

Consumer Payment Choice: A Central Bank Perspective

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The views expressed in this presentation do not necessarily represent the views of the Federal Reserve Bank of Boston or the Federal Reserve System. Results from the 2011 Survey of Consumer Payment Choice (SCPC) and 2012 Diary of Consumer Payment Choice (DCPC) are preliminary and subject to change.



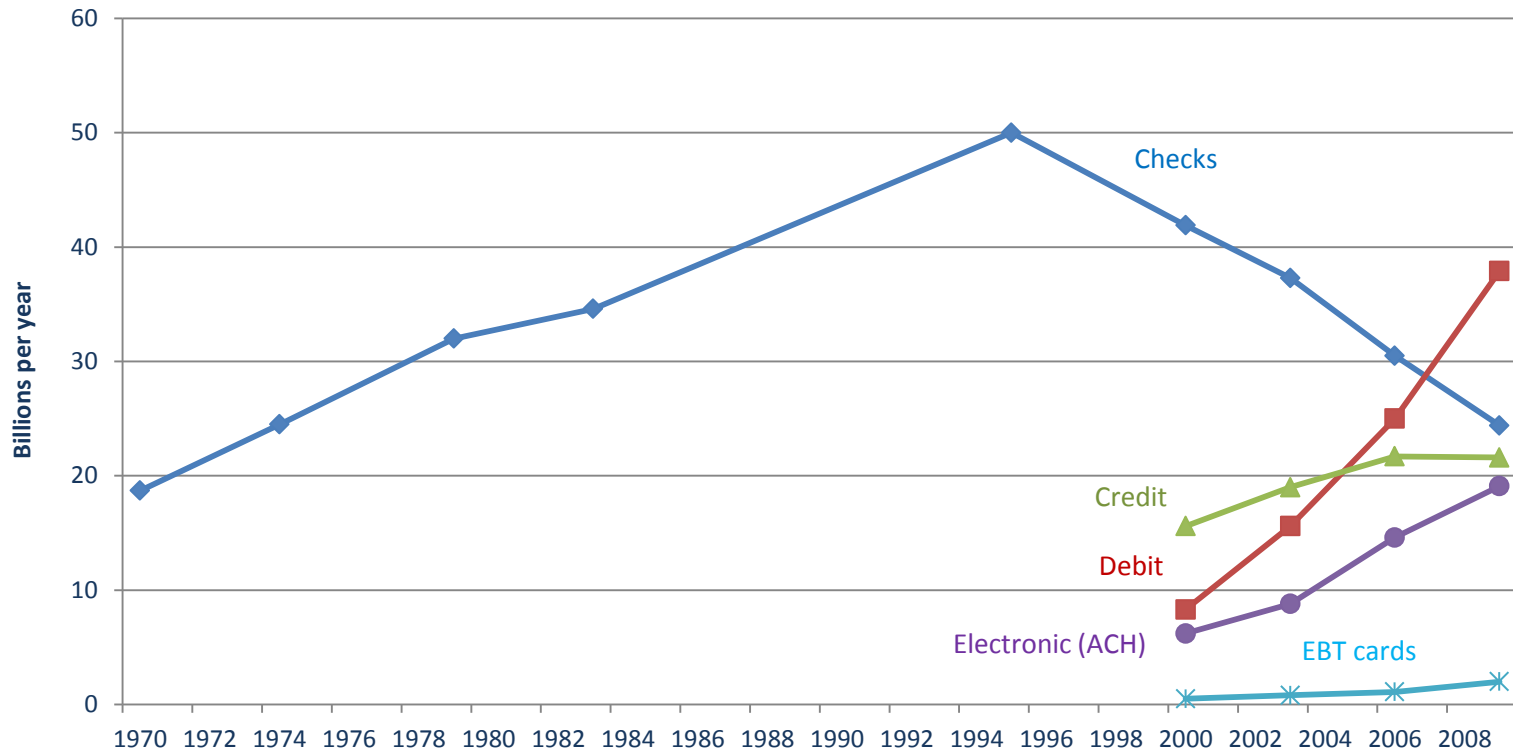
Agenda

- **Payments Transformation**
- Recent Consumer Payment Choices
- Consumer Assessments: Security Example
- Understanding Consumer Payment Behavior
- Debit vs. Prepaid
- Looking Ahead – Policies and Predictions



Noncash payment trends

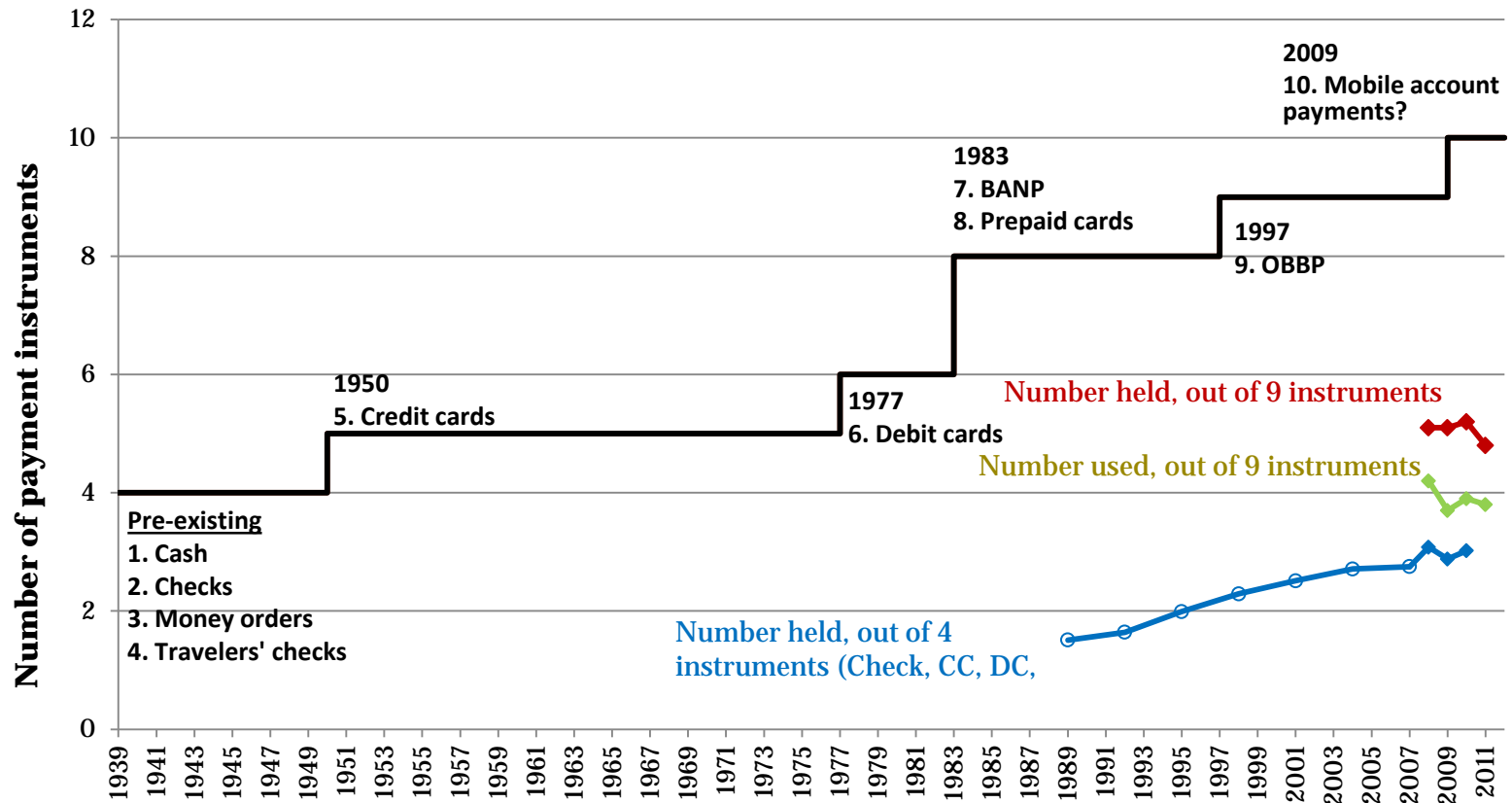
Number of U.S. payments by all sectors (household, business, government)



Source: Federal Reserve Payment Study (FRPS)



Consumers have more payment options



Source: 2008-2012 Survey of Consumer Payment Choice, 2011-2012 results unofficial and preliminary; CPRC research



New payments policies were enacted

2010

- CARD Act of 2009 (Fed, Congress)
- Opt-in overdraft protection (Fed)

2011

- Dodd-Frank Act 2010/Durbin (Fed)
- V/MC Settlement: discounts, fee disclosure (DoJ)
- New fees on debit cards, accounts (Banks)

2012

- Proposed rules for prepaid cards (CFPB)
- Strategic plan for payments (Fed)

2013

- Proposed rules for student cards/accounts (CFPB)
- V/MC/bank Settlement: CC fee rebate, surcharging (US District Court, NY)
- Regulation II rejected (US District Court, DC)

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Consumer payments data program

Year	Survey (Boston Fed)	Diary (3 Fed Banks)	Transactions Data (TBD)
2003	524		
2004	4,631		
2005	---		
2006	1,500*		
2007	---		
2008	1,010		
2009	2,169		
2010	2,102	353	
2011	2,151	389	
2012	3,176	2,547	
2013	2,100 ^e	---	?

Notes: * Sponsored by the AARP; e is estimate. Red indicates pilot studies. All samples are U.S. consumers except in 2003 (Boston Fed employees) and 2004 (all Fed employees).



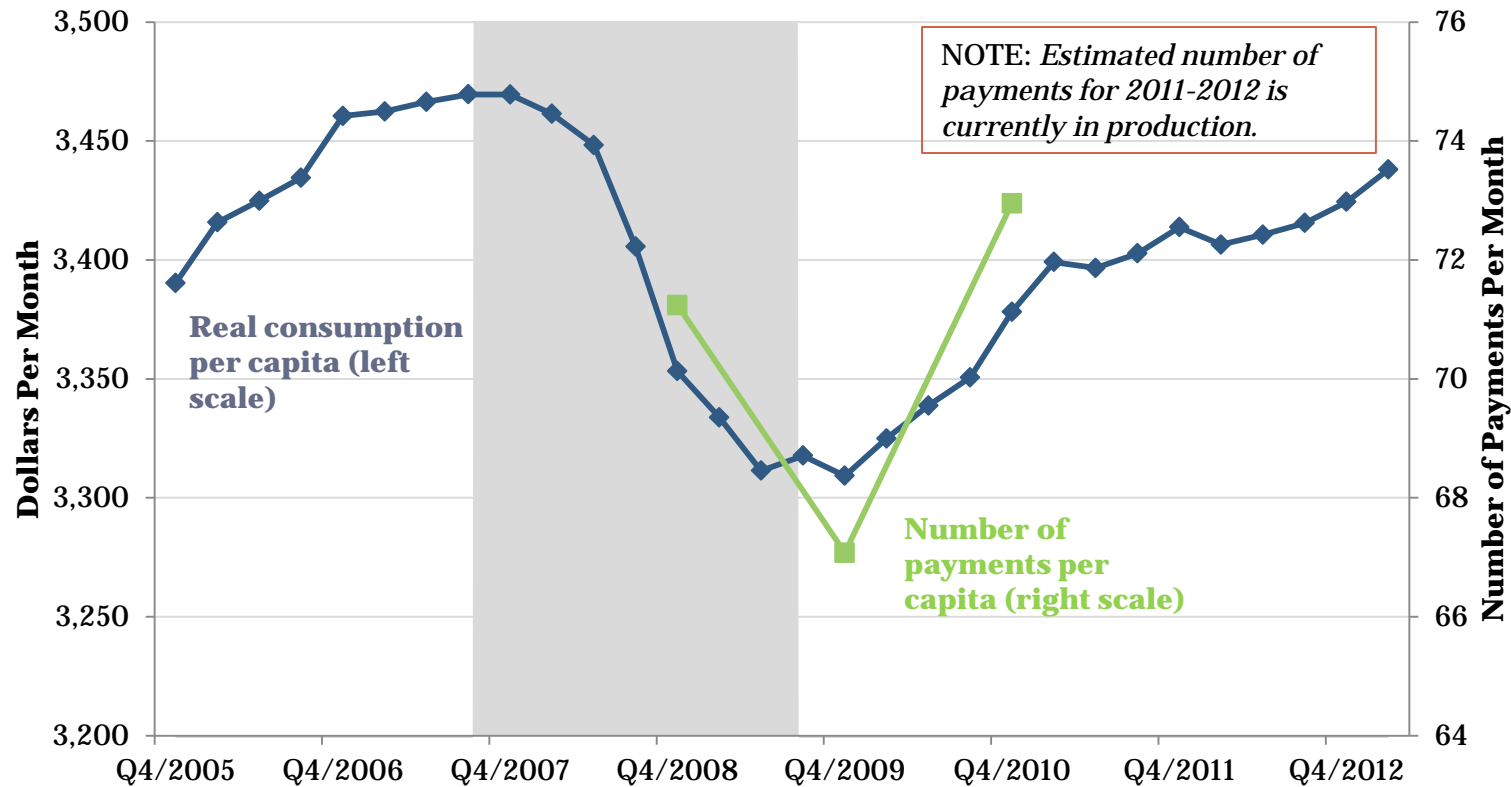
Comparison of Survey and Diary

Feature	Survey (monthly activity)	Diary (3-day activity)
Financial responsibility	X	
Assess payment instruments (PI)	X	
Adoption of PI	X	X (implied)
Incidence of use of PI	X (month, year)	X (3-day)
Cash activity	X	X
Frequency of use of PI	X	X
Dollar value of payment activity		X

Note: Diary data can be linked to Survey panel data from 2008-2012 (and beyond) for each individual respondent.



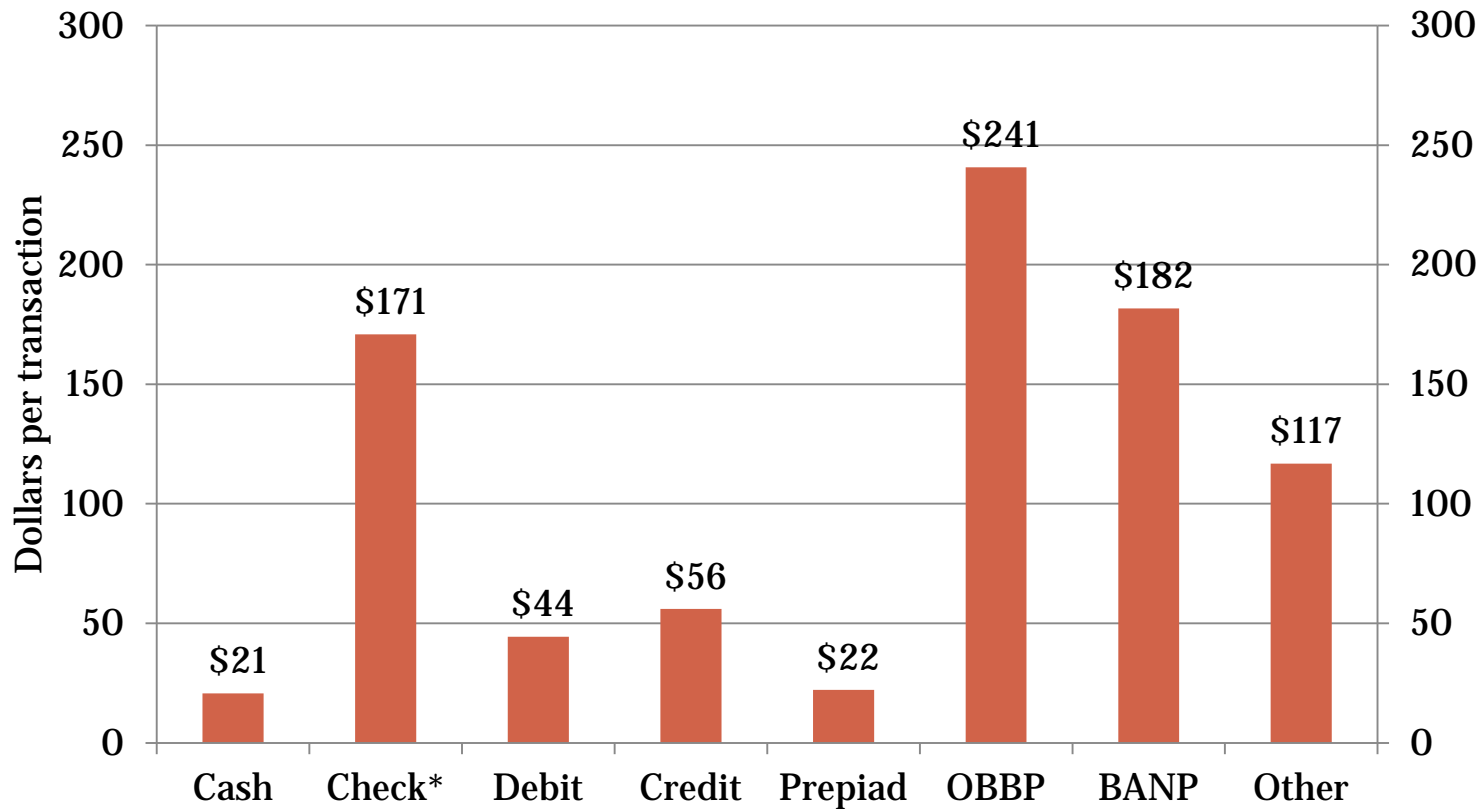
Consumer payments and consumption



Notes: Consumption is the inflation-adjusted value of goods and services bought. Payments is the number of times consumers made a payment for consumption and non-consumption transactions.
Sources: Haver Analytics; 2008-2010 Survey of Consumer Payment Choice.



Transaction values by instrument, 2012

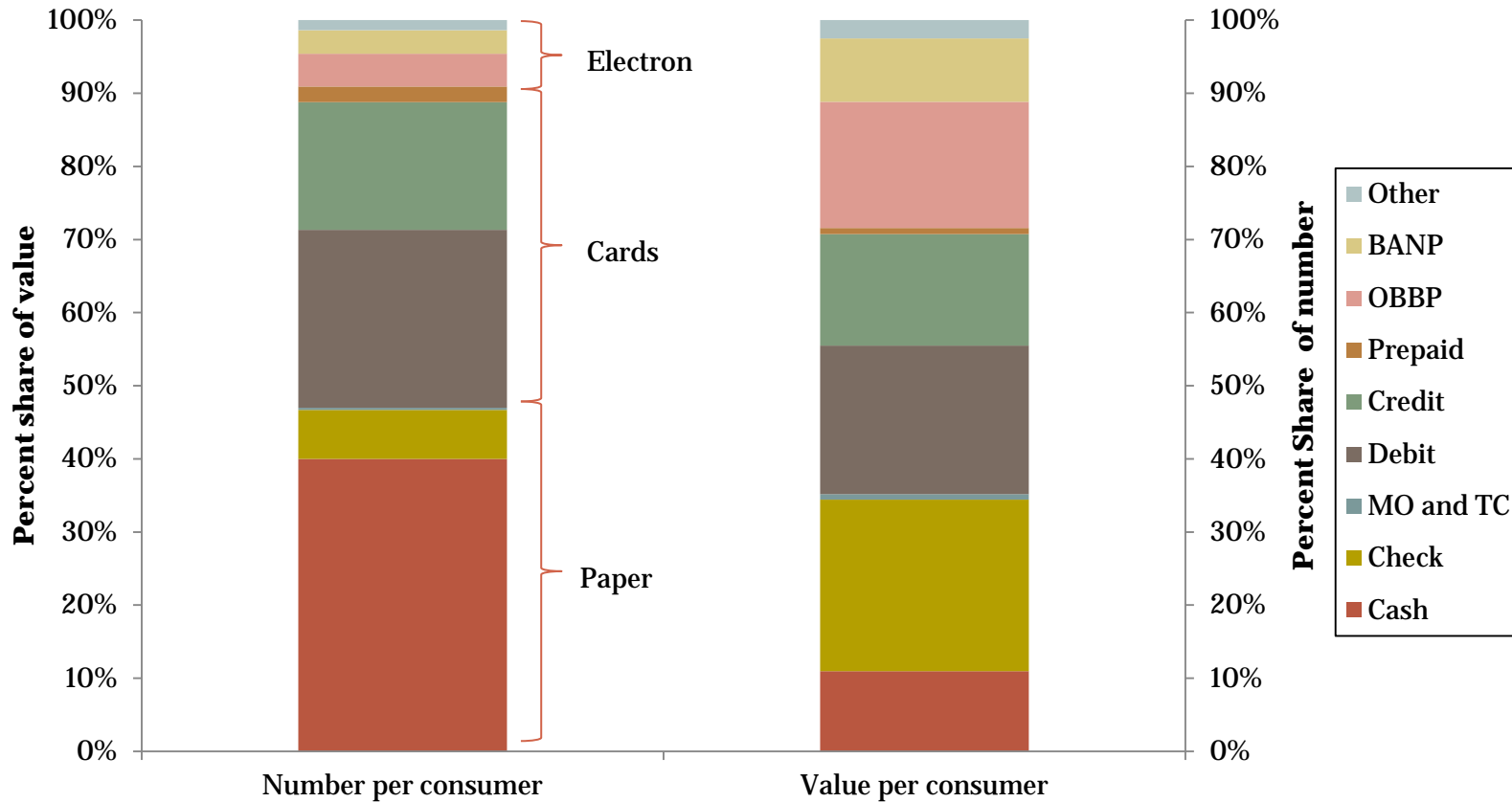


Notes: *Checks and Money Orders. "Other" does not include unreported and text messages.

Source: 2012 Diary of Consumer Payment Choice, unofficial and preliminary.



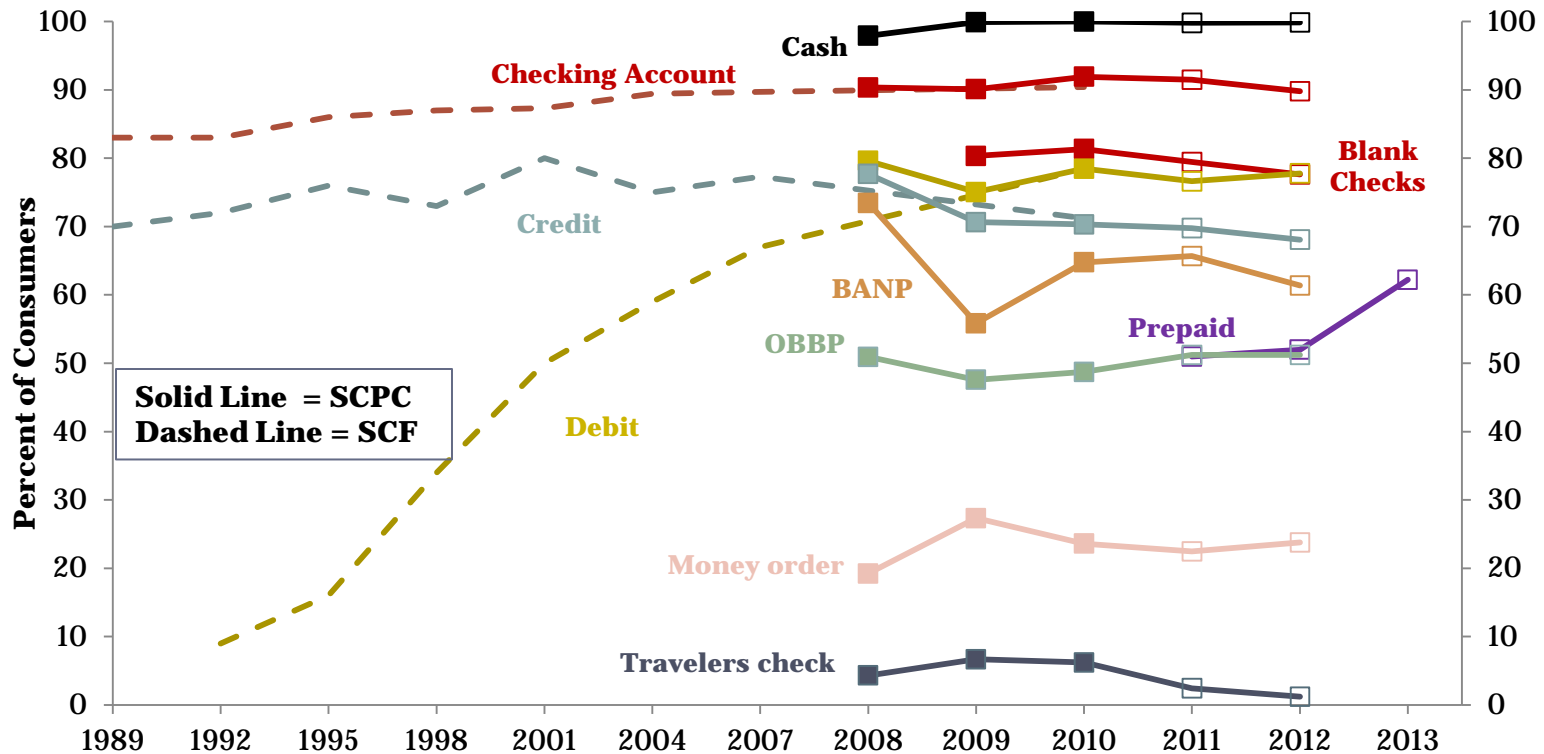
Consumer payments by instrument, 2012



Source: 2012 Diary of Consumer Payment Choice, unofficial and preliminary.



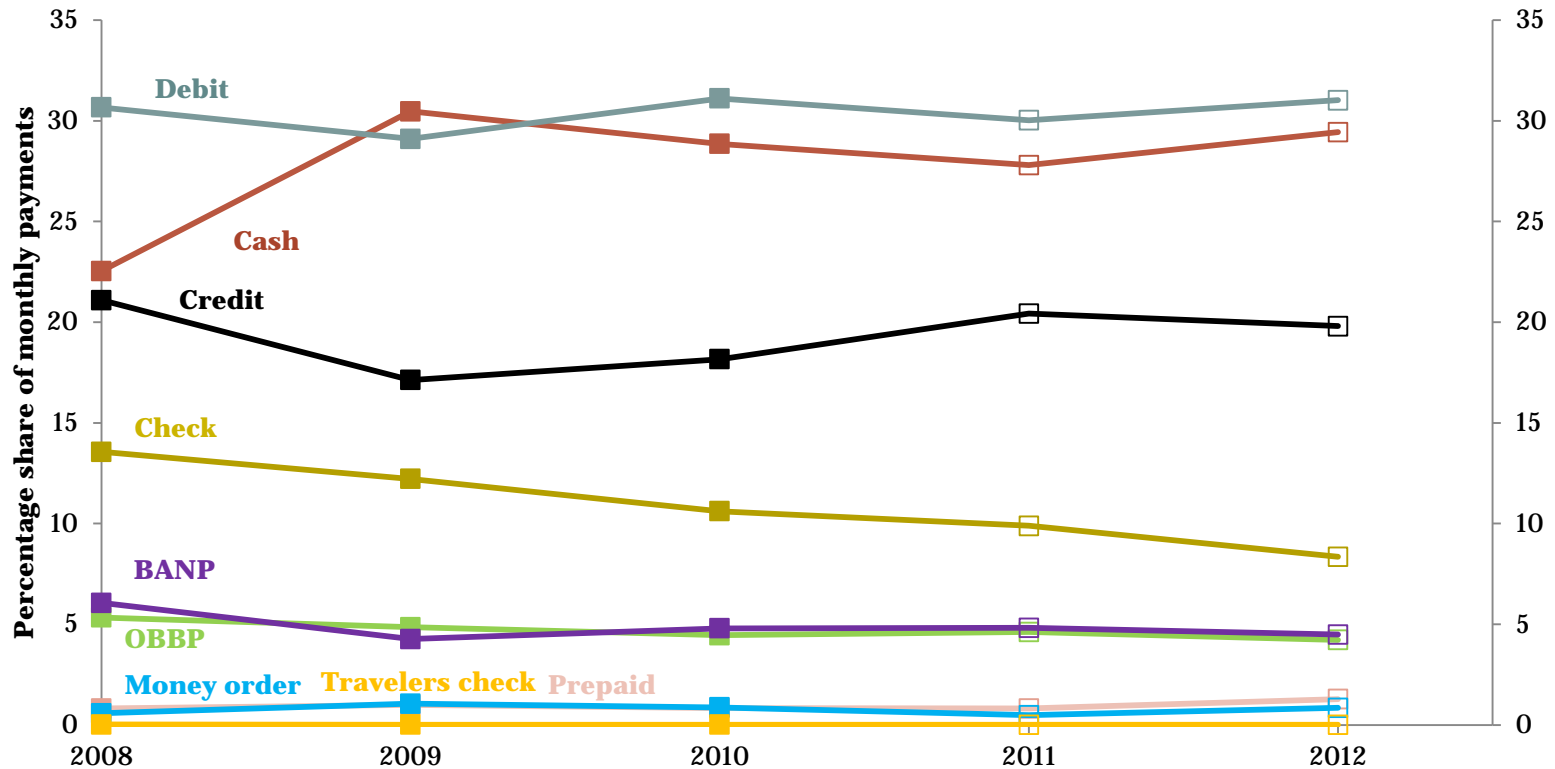
Consumer adoption of payment instruments



Source: 2008-2012 Survey of Consumer Payment Choice, 2011-2012 results unofficial and preliminary; 2013 Prepaid Survey, results unofficial and preliminary; Survey of Consumer Finance



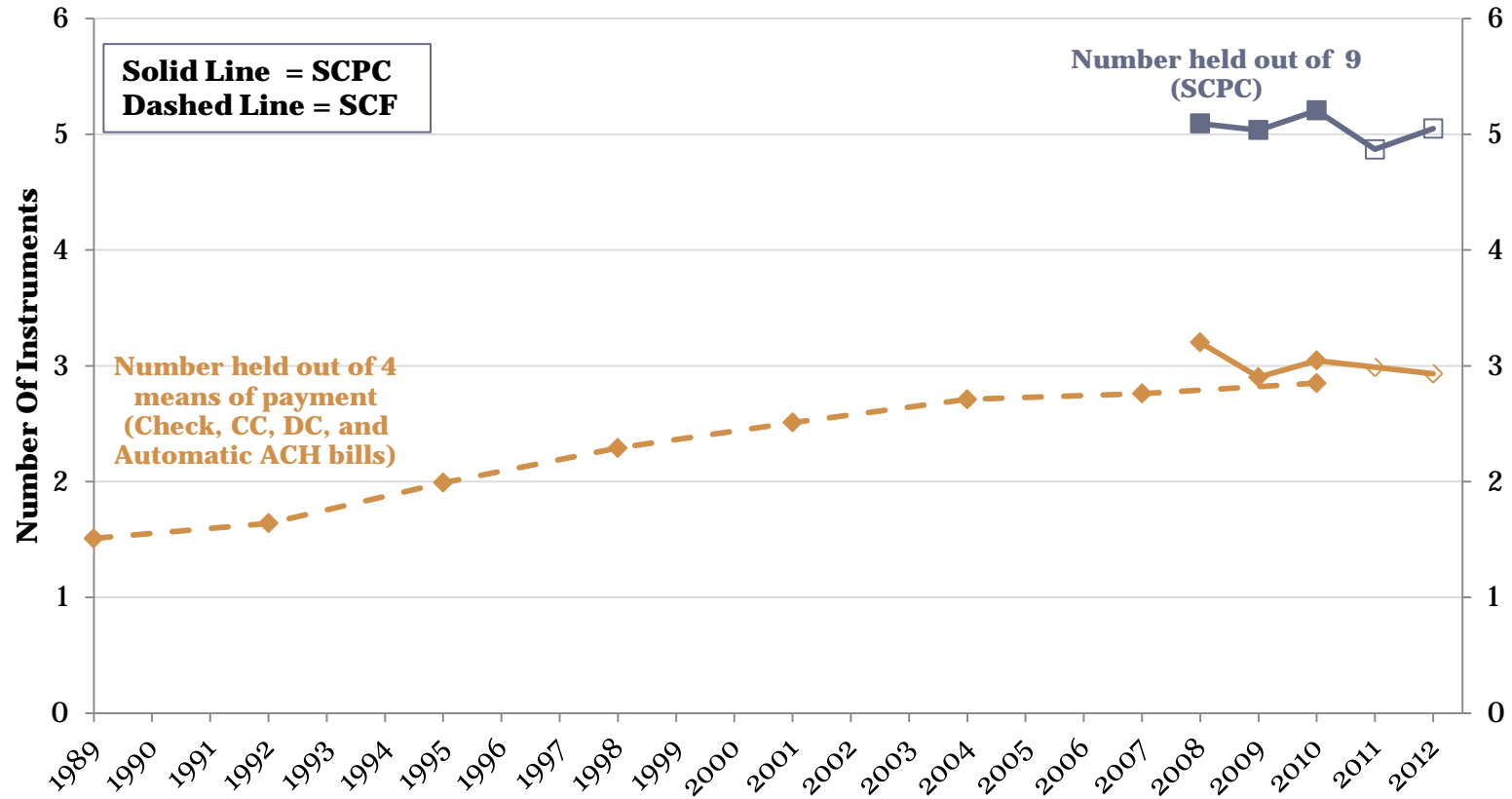
Consumer use of payment instruments



Source: 2008-2012 Survey of Consumer Payment Choice, 2011-2012 results unofficial and preliminary



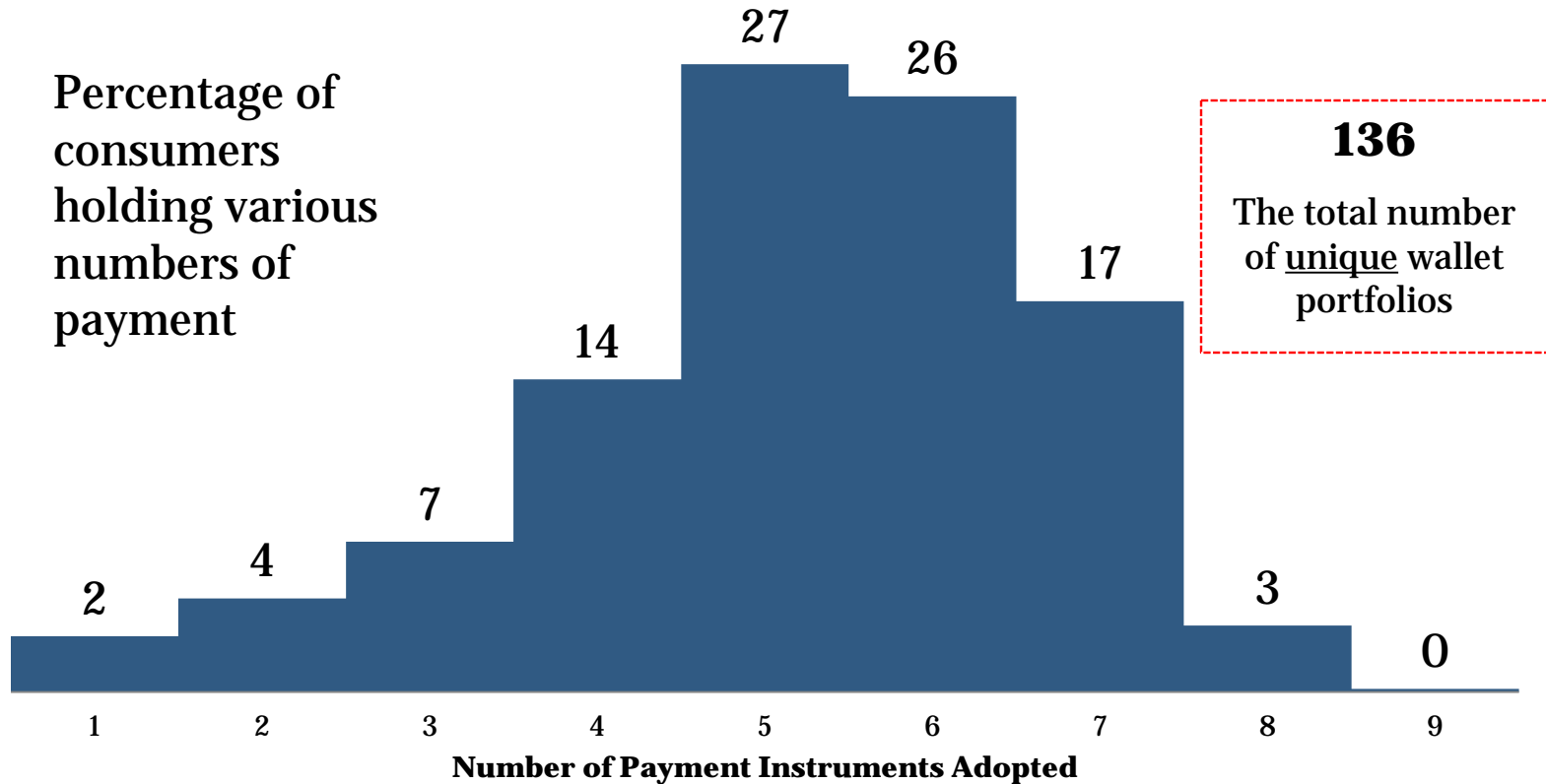
Number of instruments held by consumers



Source: 2008-2012 Survey of Consumer Payment Choice, 2011-2012 results unofficial and preliminary; Survey of Consumer Finance



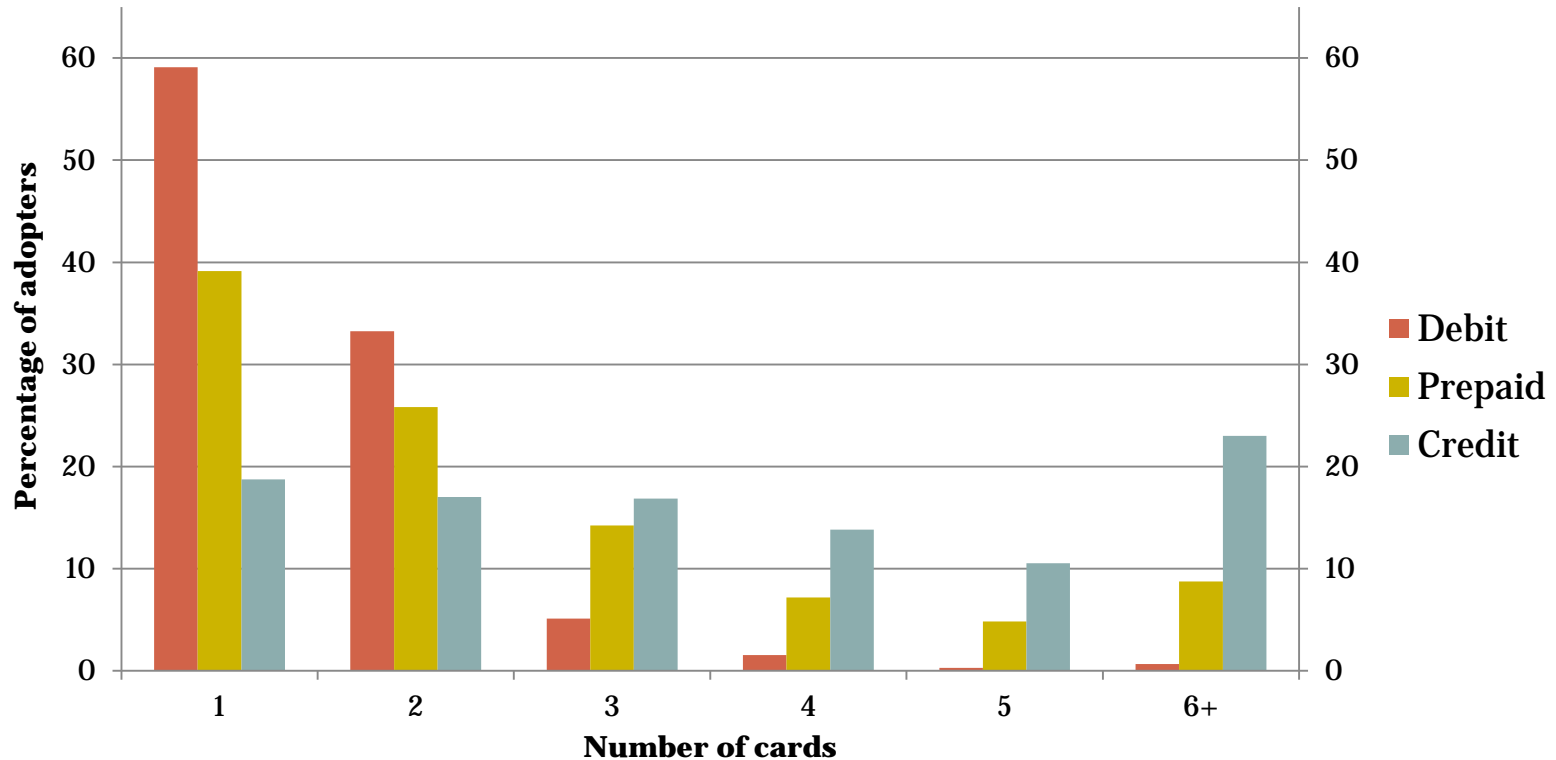
Consumer “portfolios” of instruments



Source: 2010 Survey of Consumer Payment Choice



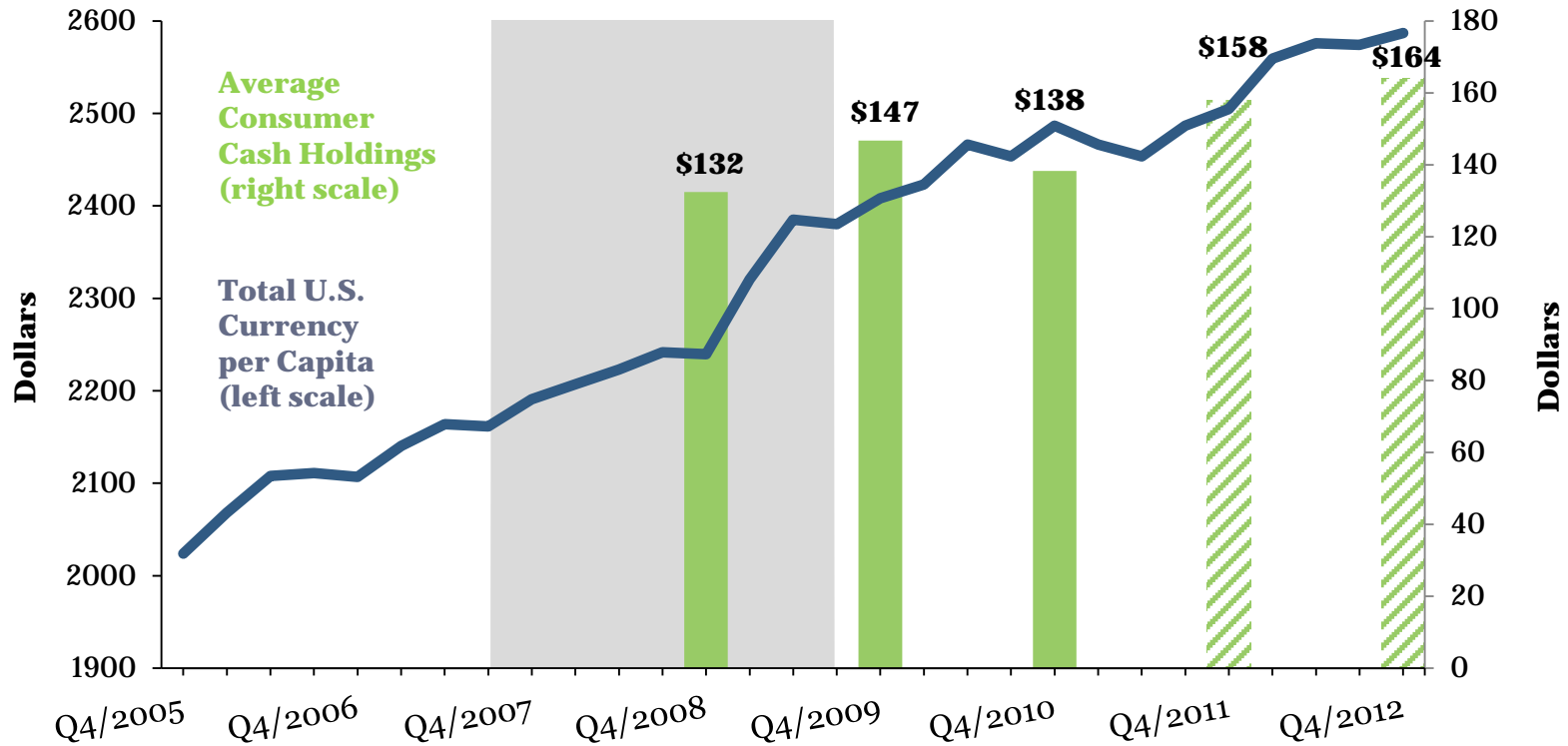
Number of payment cards held by adopters



Source: 2012 Survey of Consumer Payment Choice, results unofficial and preliminary



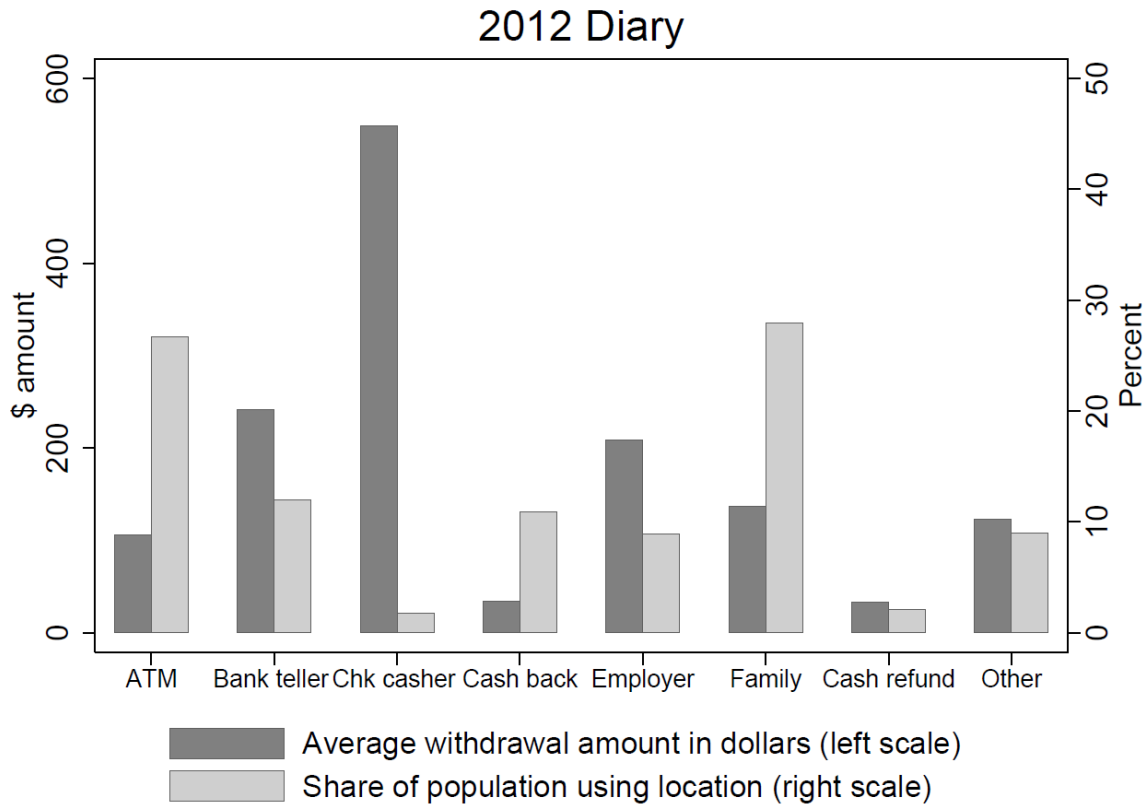
U.S. domestic currency in circulation



Note: Capita is defined as 18+ non-institutionalized civilians. Cash holdings exclude large values.
Source: (Left) Federal Reserve Statistical Release; (Right) 2008-2012 Survey of Consumer Payment Choice, 2011-2012 results unofficial and preliminary



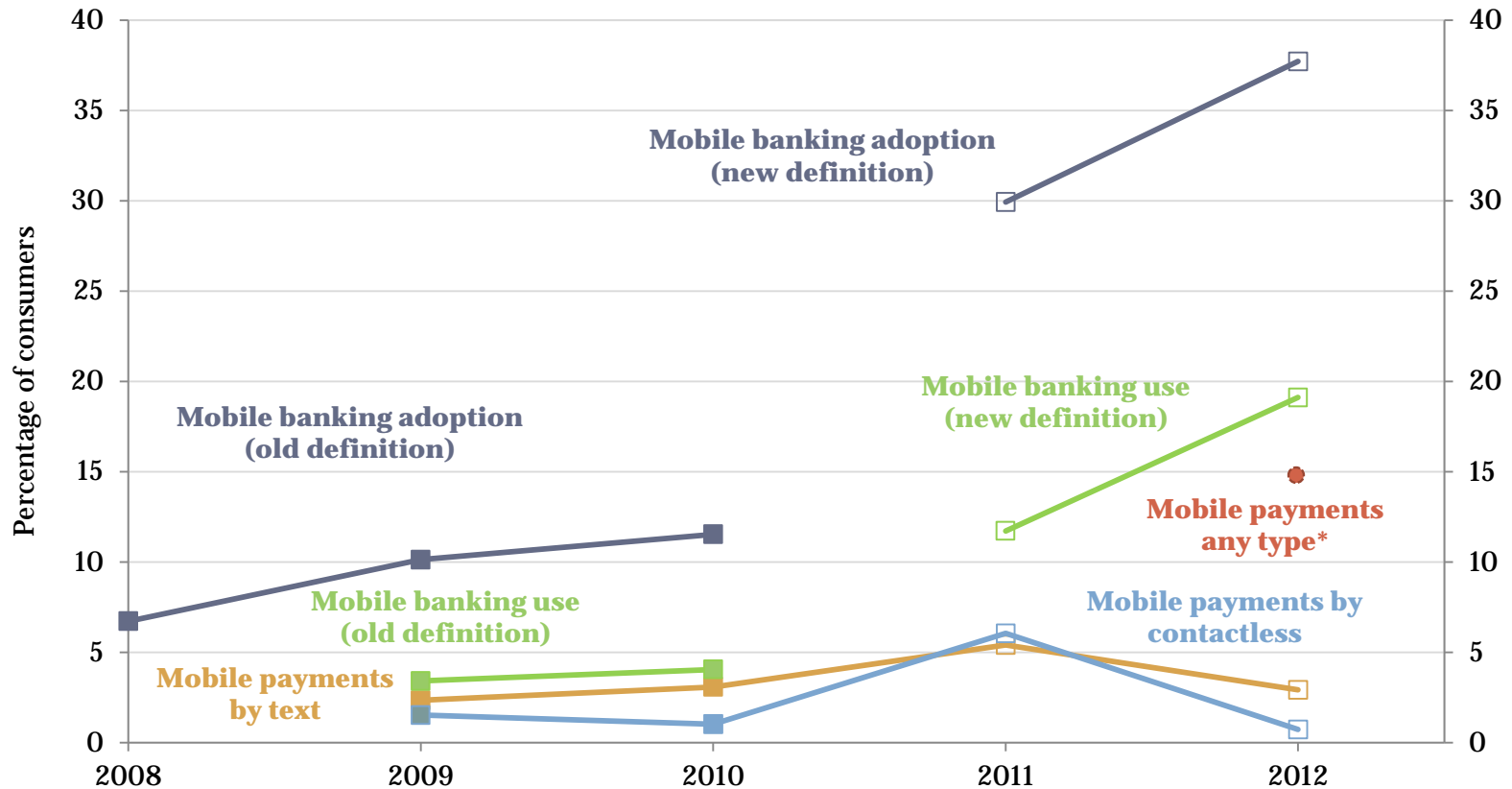
Cash withdrawals by location



Source: 2012 Diary of Consumer Payment Choice, unofficial and preliminary



Mobile banking and payments



Source: 2008-2012 Survey of Consumer Payment Choice, 2011-2012 results unofficial and preliminary;
 *Consumers and Mobile Financial Services, Federal Reserve Board.

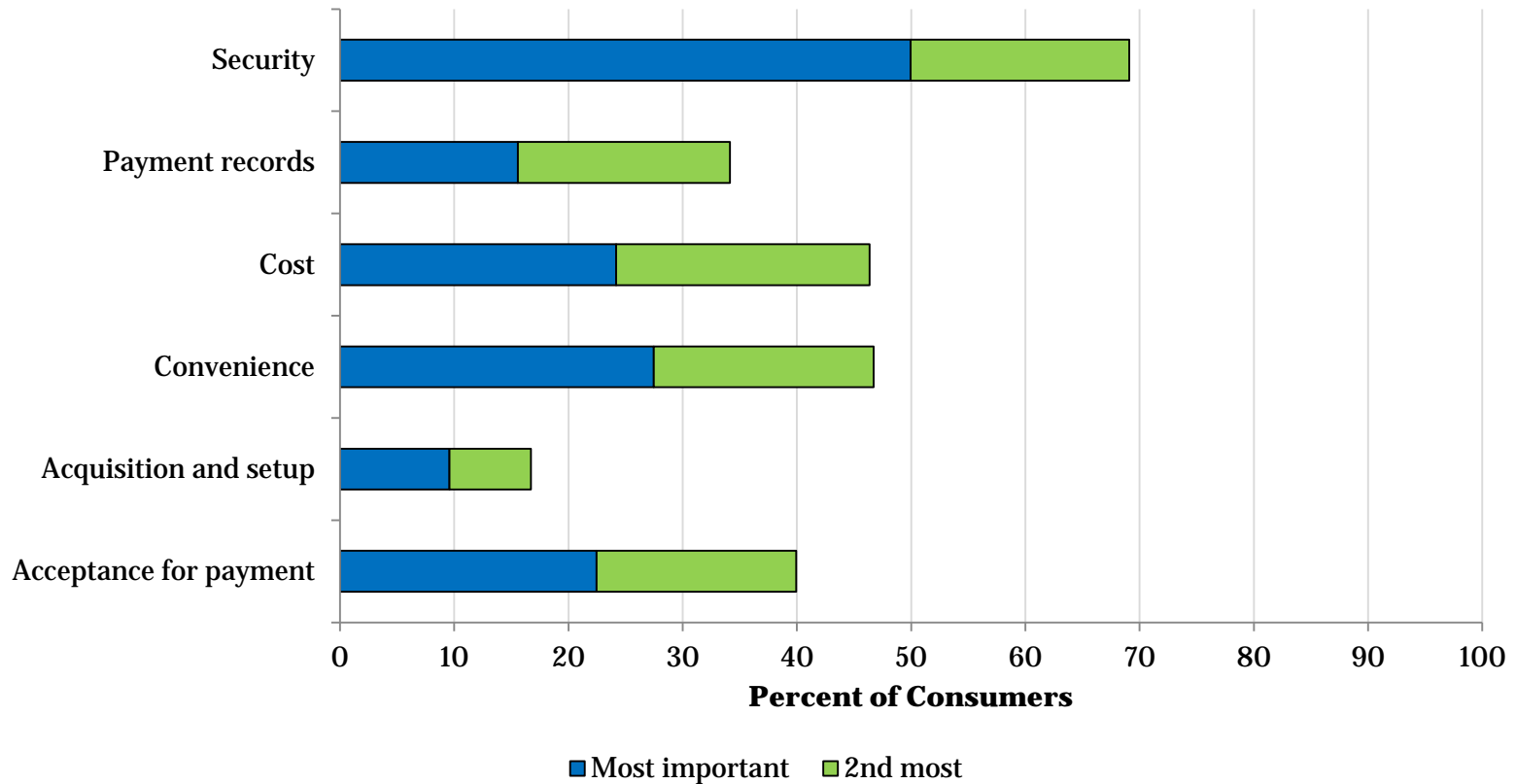


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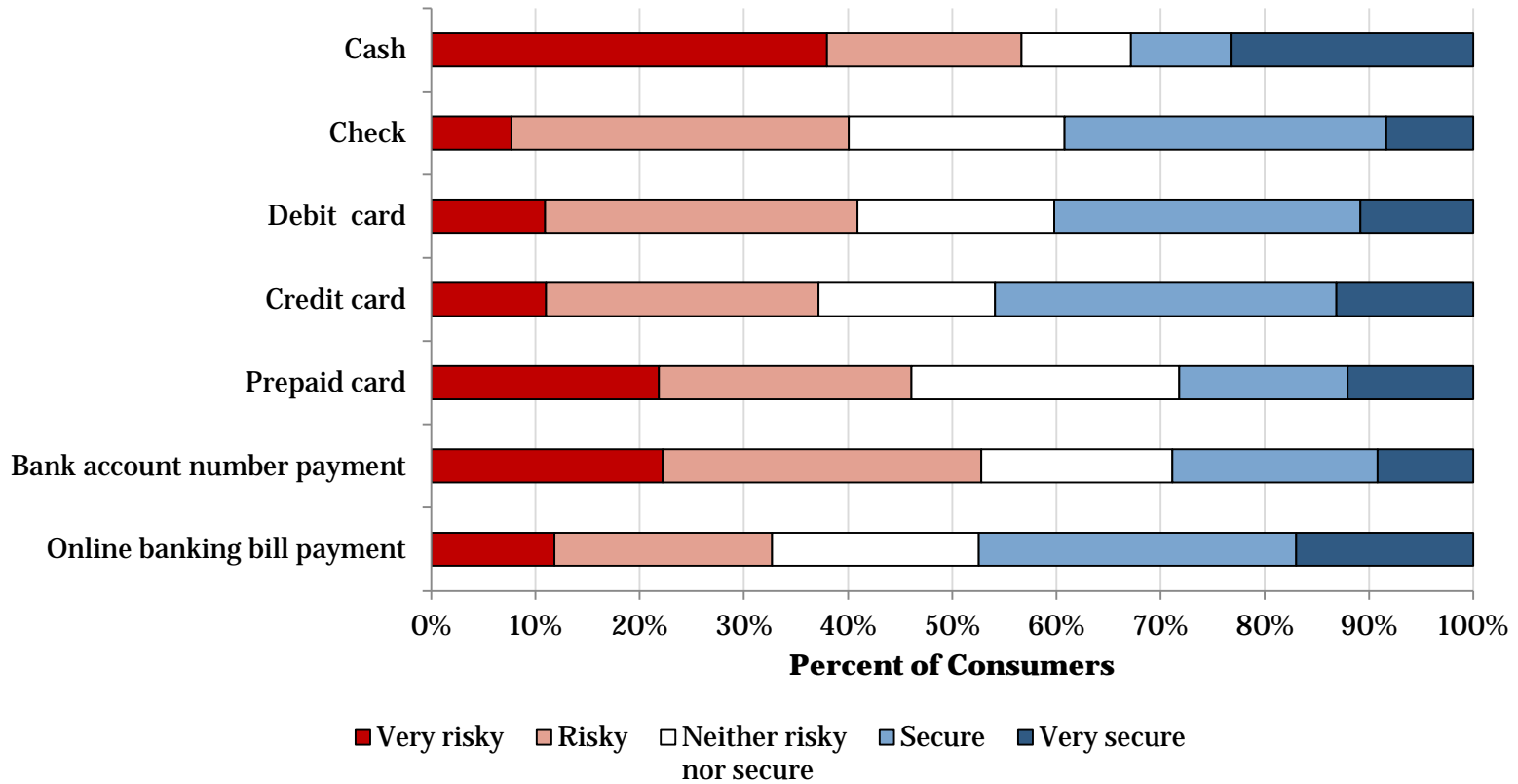
Security seems most important to consumers



Source: 2011 Survey of Consumer Payment Choice, results unofficial and preliminary



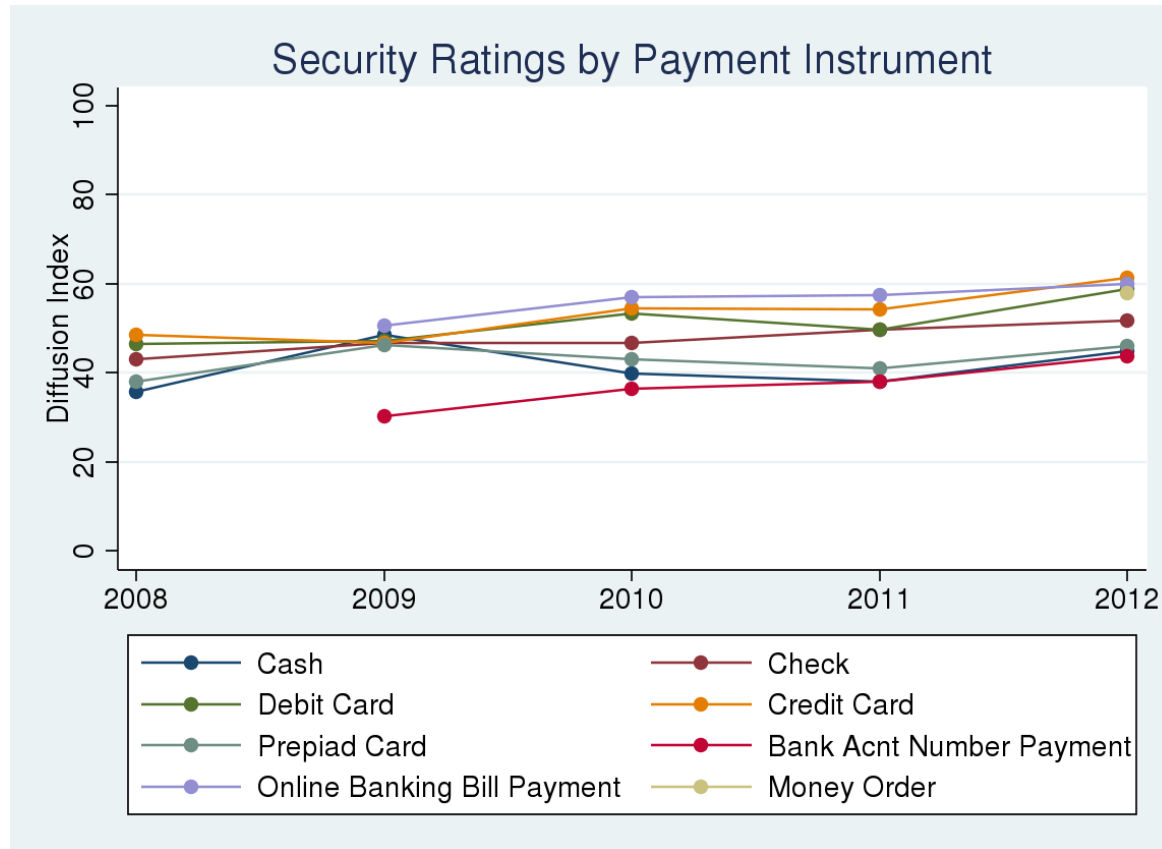
Ratings of payment instrument security



Source: 2011 Survey of Consumer Payment Choice, results unofficial and preliminary



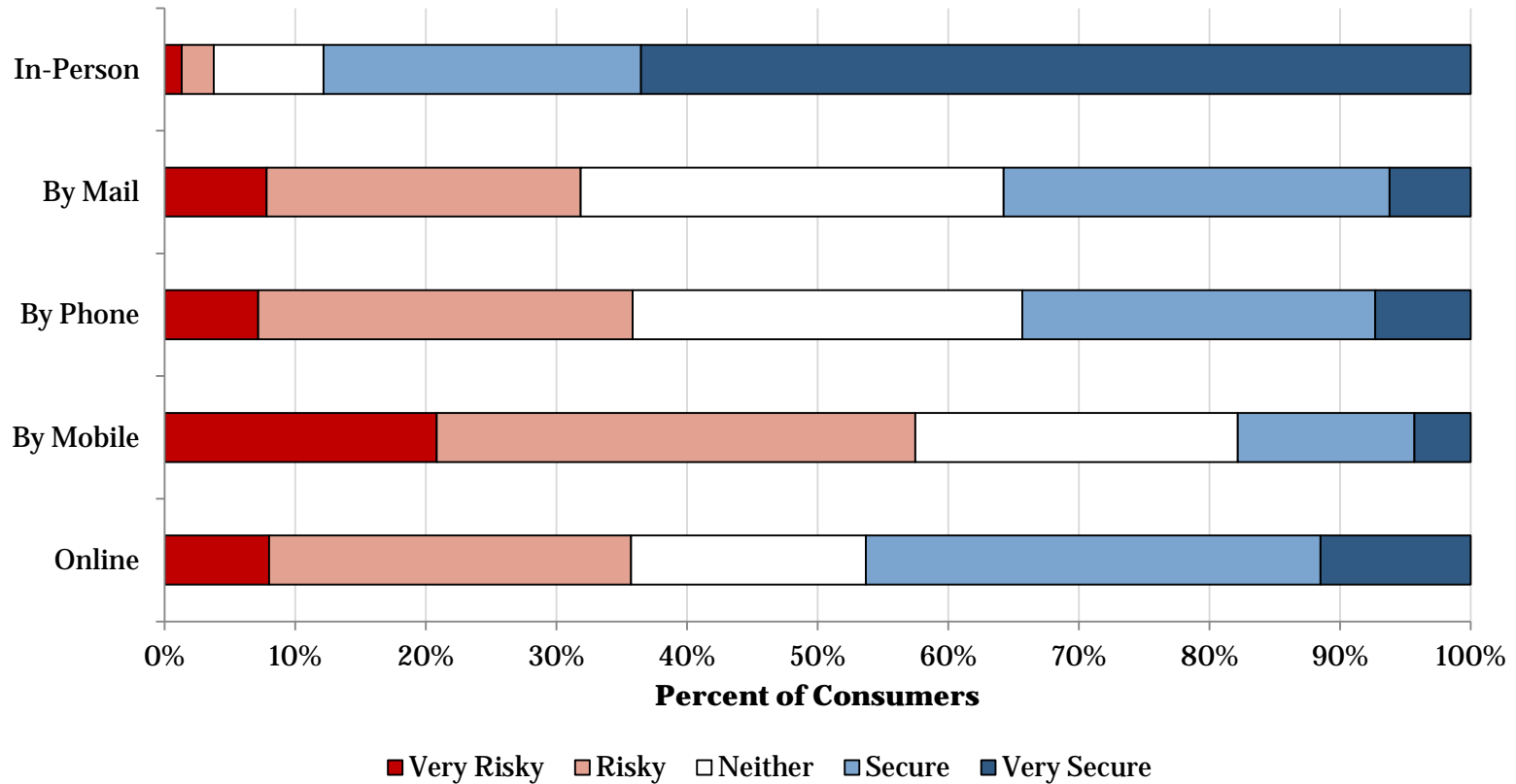
Security ratings are rising over time



Source: 2008-2012 Survey of Consumer Payment Choice, 2011-2012 results unofficial and preliminary



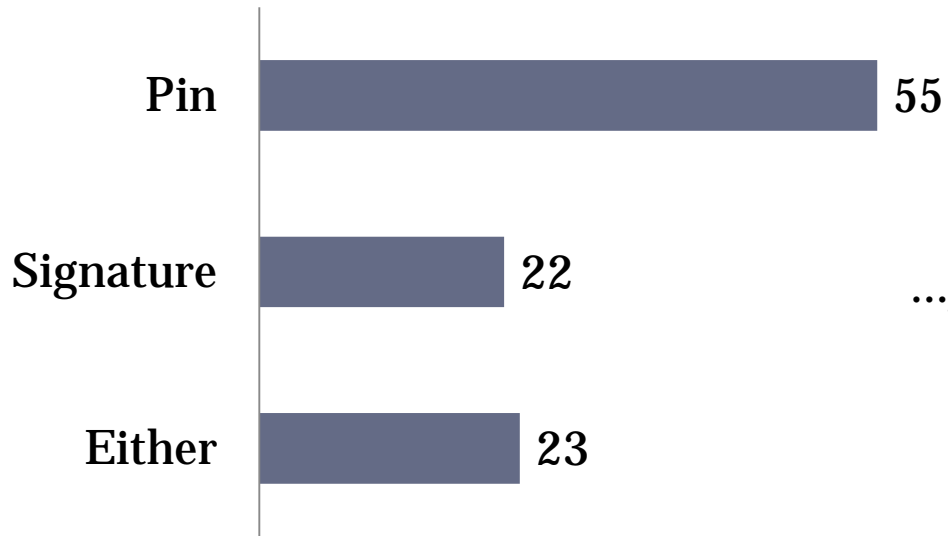
In-person payments are rated most secure



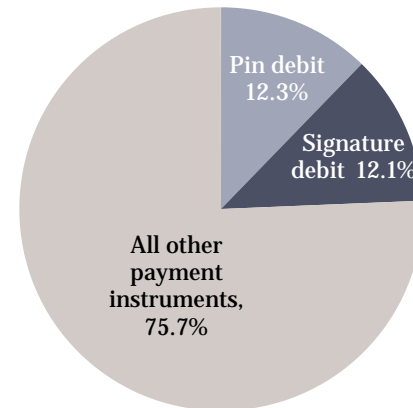
Source: 2011 Survey of Consumer Payment Choice, results unofficial and preliminary



Consumers prefer PIN debit payments...



...yet *usage* is almost even



Sources: 2012 Survey of Consumer Payment Choice;
2012 Diary of Consumer Payment Choice, unofficial and preliminary



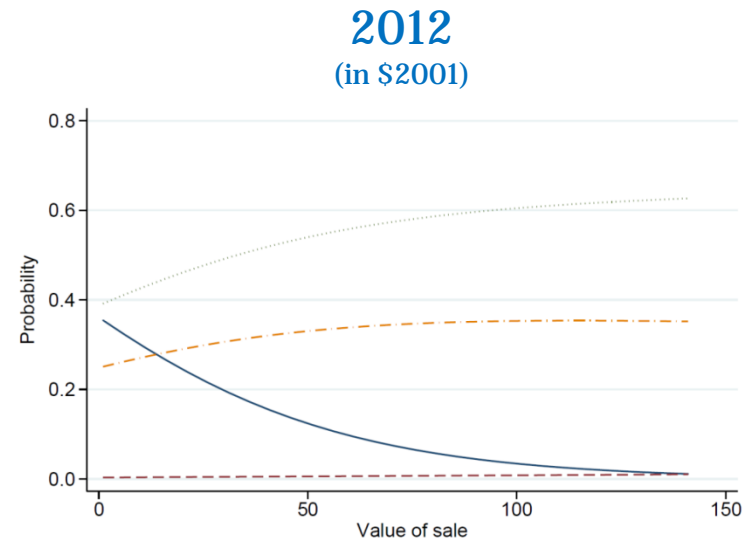
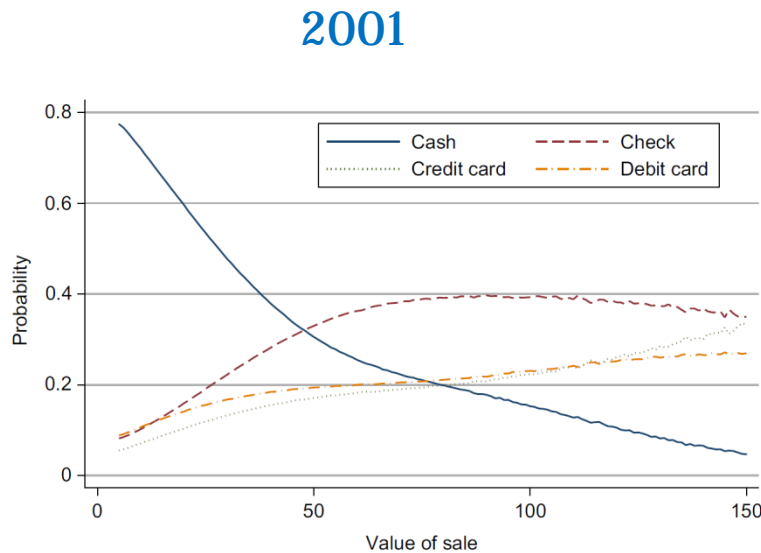
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Grocery payments, then and now

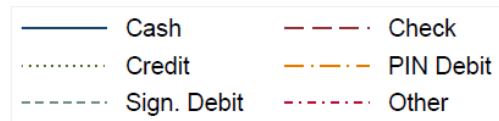
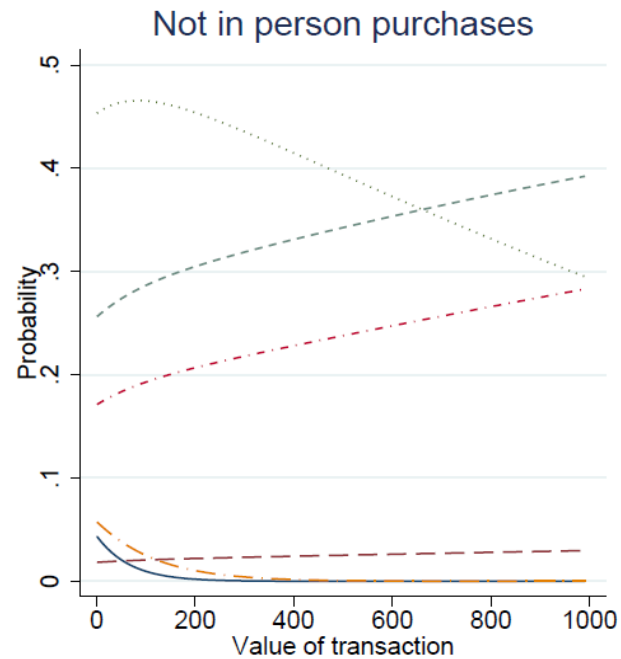
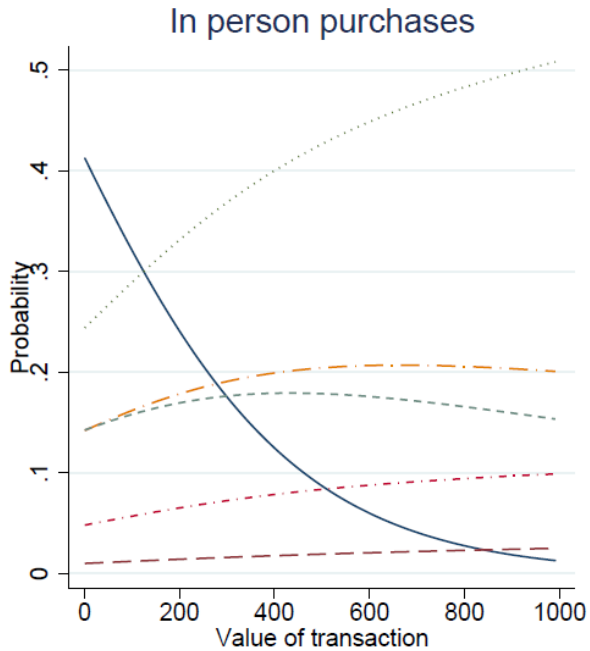
Probability of using payment instruments correlates with \$ value



Notes: Graphs include same four payments instruments. Credit card includes signature debit.
Source (left): Klee, E. (2008). "How people pay: Evidence from grocery store data." *Journal of Monetary Economics*, 55, 526-541
Source (right): 2012 *Diary of Consumer Payment Choice*, results unofficial and preliminary



Nonbill payments, 2012

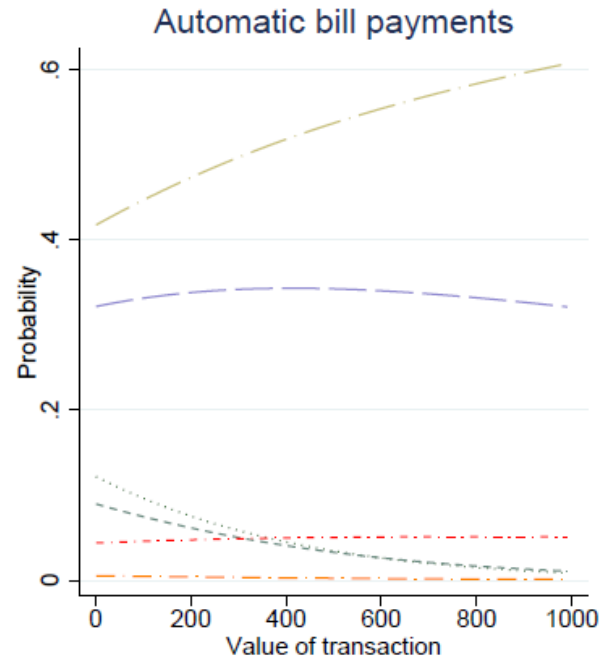
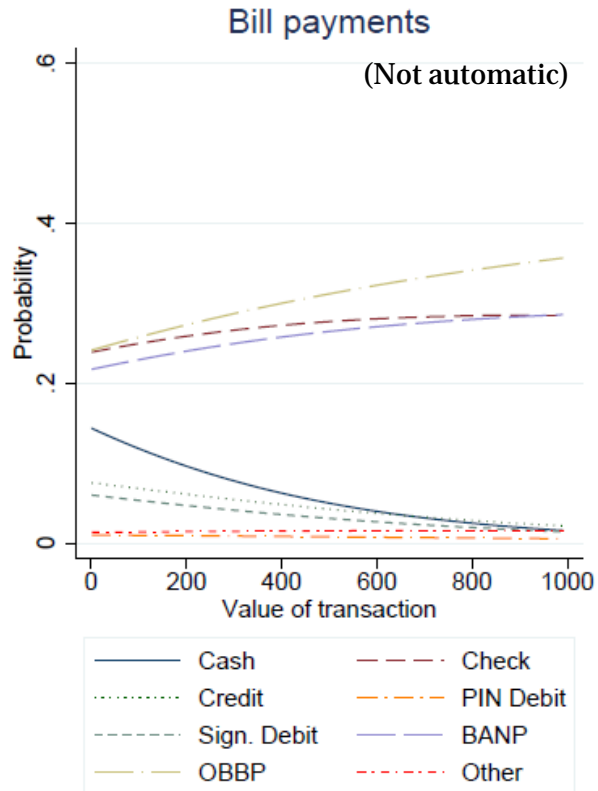


Other category includes: prepaid, BANP, OBBP, money order travelers' check, text message and other payments.

Source: 2012 Diary of Consumer Payment Choice, unofficial and preliminary



Bill payments, 2012



Other category also includes: prepaid, money order, travelers' check and text message payment.

Source: 2012 Diary of Consumer Payment Choice, unofficial and preliminary



Consumers benefit least from prepaid cards

Table 6: Relative Utility by Context and Payment Instrument (1.00 = most preferred by consumers)

	Automatic bill pay	Online bill pay	In person bill pay	Online pay	Essential retail	Non-essential retail	Other non-retail
cash			0.63		0.97	0.78	0.88
check			0.90	0.71	0.69	0.63	0.83
debit card	0.71	0.69	0.66	0.74	1.00	0.82	0.86
credit card	0.67	0.64	0.64	0.72	0.89	0.78	0.83
online banking bill pay		0.87					
electronic bank account deduction	0.84	0.78		0.74			
store value card			0.50	0.53	0.64	0.56	0.57
direct deduction from income	0.85						

Source: Sergei Koulayev, Marc Rysman, Scott Schuh, and Joanna Stavins (2012), [“Explaining Adoption and Use of Payment Instruments by U.S. Consumers.”](#) Federal Reserve Bank of Boston Working Paper No. 12-14.



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Comparison of money and instruments

Feature	Assets		Cards	
	Cash	Checking Account	Debit	Prepaid
Medium of exchange	✓	✓	✓	✓ (GP > other)
Unit of account	✓	✓	X	X
Store of value	✓	✓	X	X
Fees	Non-network ATMs	Some accounts	Few	Many



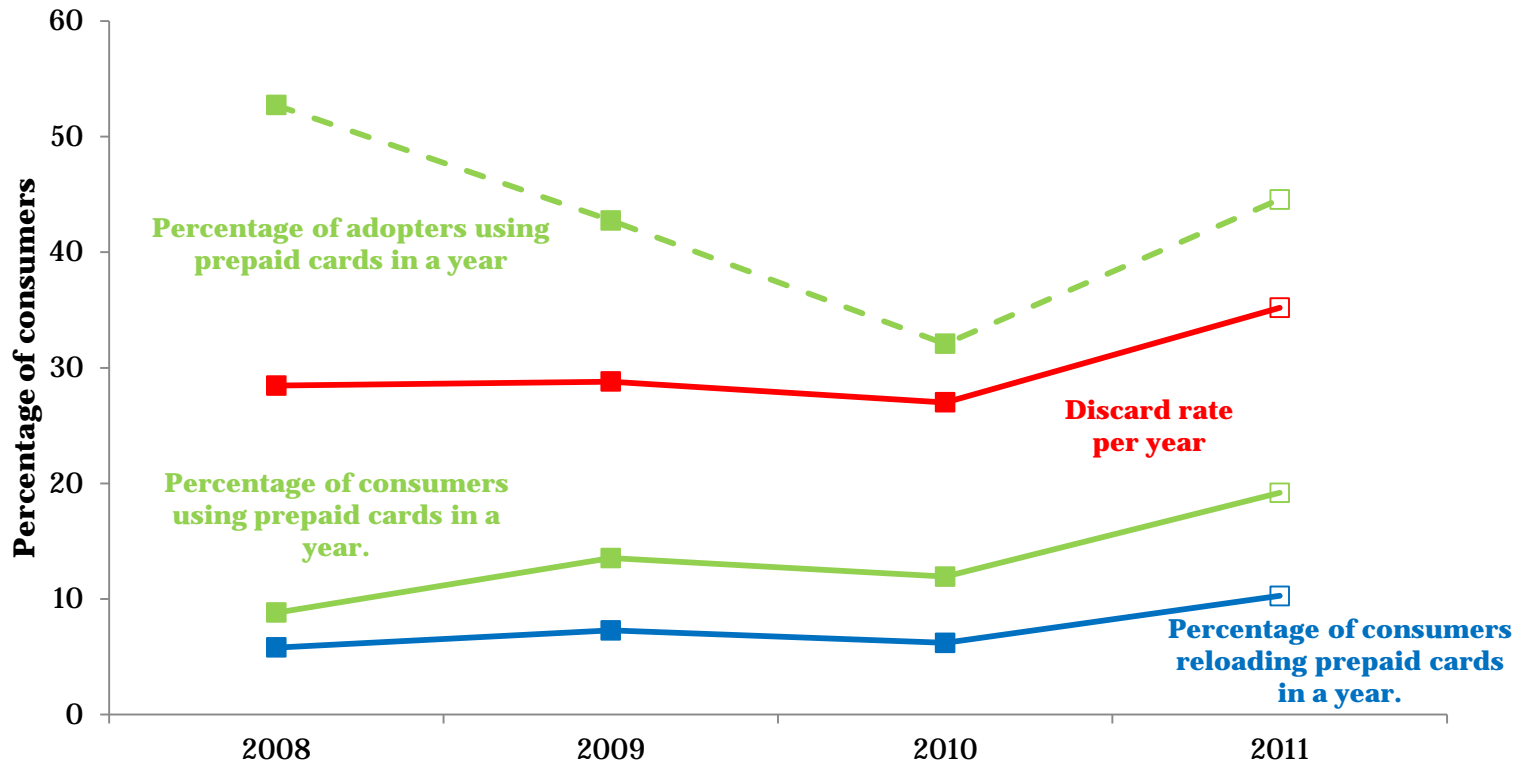
Consumers prefer debit to prepaid

Economic Theory							
High \leftrightarrow Low							
Opportunity Cost	Cash, Prepaid , TC, MO [Negative]	<	OBBP, BANP [Zero]	<	DC, Check	<	CC, Mobile Text/SMS
Transaction Cost	Prepaid	<	Cash	<	All Other Instruments		

Consumer Assessments, Survey Data					
Worse \leftarrow \rightarrow Better					
Acceptance	BANP	<	Check, Prepaid , OBBP	<	DC, CC, Cash
Cost	Cash	<	DC, Check, BANP, OBBP, Prepaid	<	CC
Records	Cash, Prepaid	<	BANP	<	DC, Check, CC, OBBP
Security	BANP, Cash, Check, Prepaid			<	OBBP, DC, CC
Convenience	BANP	<	Cash, Check, OBBP, Prepaid	<	DC, CC
Get/set up	Prepaid , OBBP, BANP	<	DC, CC, Check	<	Cash



Consumer use of prepaid cards

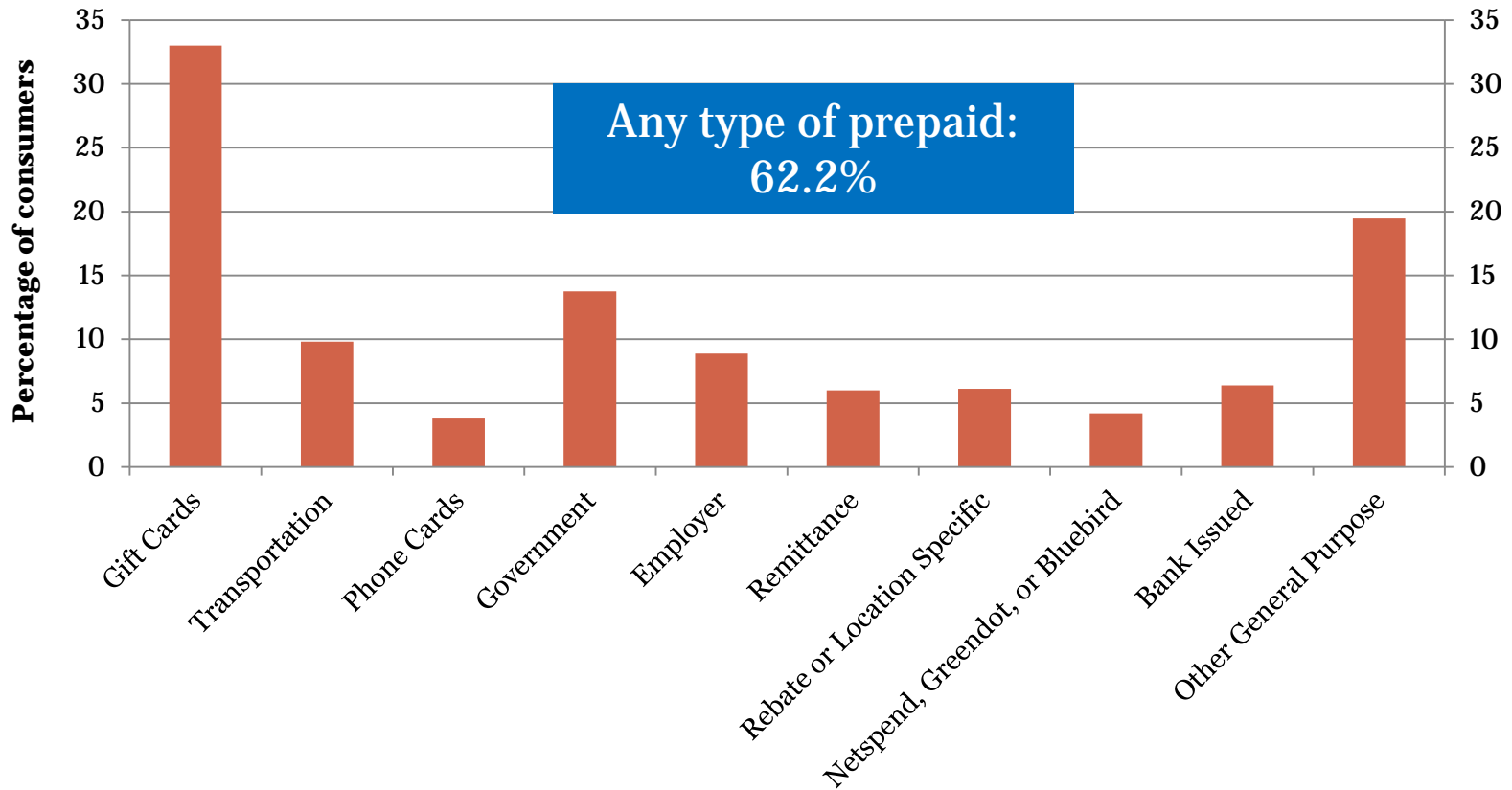


Notes: Prepaid use is defined as the share of consumers or adopters using a prepaid card in a given year.
The above results are based on 4 card categories.

Source: 2010 and 2011 Survey of Consumer Payment Choice, 2011 results unofficial and preliminary



Consumer adoption of prepaid cards



Source: 2013 CPRC Prepaid Survey, unofficial and preliminary

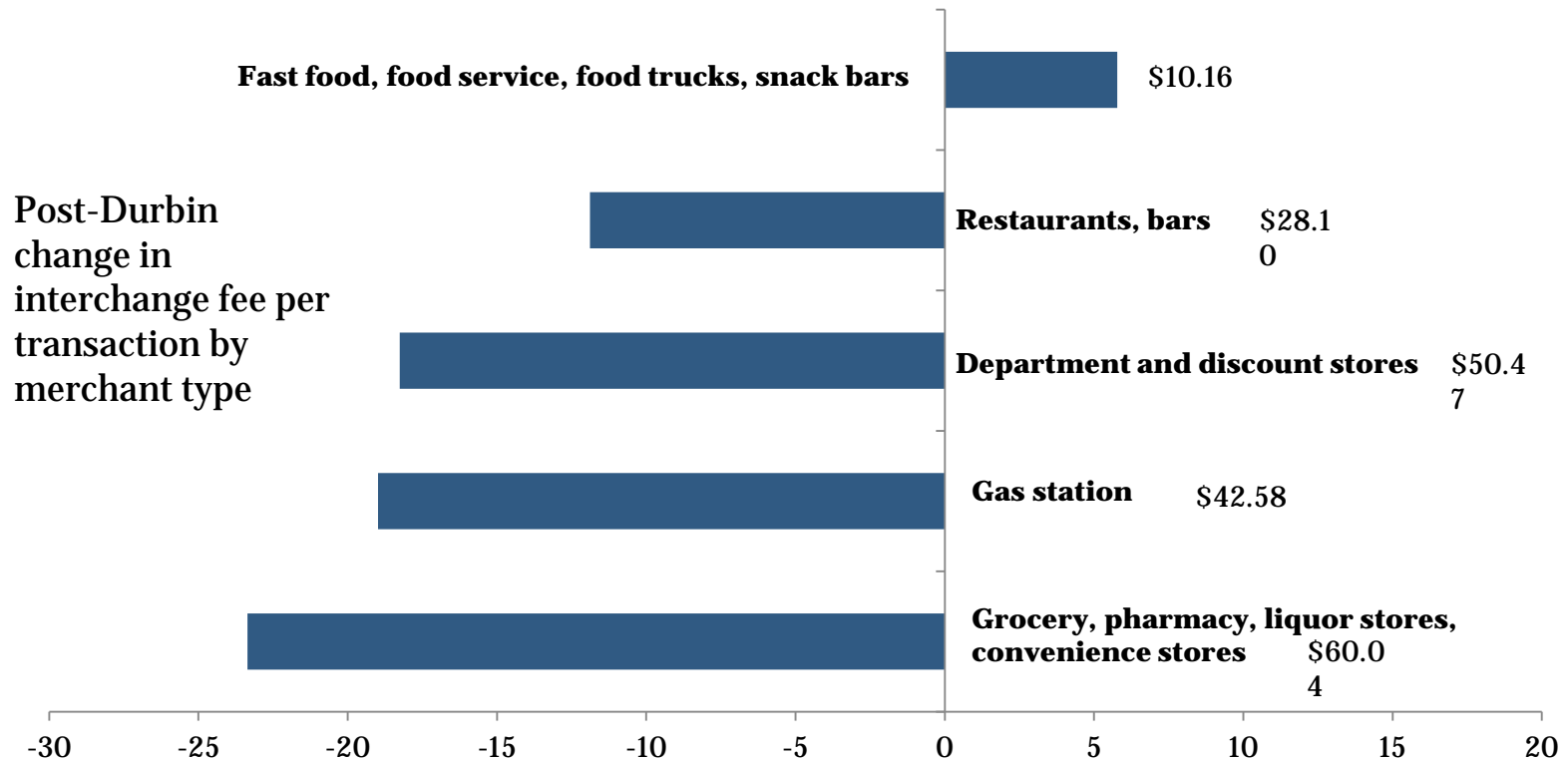


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Debit card fee cap estimated to increase fees paid by merchants with small-dollar transactions



Note: Selection based on most number of debit card payments. Dollar values are average transaction for merchant.

Source: Oz Shy (2013), "Measuring some Effects of the 2011 Debit Card Interchange Fee Reform," updated version of ["Who Gains and Who Loses from the 2011 Debit Card Interchange Fee Reform?"](#) Federal Reserve Bank of Boston Public Policy Discussion Paper No. 12-6



Is Durbin/RegII affecting consumers?

POS: hard to see direct effects because consumers:

- Don't pay the merchant/interchange fee directly
- Are unlikely to perceive reductions in retail price (if any)
- May not have a choice between PIN and signature...
 - ...and may not care that much despite having preferences
- Don't know or influence merchant's routing decision
- Are unlikely to be aware of the issues
- And simply may not care – especially if they don't see changes

BANKS: some changes to accounts, cards, fees, etc.



Faced with fee for debit, consumers want to switch mostly to cash and check

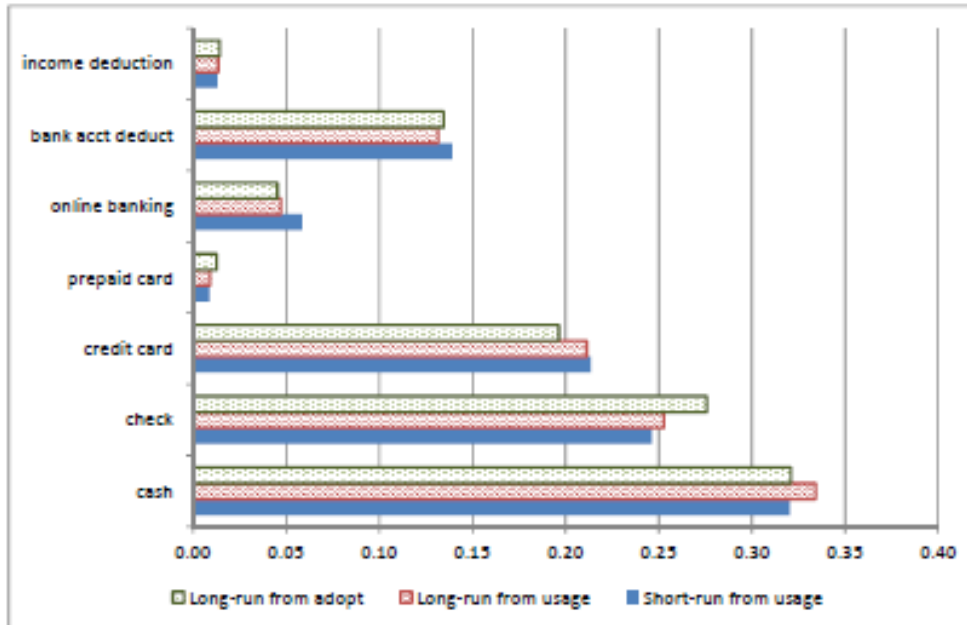


Figure 1: Changes in use of each payment instrument, measured as market share percentage points, in response to an increase in debit card use cost and adoption cost, by adoption adjustment (short run or long run).

Source: Sergei Koulayev, Marc Rysman, Scott Schuh, and Joanna Stavins (2012), [“Explaining Adoption and Use of Payment Instruments by U.S. Consumers,”](#) Federal Reserve Bank of Boston Working Paper No. 12-14.



Faced with surcharge on credit cards, consumers want to switch to cash and check – and debit

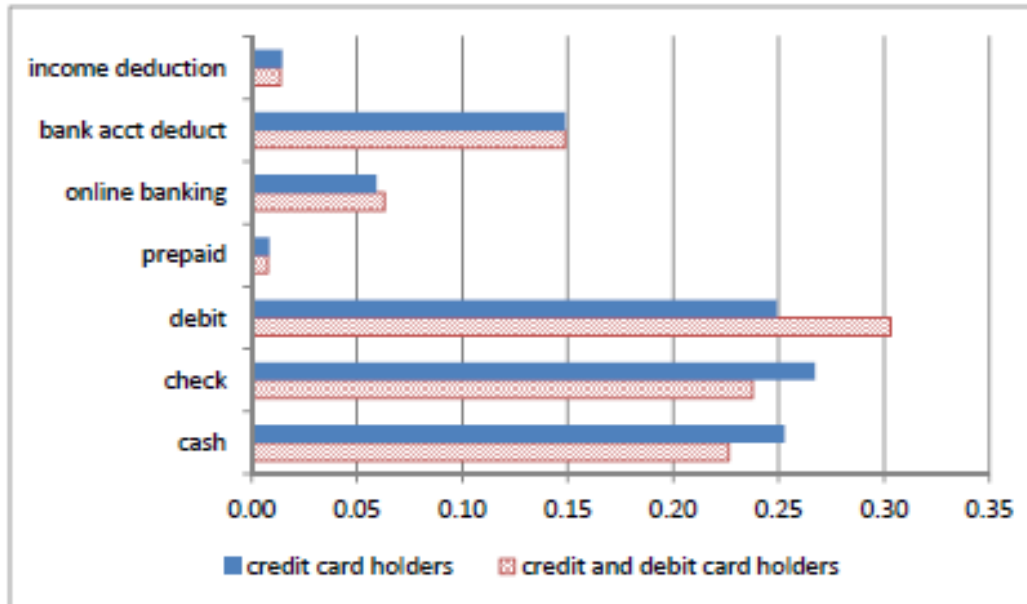
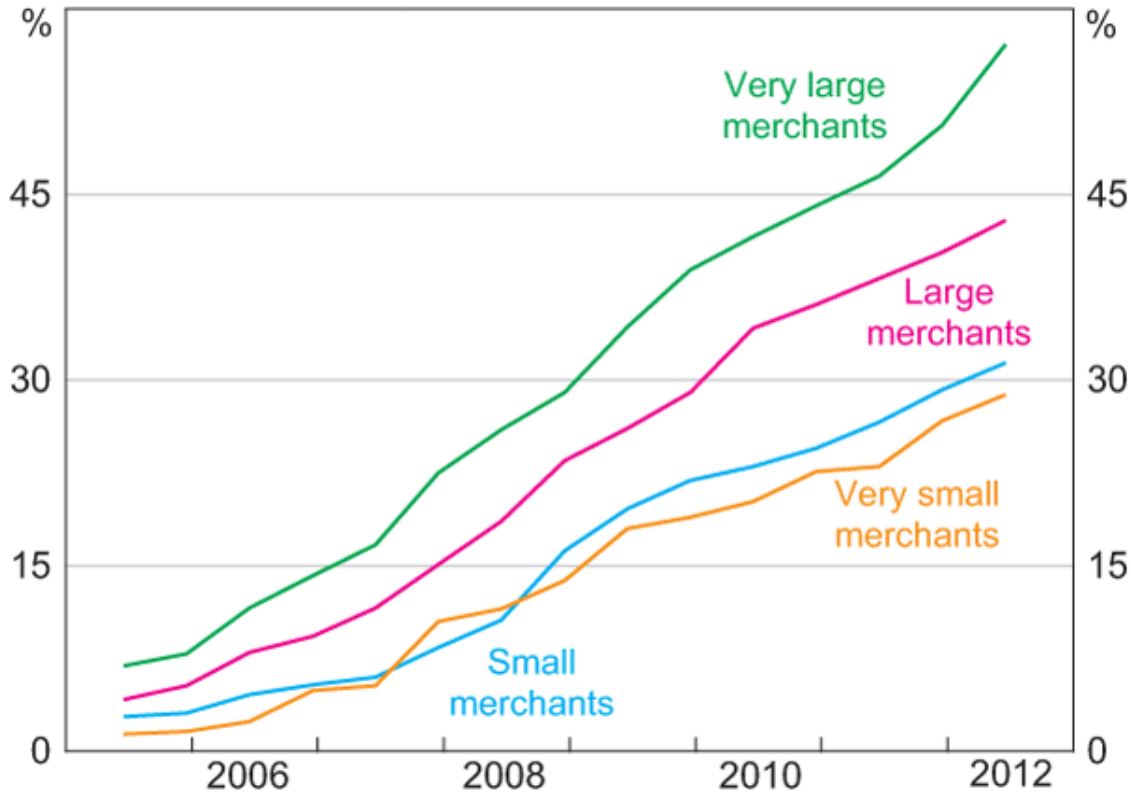


Figure 5: Changes in market share percentage points in response to an increase in the use cost of credit cards.

Source: Sergei Koulayev, Marc Rysman, Scott Schuh, and Joanna Stavins (2012), [“Explaining Adoption and Use of Payment Instruments by U.S. Consumers,”](#) Federal Reserve Bank of Boston Working Paper No. 12-14.

Will U.S. merchants surcharge credit?

Australian experience suggests “yes” (over time)



Source: Reserve Bank of Australia, 2012

2012-13 CFPB proposed rules for prepaid

General purpose reloadable prepaid cards (GPRPC)

- Should GPRPC be subject to Regulation E (electronic funds transfers)?
- Require standard disclosures?
- Protect consumers from unauthorized transactions?
- Regulate fees and information in GPRPC?
- Inform/teach consumers about GPRPC?
- Require deposit insurance on card balances?
- Regulate overdraft situations on card balances?
- Force provision of savings for card holders?



THANK YOU



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