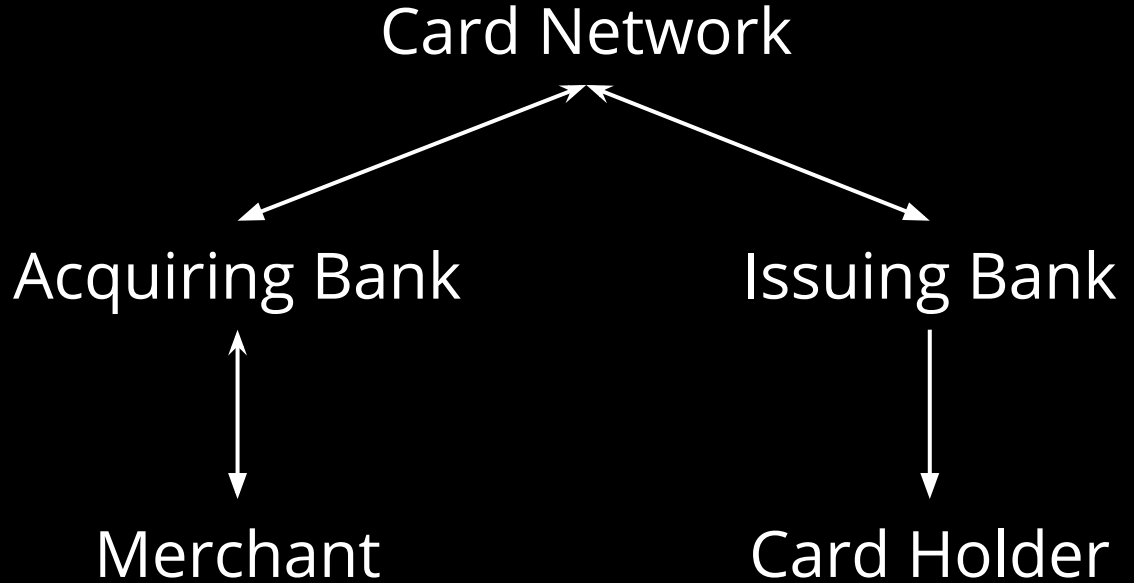
Set of small-value, large volume websites.

Pool of stolen payment cards



Existing Real-Time Anti-Fraud

- Find horse hoofprints
- Detect, then remediate
- Retrospective, not preventative



Proposed Intervention

- Stop automated payment card use
- Value chain choke-point
- Technology agnostic

Refining vs. Cashout Merchants

Refining	Cashout
Large transaction volume website	High value transactions
Low value per transaction	Fungible, resellable goods
Low impact from fraud	Larger pain from fraud
Enable downstream harms	Cannot see upstream enablers

How Do We Get There

- Regulatory
- Liability
- Cross-subsidy

Implications

- Chip+PIN
- Acrimonious lobby fight
- Small intervention: big change

Limitations, Future Work

- Quantifying impact
- Empirical grounding

