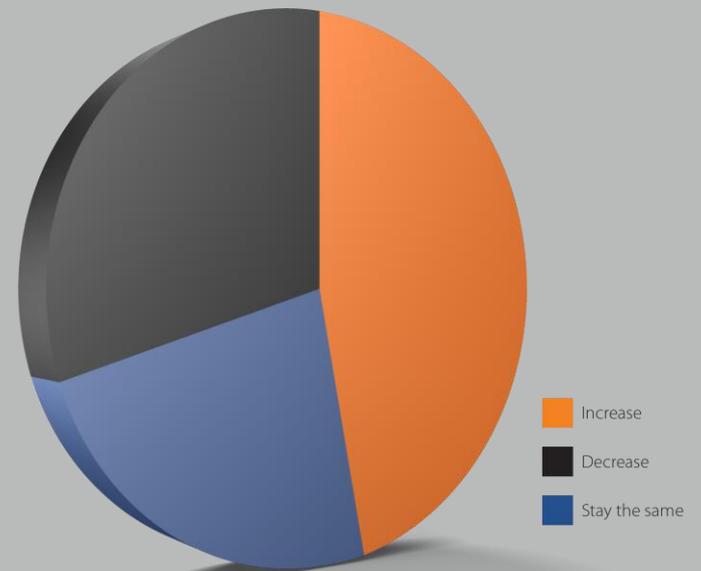


Seeds of Change in Debit

The 2016 Debit Issuer Study

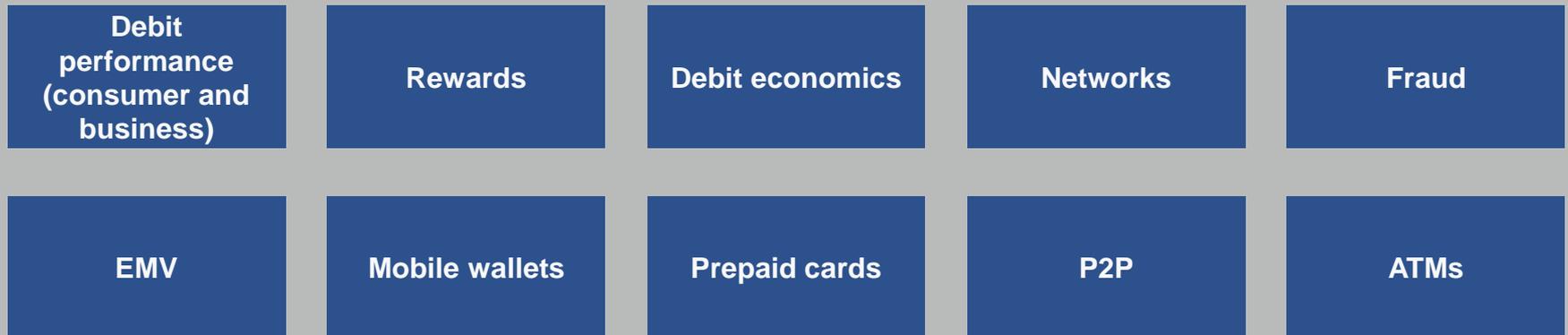
MEDIA EXHIBITS



Study Overview

- The Debit Issuer Study is the definitive assessment of U.S. debit market
 - *2016 Debit Issuer Study* is the 11th edition of the Study
 - 72 debit card issuers, representing ~153 MM debit cards and ~77,000 ATMs
 - ~48%¹ of industry debit transactions (largest sample in Study's history)

Study Scope



1. Based on reported transactions in the *2016 Debit Issuer Study* as a share of total transactions processed by U.S. payment networks in *Nilson Report*

Study Identified Five Macro Debit Trends

1 | **Accelerating EMV Transition**

2 | **Increasing Fraud**

3 | **Emerging Mobile Wallets**

4 | **Converging Debit Transaction Types**

5 | **Continuing Strength of Debit**

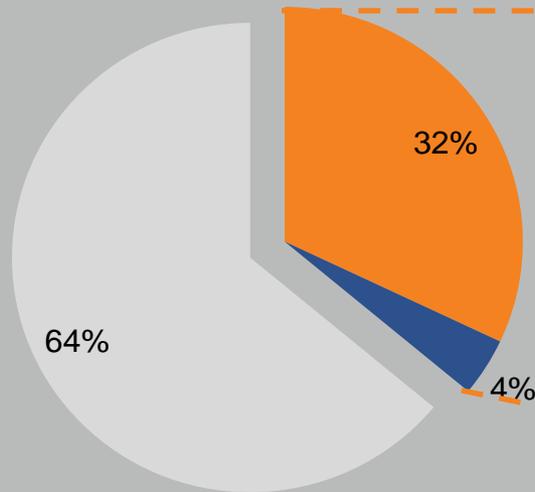
1

Accelerating EMV Transition

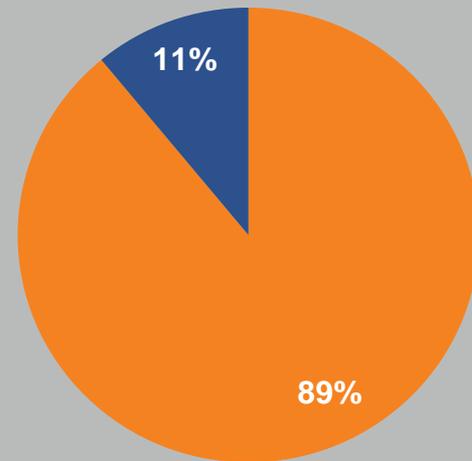
Accelerating EMV Transition

Chip Debit Transactions Still a Small Fraction of Total

All debit card transactions



Chip debit card transactions



■ Magstripe card transactions at non-chip terminals

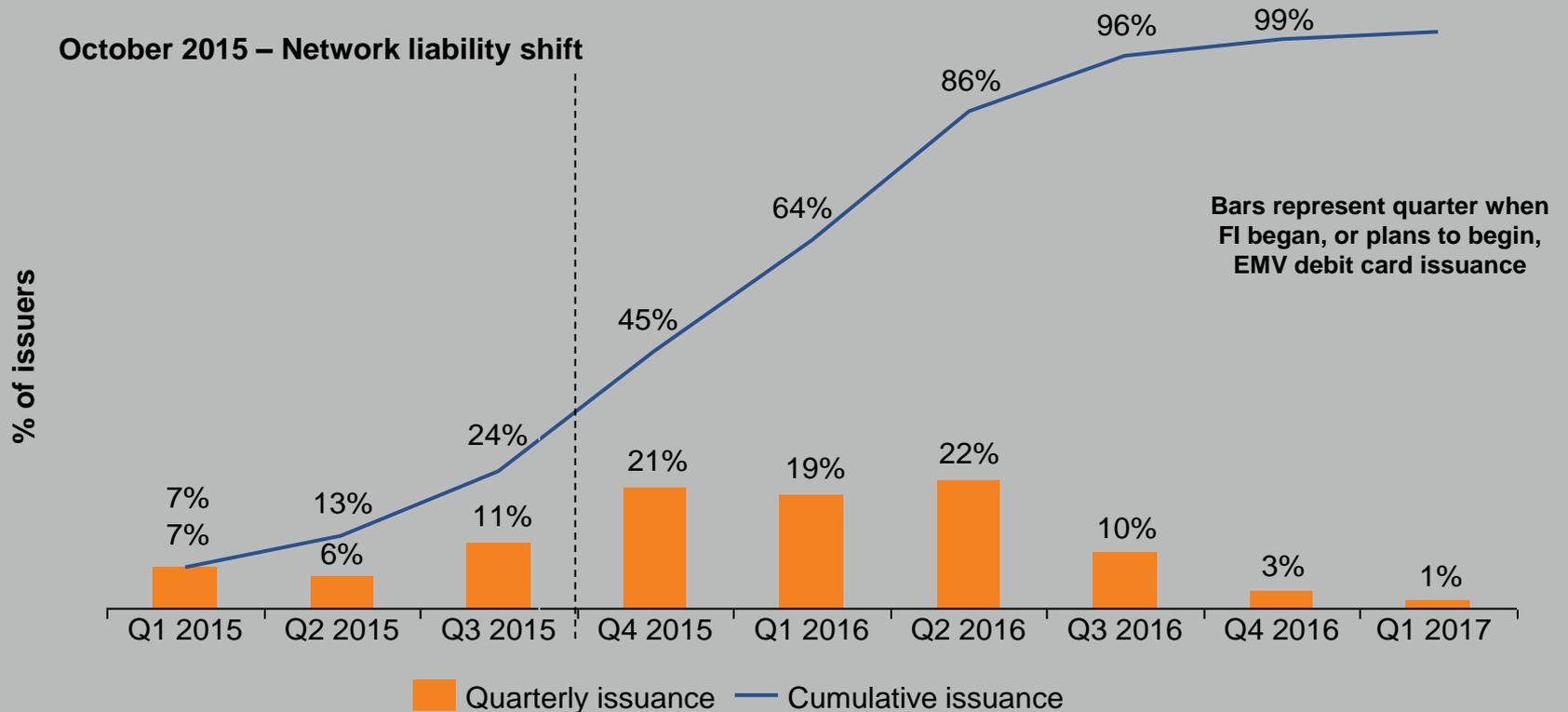
■ Chip card transactions at non-chip terminals

■ Chip card transactions at chip-enabled terminals

Note: Excludes mobile payments, which are a very small fraction of the total

Issuers Ramp up Chip Debit Card Issuance

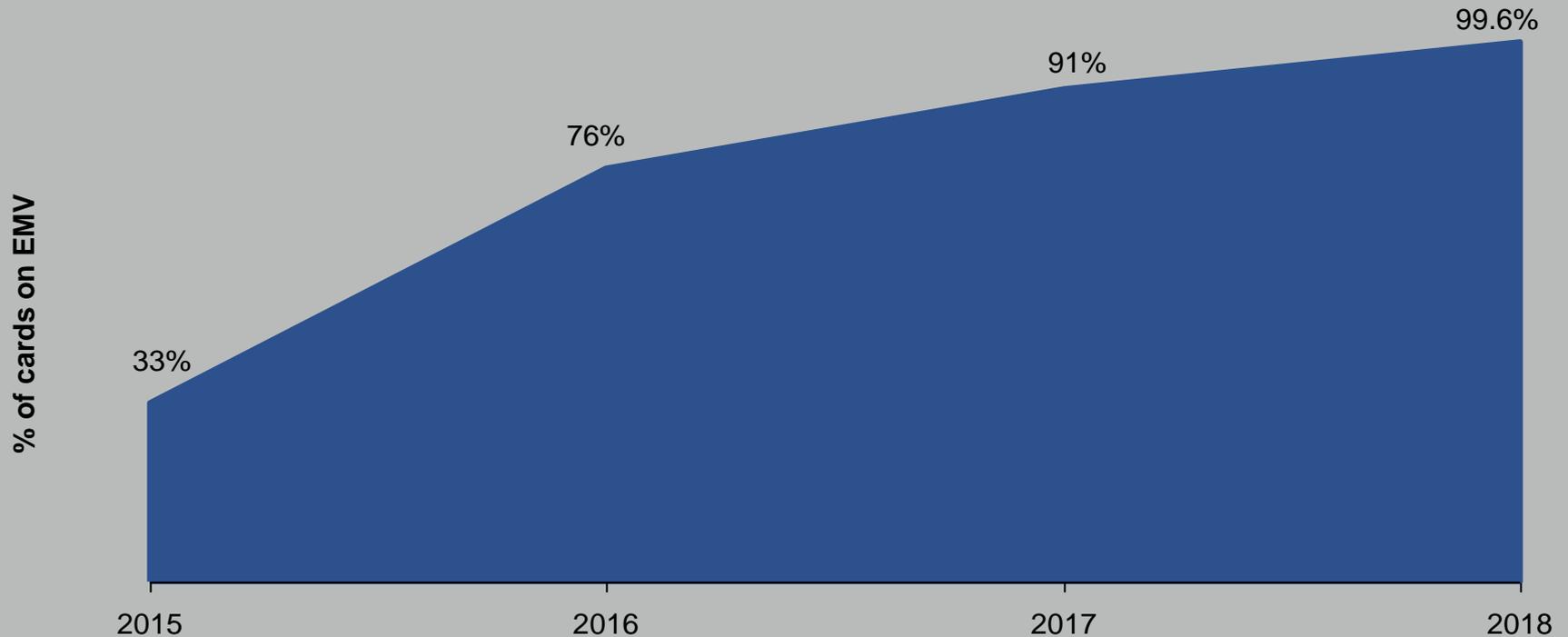
Initiation of chip debit card issuance



Accelerating EMV Transition

Debit Card Conversion to be 76% Complete by Yearend

Cumulative conversion of U.S. debit cards to EMV¹



1. Transitions are measured at the end of each year (e.g., 2015 means as of December 31, 2015). Projection based on issuers' forecasts of the rate of EMV debit card migration, weighted based on issuers' card base sizes

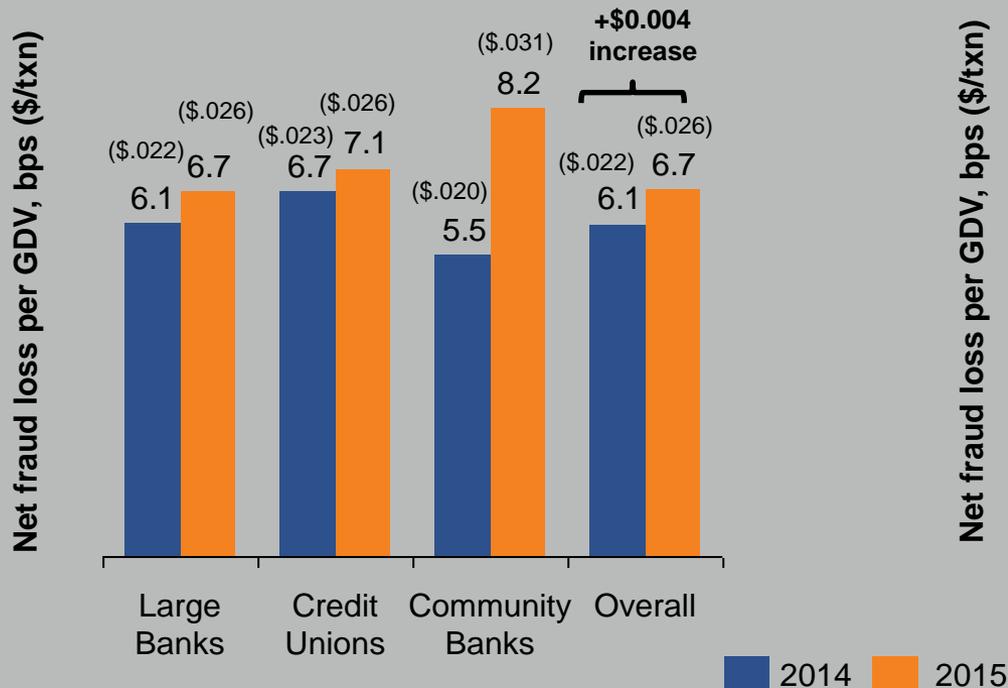
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Increasing Fraud

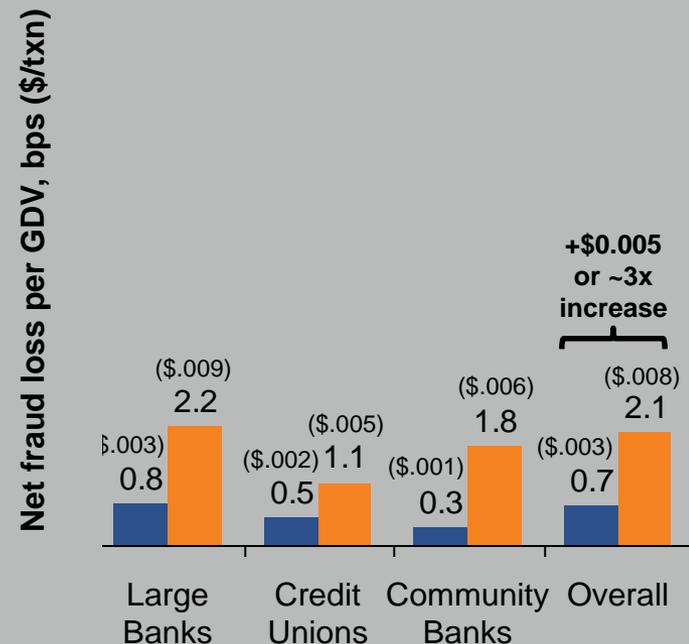
Increasing Fraud

Fraud Loss Rates Increased in 2015

No-PIN POS debit net fraud loss rate¹



PIN POS debit net fraud loss rate

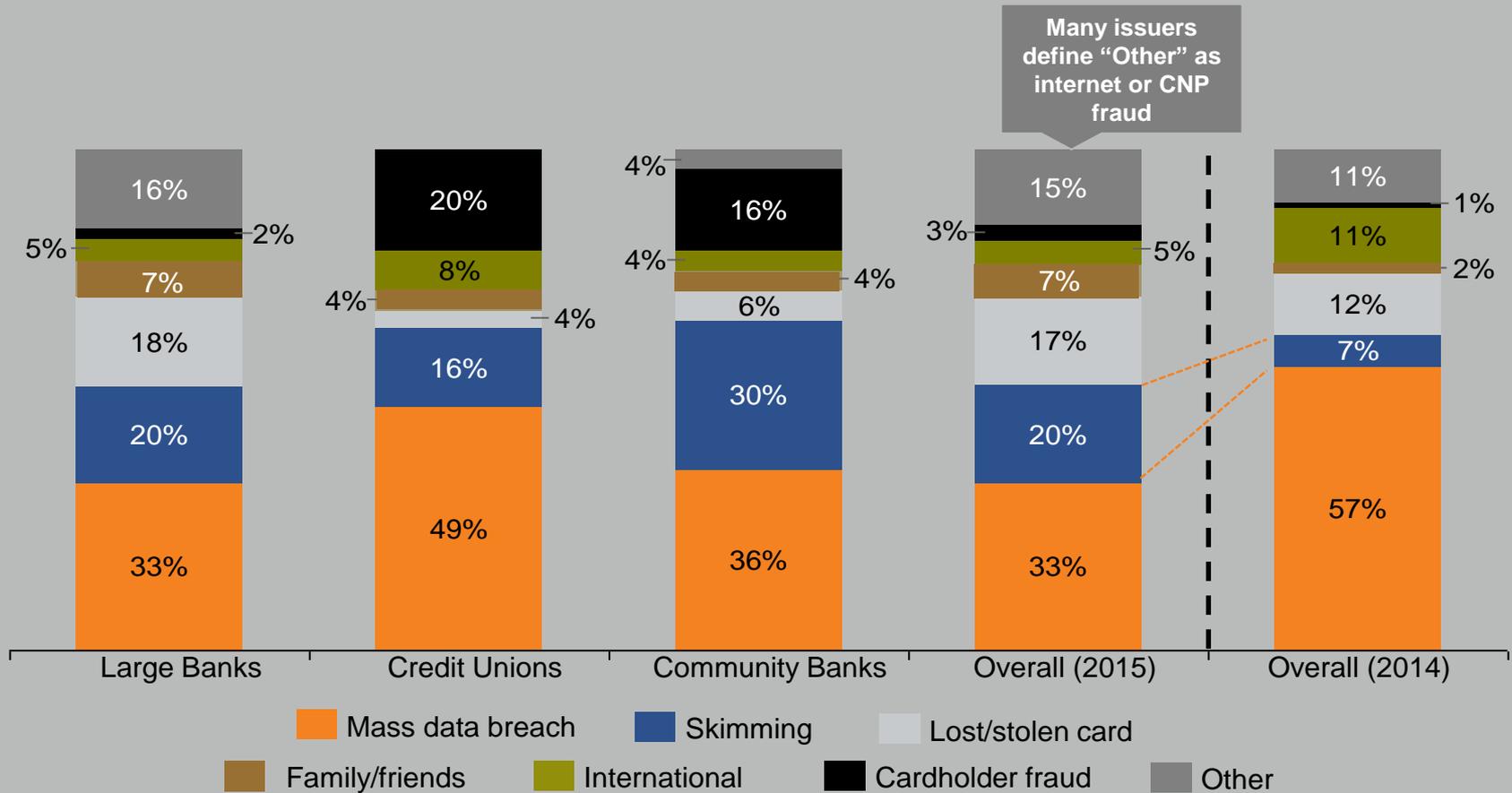


1. Includes all debit transaction types not authorized with a PIN

Increasing Fraud

Sources of Debit Card Compromises Are Shifting

Percentage of debit fraud losses by point of compromise

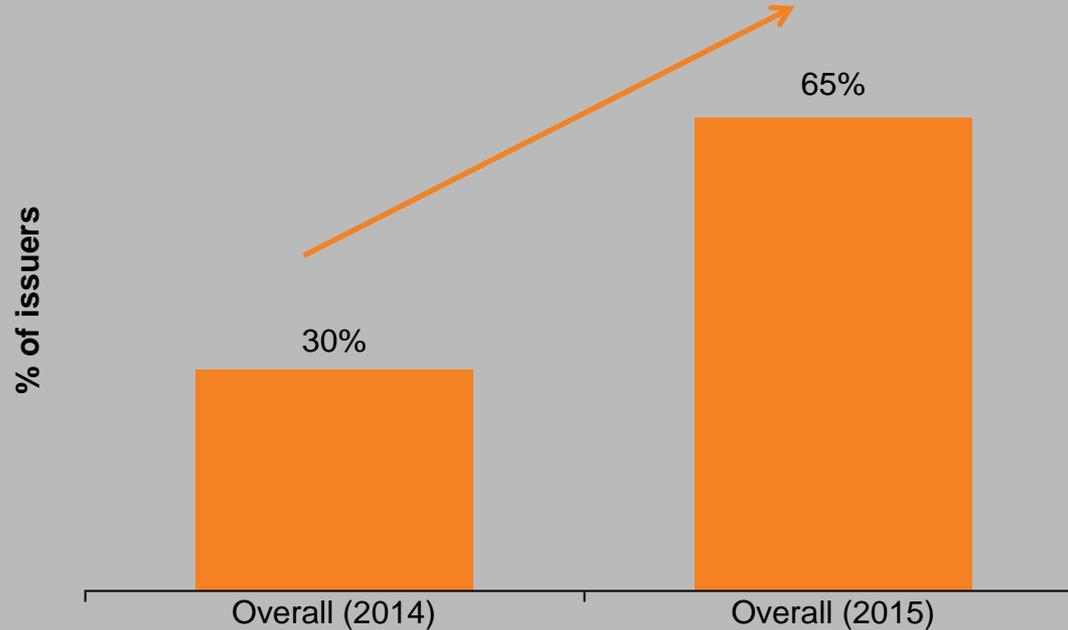


3

Emerging Mobile Wallets

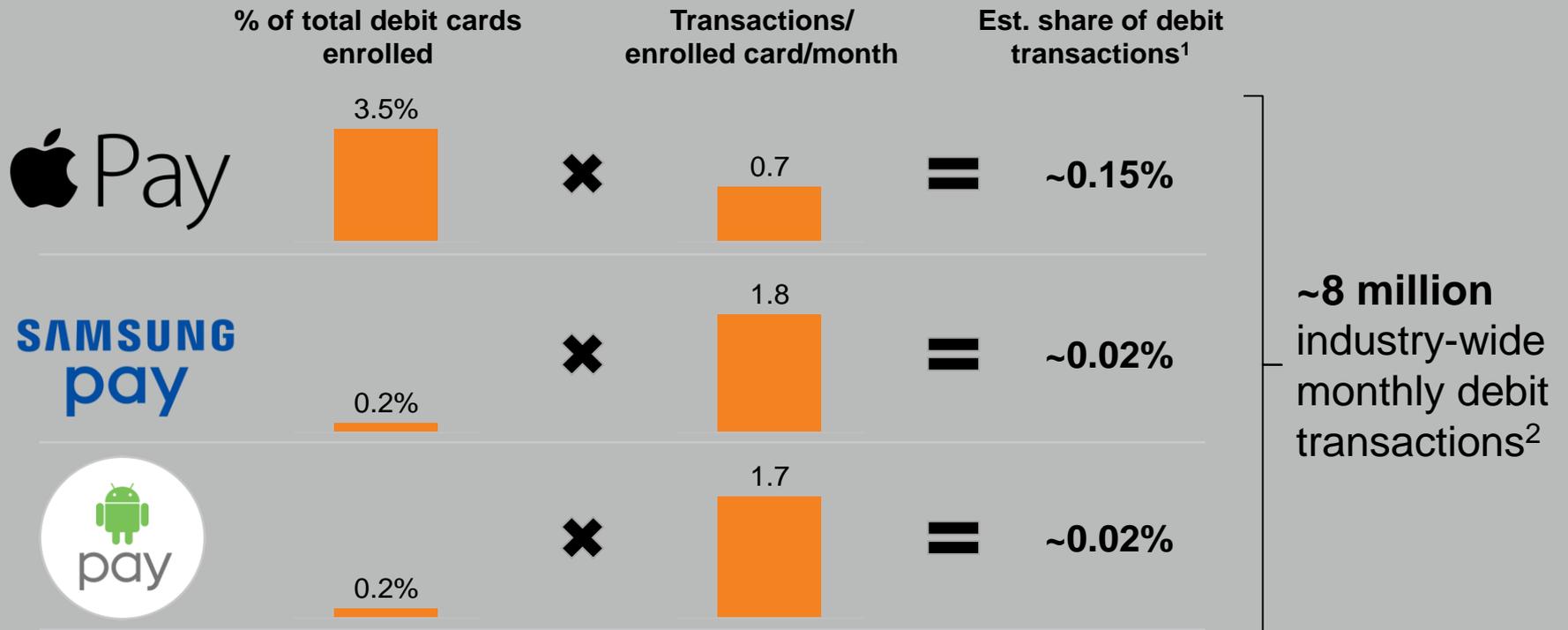
Issuer Adoption of Mobile Payments Surged

Issuers with cards eligible to be loaded into mobile wallets



Mobile Wallet Adoption and Usage Rates Remain Low

Total est. mobile wallet debit transactions for January 2016



1. As a proportion of the average monthly total of signature and PIN transactions for both consumer and business, for all issuers (includes those with no mobile wallets)

2. Based on the number of transactions from the 2013 Federal Reserve Payments Study with 2012-2015 growth rates from past Debit Issuer Studies

Mobile Payments Experiences Are Mixed

Positive Experiences

Negative Experiences

Issuers

- ✓ Ease of implementation and servicing

- ✗ Difficulties with user authentication and provisioning resulting in high call volumes

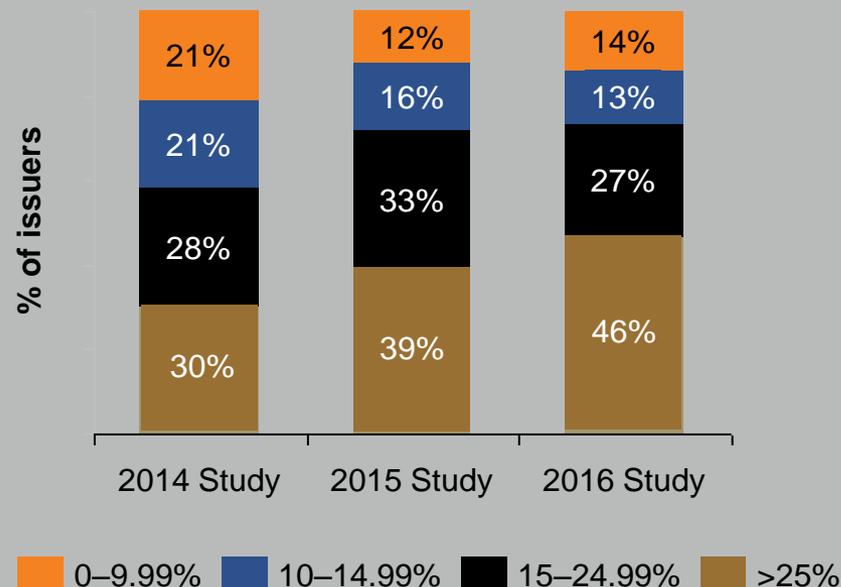
Cardholders

- ✓ Regular users are impressed with the speed and security of mobile payments

- ✗ Lack of merchant mobile wallet acceptance and an inconsistent customer experience

Expectations High for Mobile Payments Adoption

Issuers' views on share of debit transactions that will migrate to mobile over the next five years



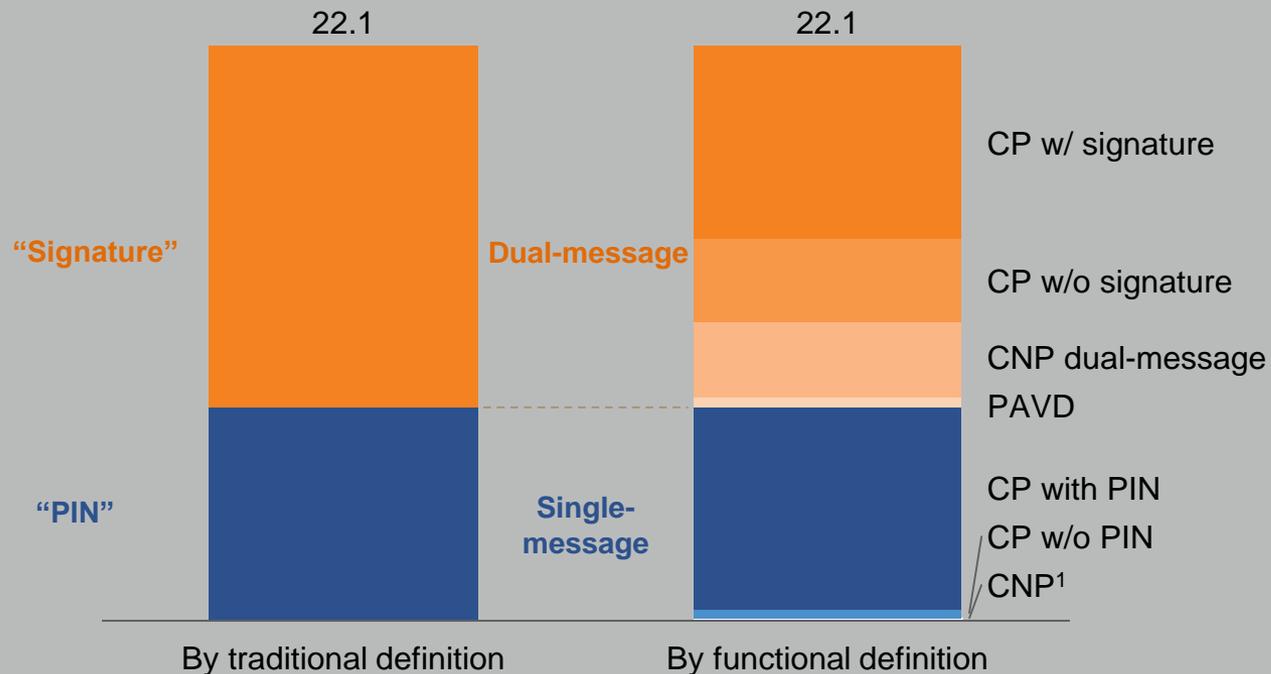
4

Converging Transaction Types

Converging Debit Transaction Types

Debit Transaction Types Are Increasingly Difficult to Distinguish

Monthly consumer debit transactions per active card by transaction type



Note: CP = card-present, CNP = card-not-present, PAVD = PIN-authenticated Visa Debit
 1. Includes PINless bill payment and internet PIN

5

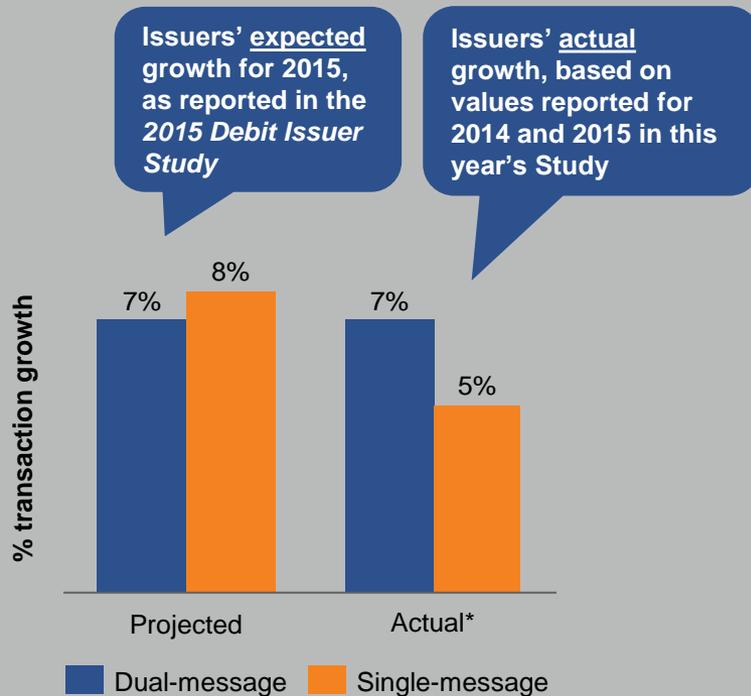
Continuing
Strength
of Debit

Continuing Strength of Debit

Debit Transaction Growth Exceeded 6% in 2015

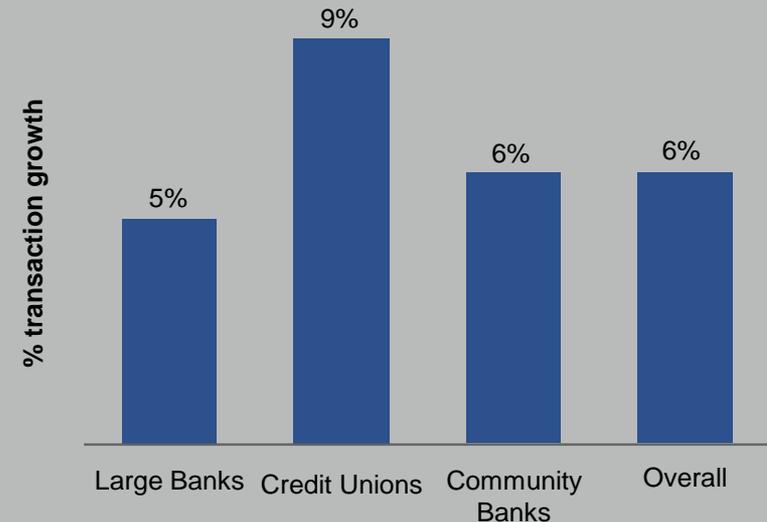
Overall consumer dual-message vs. single-message transaction growth

2015 projected¹ vs. actual



Projected debit growth in 2016

Overall transaction volume

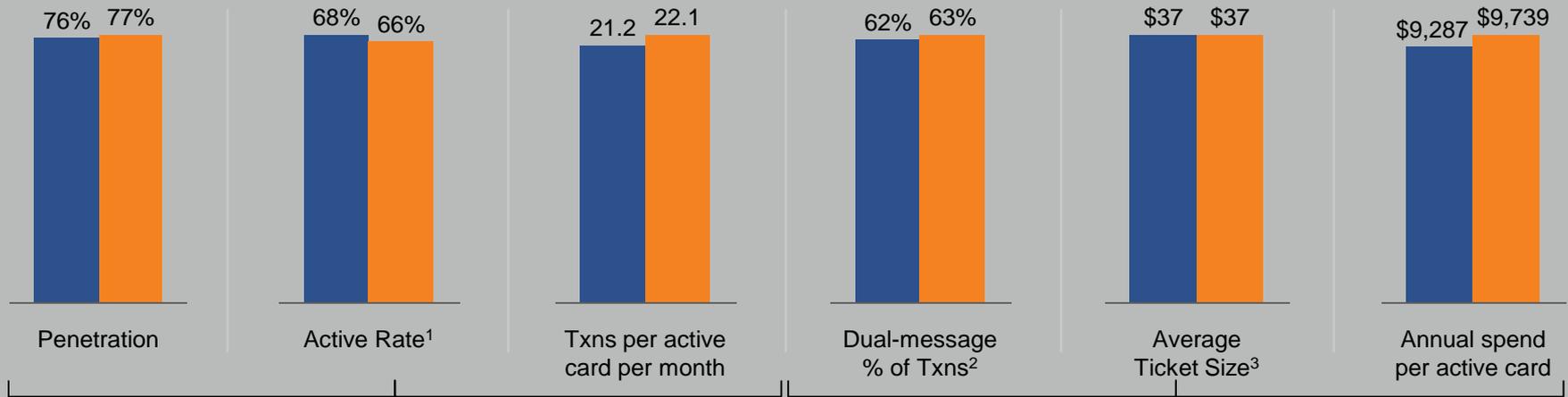


1. Overall transaction growth was 6.26% Y-o-Y in 2015

Continuing Strength of Debit

Consumer Debit KPIs Remain Strong

Consumer debit Key Performance Indicators 2014 vs. 2015



Measure debit card prevalence and frequency of use; transaction volume is main revenue driver for regulated issuers

Measure spend and transaction types, important metrics for exempt issuers

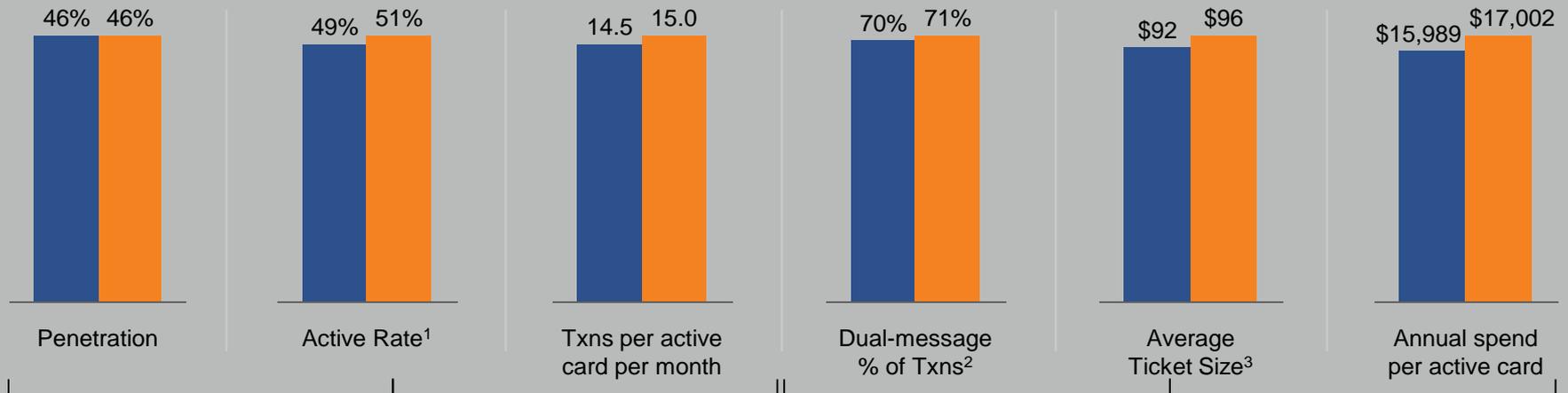
■ 2014 ■ 2015

1. Percentage of cards that performed any transaction in the last 30 days
3. Blended average of single-message and dual-message transactions

Continuing Strength of Debit

Business Debit KPIs Reflect Revenue Opportunity

Business debit KPIs 2013 vs. 2015



Measure debit card prevalence and frequency of use; transaction volume is main revenue driver for regulated issuers

Measure spend and transaction types, important metrics for exempt issuers

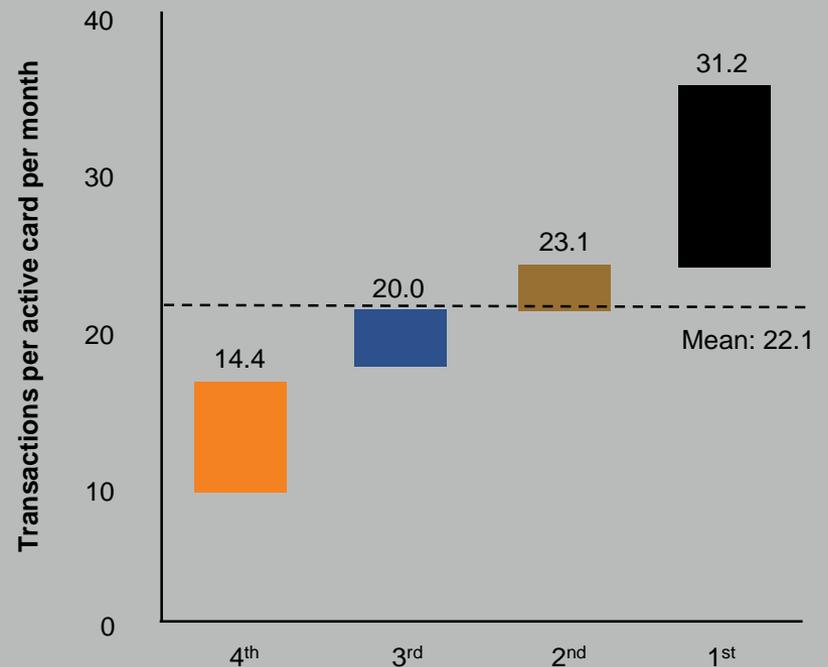
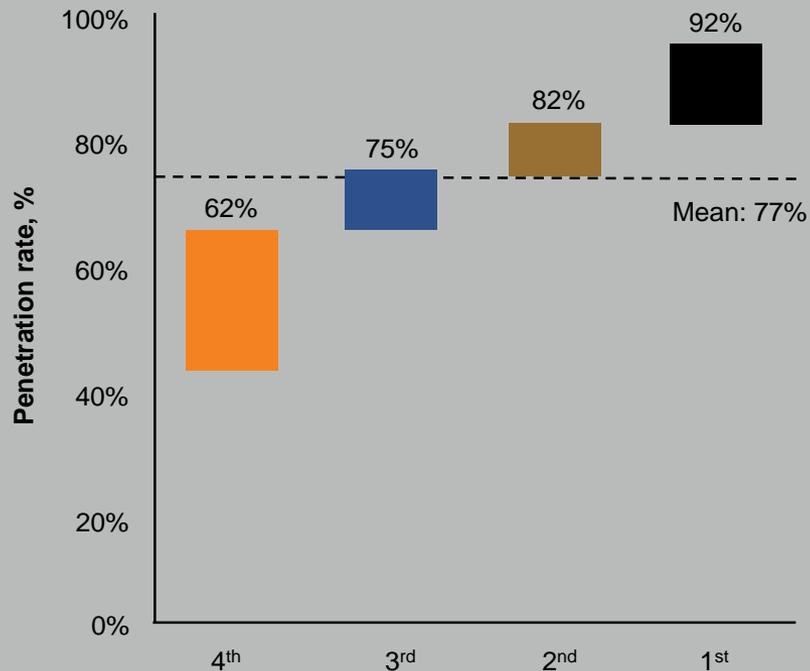
■ 2013 ■ 2015

- 1. Percentage of cards that performed any transaction in the last 30 days
- 3. Blended average of single-message and dual-message transactions

Continuing Strength of Debit

Best-in-Class Benchmarking

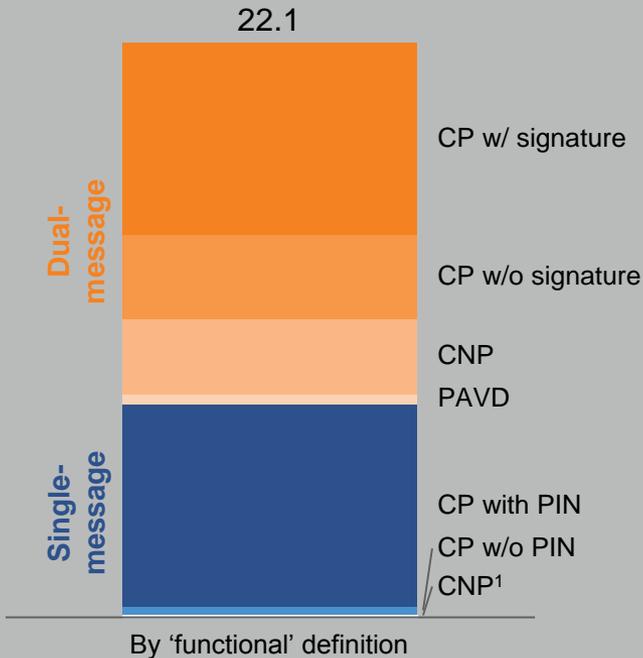
Leading performers in penetration and usage far outperform the average



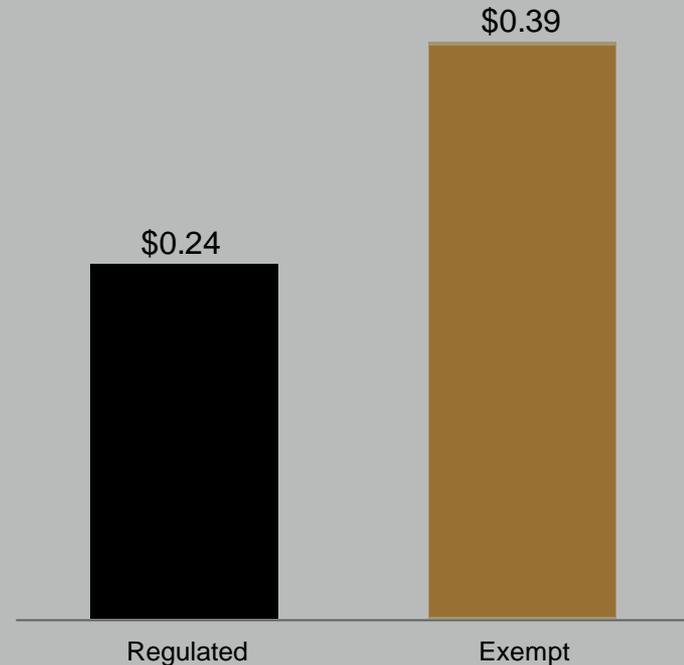
Continuing Strength of Debit

Regulated vs. Exempt Interchange Differential

Debit transaction types



Average blended interchange rate for consumer debit 2015, regulated vs. exempt issuers



1. Includes PINless bill payment and Internet PIN debit

Note: CP = card-present, CNP = card-not-present, PAVD = PIN-Authenticated Visa Debit

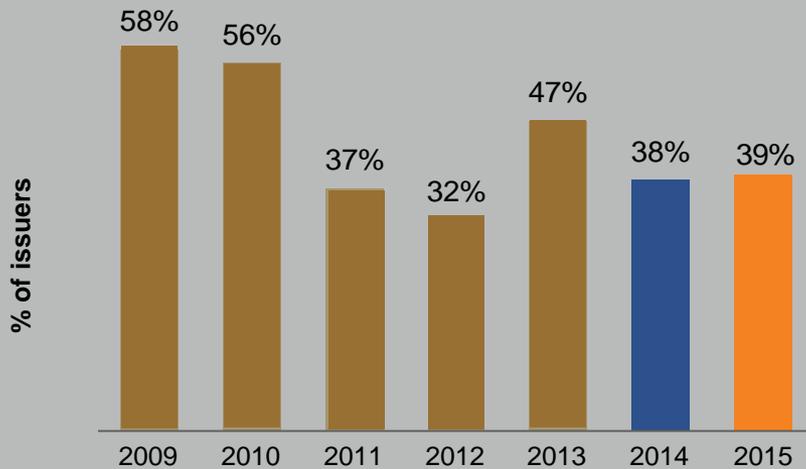
Note: Exempt issuers' cardholders average more transactions per active card/month, this is reflected in the annual revenue calculation

Continuing Strength of Debit

Debit Rewards Program Incidence is Unchanged

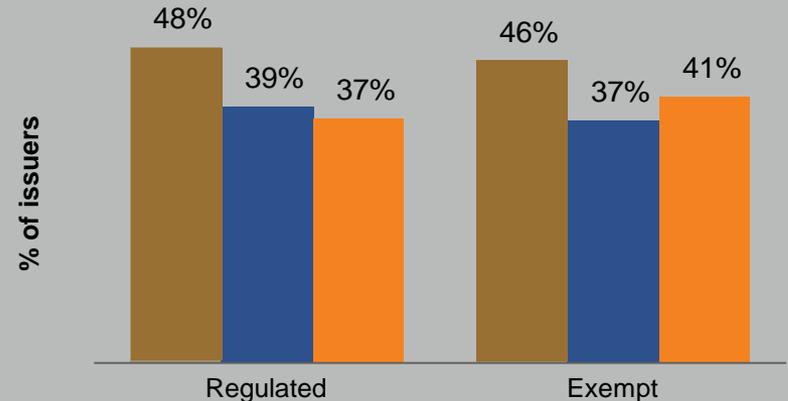
Rewards program incidence

By year



Rewards program incidence

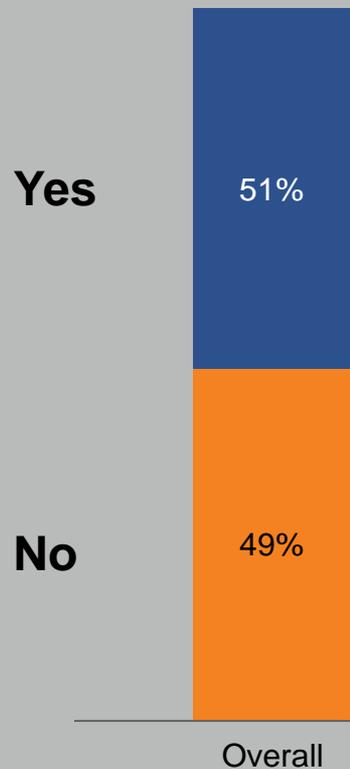
2015, regulated vs. exempt



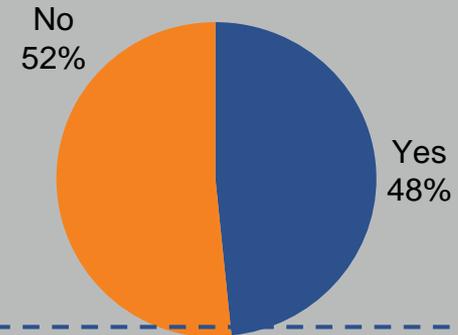
2013 2014 2015

Issuers See Person-to-Person Payments as Growth Opportunity

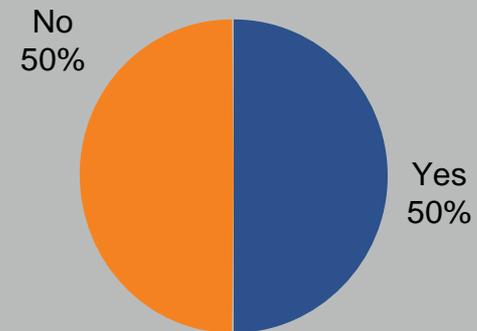
% of FIs offering P2P payments in 2015



% making changes to program

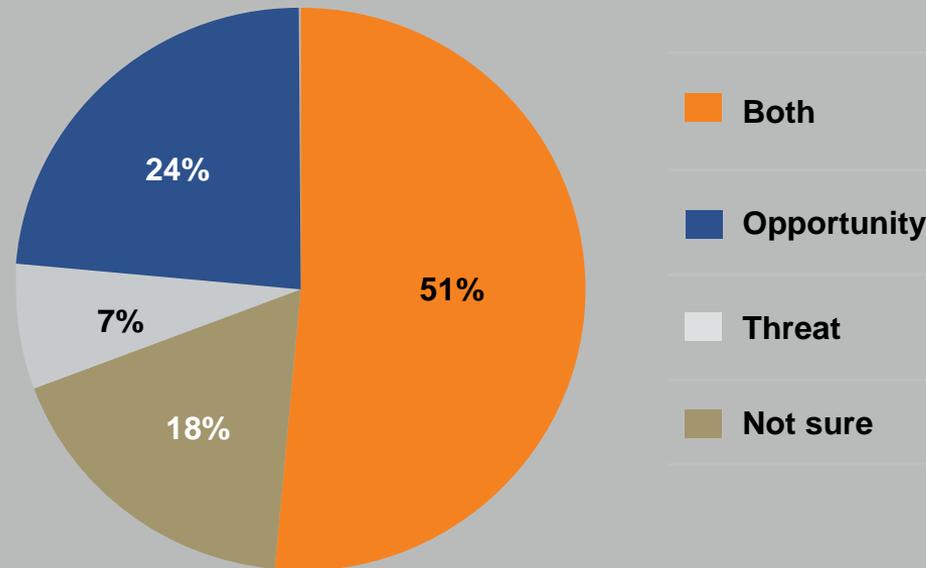


% offering P2P payments in 2016



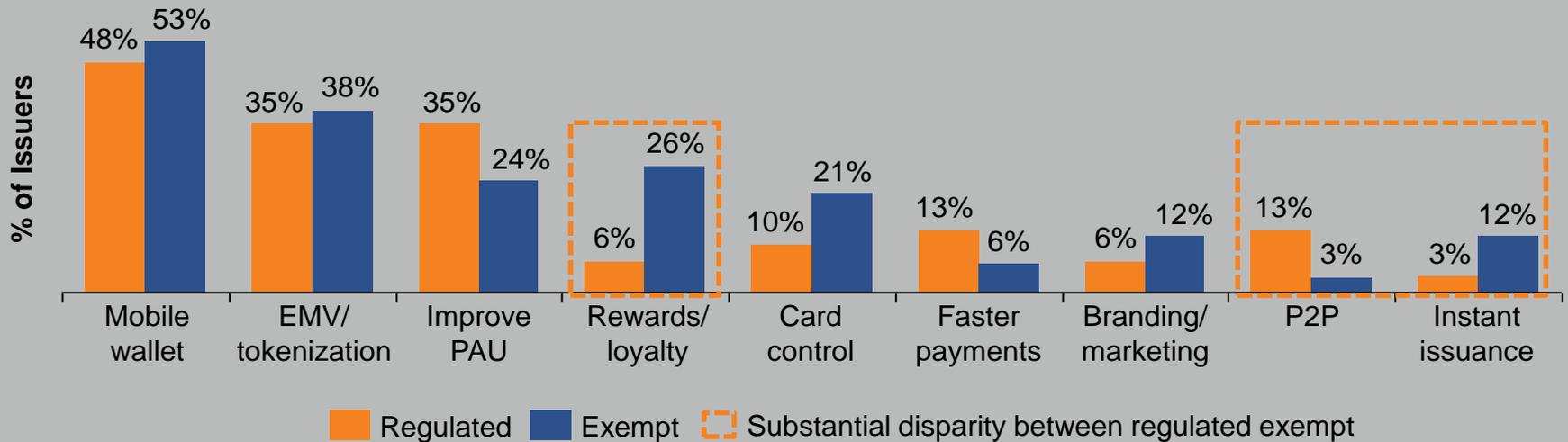
Most Issuers View FinTech as Both an Opportunity and Threat

Is FinTech an opportunity or a threat?



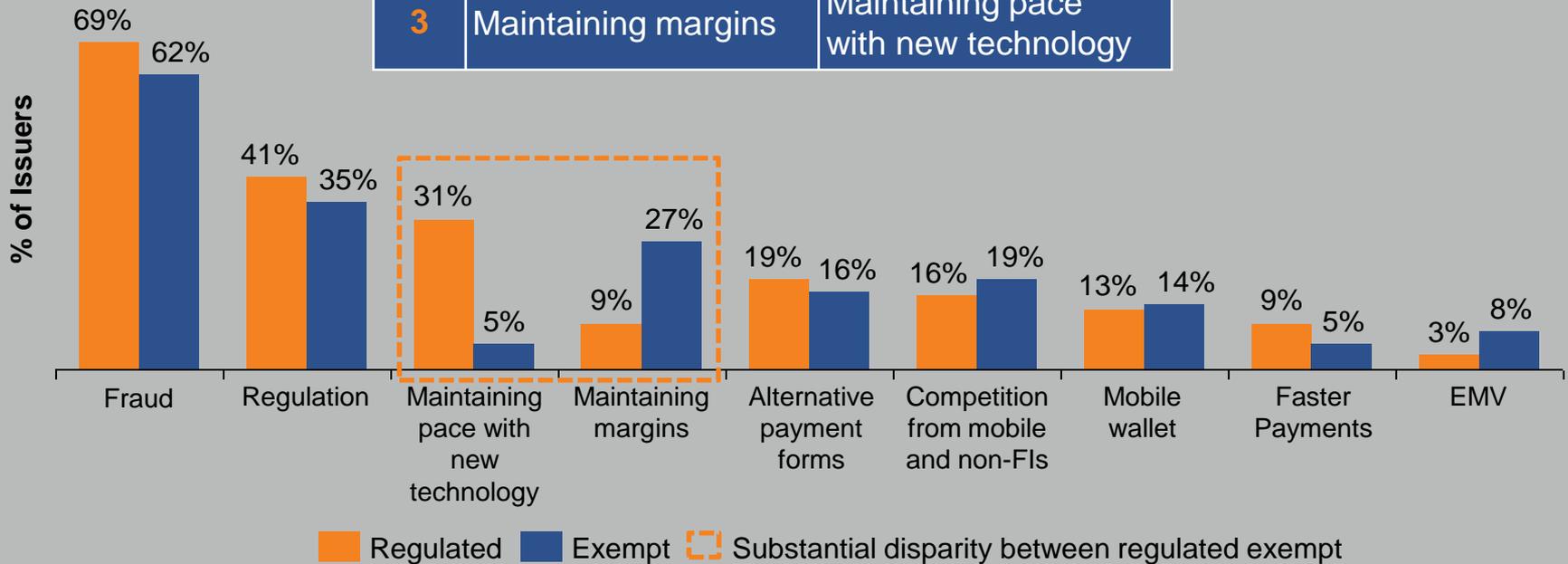
Issuers' Top Opportunities in 2016...

Change in Top Opportunities		
	2015	2016
1	Improve PAU	Mobile wallet
2	Mobile wallet	EMV/tokenization
3	EMV/tokenization	Improve PAU



...And Their Top Challenges for 2016

Change in Top Challenges		
	2015	2016
1	Fraud	Fraud
2	Regulation	Regulation
3	Maintaining margins	Maintaining pace with new technology



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