

Consumer Payment Choice: A Central Bank Perspective

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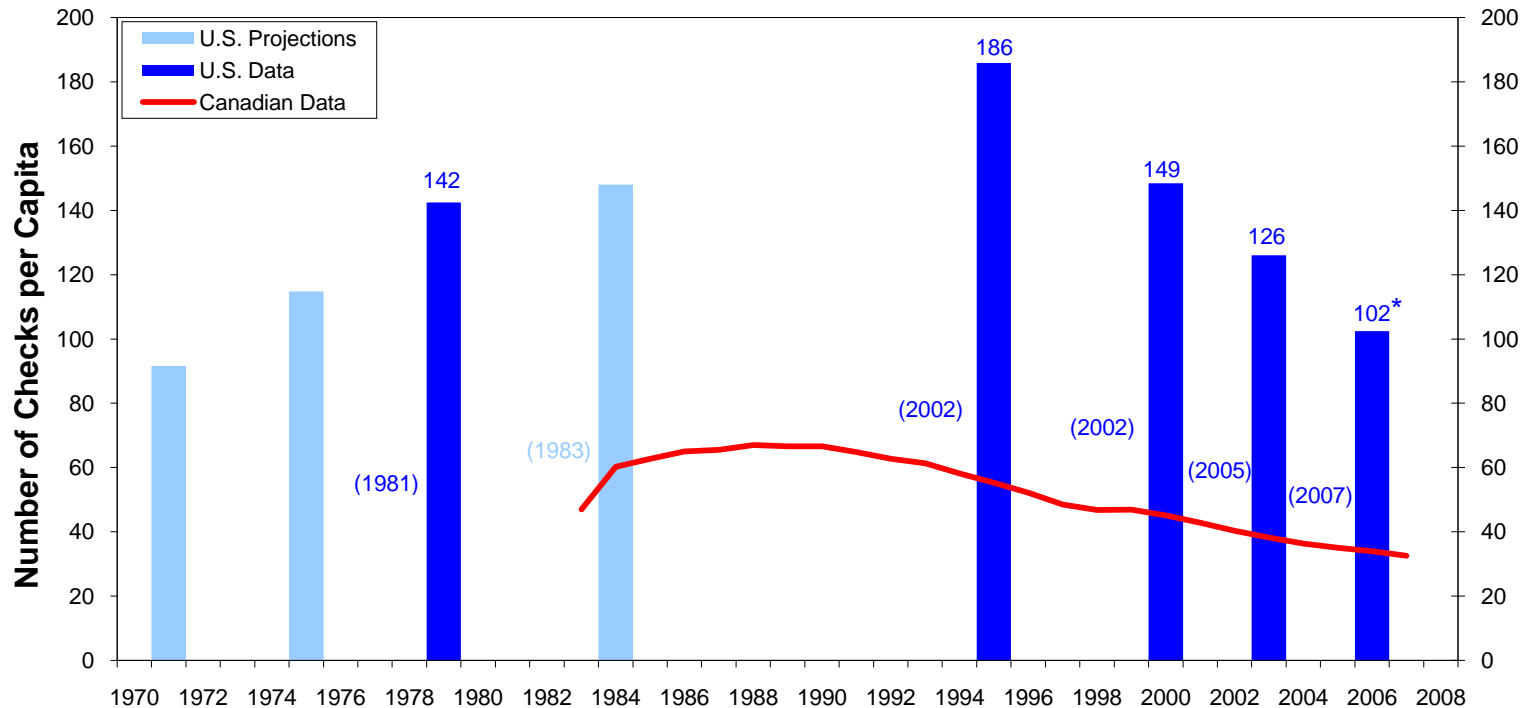


Presentation overview

- Context and motivation
- Survey of Consumer Payment Choice (SCPC)
- Consumer payment adoption and use
- Some cash and debit card results (2008)
- Conclusions and future plans

Checks – publicly available data

U.S. check decline was not reflected in public data until late....



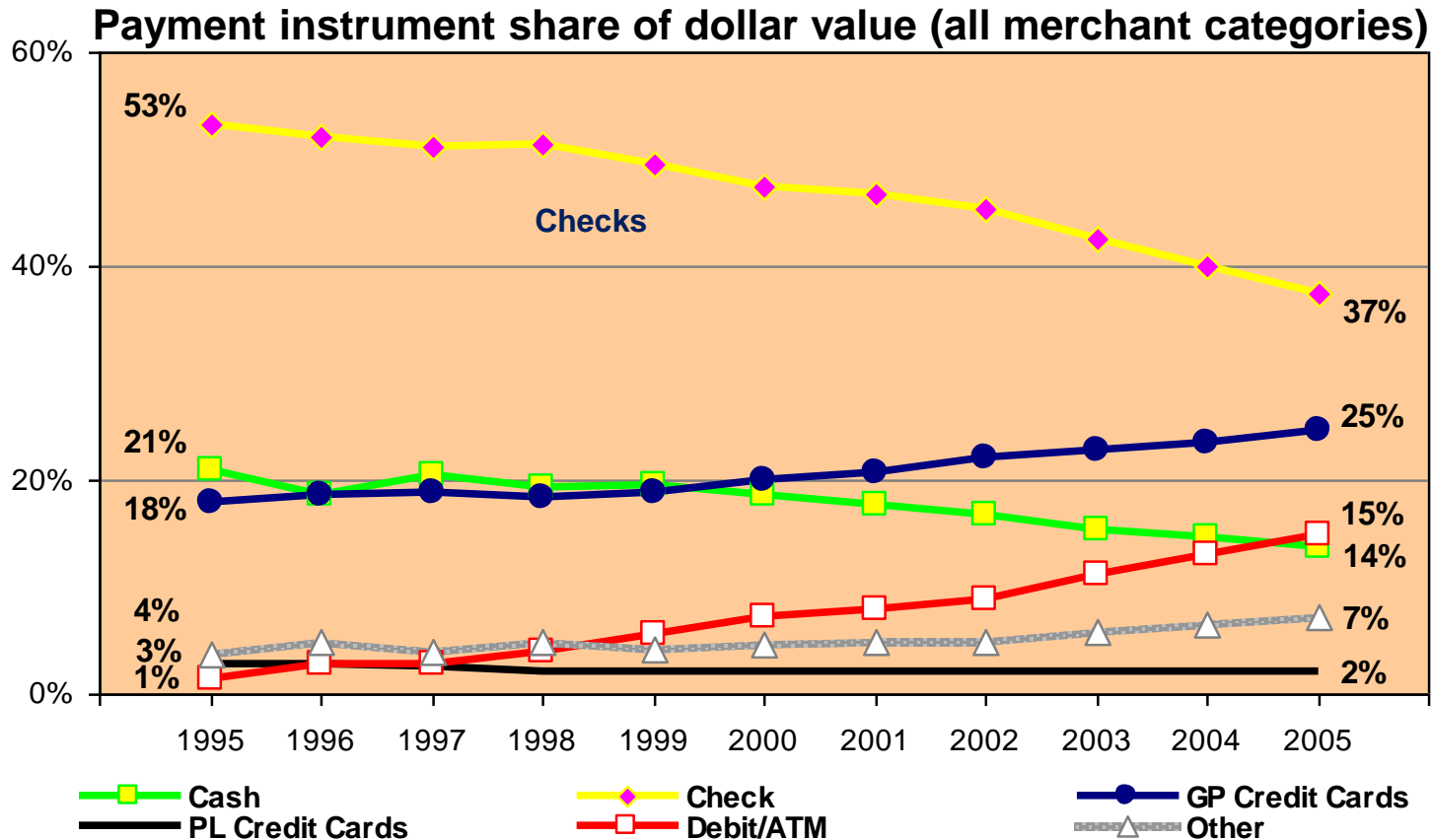
SOURCES: U.S. data: Federal Reserve Bank of Atlanta (1981, 1983); Federal Reserve System (2002, 2004); Gerdes and Walton (2002); Gerdes, Liu, Parke, and Walton (2005); Gerdes (2008); Benton, Blair, Crowe, and Schuh (2007).

Canadian data: Automated Clearing Settlement System (ACSS) Clearing Exchange Report (2008).

*The 2006 U.S. number excludes paper checks written and converted to ACH, which were included in earlier years.

Checks – private data

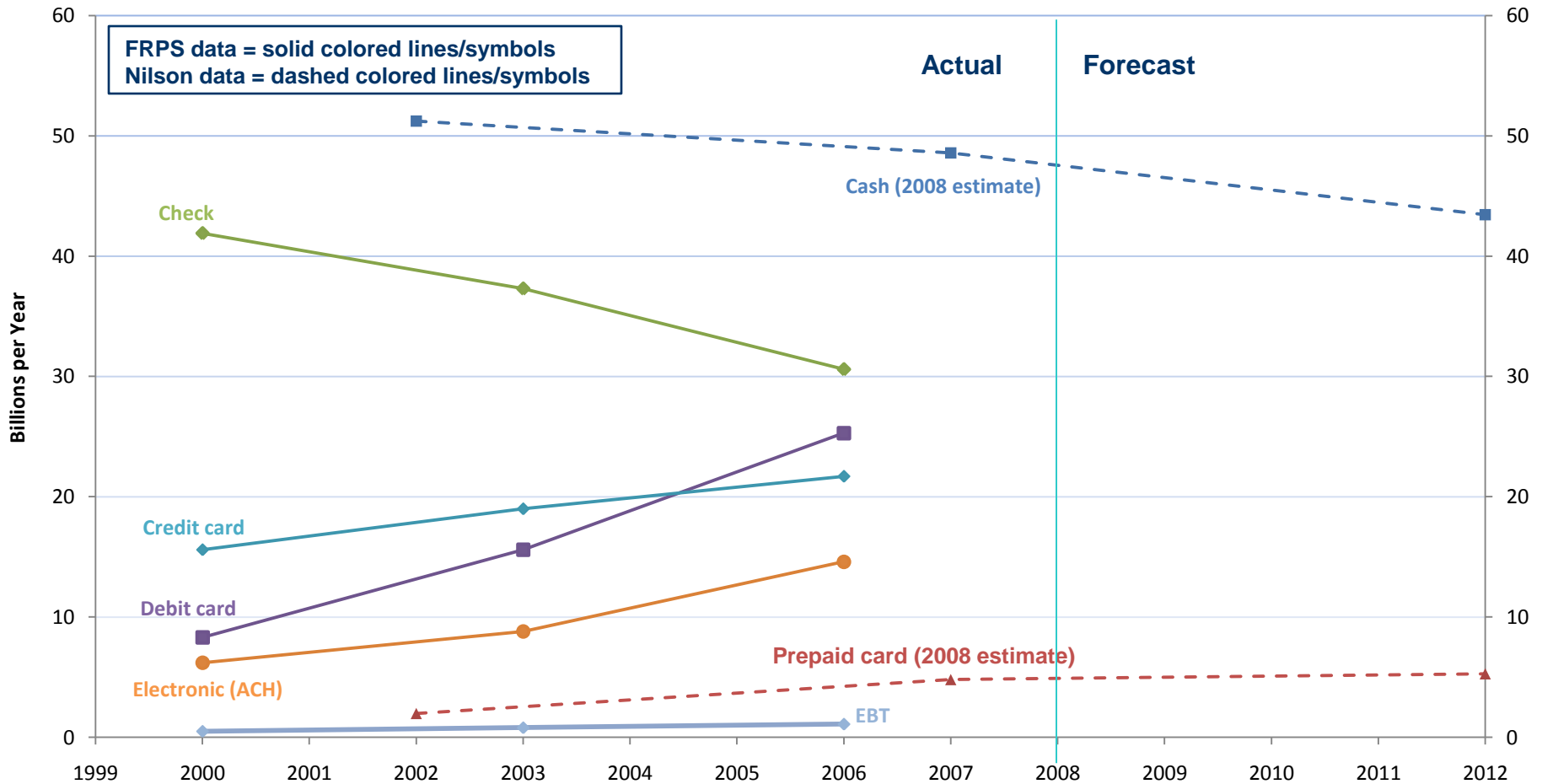
...but private data reflected U.S. check decline early and often.



SOURCE: Visa USA Research Services. (2006) "Visa Payment Panel Study." Page 9.
<http://www.bos.frb.org/economic/eprg/conferences/payments2006/papers/hampton.pdf>.

Number of U.S. payments (FRPS)

Card and electronic payments are replacing paper payments



SOURCES: 2006 Federal Reserve Payment Study (FRPS), 2007 Nilson

U.S. consumer check use (FRPS)

Consumers are reducing their check use more slowly than others

	Number (billions)	Share (%)	
		Consumer share of U.S. checks	Consumer check share of noncash payments
2003*	19.1	50.9	23.5
2007	19.2	58.0	20.6

* Percentages of checks written by consumers are taken from the 2001 Retail Payments Research Report, also published by the Federal Reserve, and are used in all of the statistics quoted here on the assumption that they were constant between 2001 and 2003.

NOTE: Federal Reserve Payment Studies only have consumer data for check use but not for any other payment instruments

Boston Fed response

- Consumer Payments Research Center (CPRC)
 - Established in 2004 to study demand side of payments
 - Surveys consumer & develops data, e.g.
 - *Survey of Consumer Payment Choice (SCPC)*
 - *Survey of Payment Choice & Shopping Behavior*
 - Conducts economic research
 - Evaluates and develops public policies

SCPC overview

- *Survey of Consumer Payment Choice (SCPC)*
 - Estimates of adoption & use for 9 payment instruments
 - Two types of information:
 - Aggregate data for macroeconomic and trend analysis
 - Consumer-level data for microeconomic and policy analysis
 - Fills a niche not covered by other sources, e.g.
 - *Survey of Consumer Finances (SCF)*
 - *Federal Reserve Payments Studies (FRPS)*
 - Annual data (2003-04, 2006, 2008-2009, ongoing)
 - Available to the public for free, full disclosure of survey details

SCPC payment instruments

Paper

1. Cash
2. Check
3. Money order
4. Traveler's check

Cards

5. Debit
6. Credit
7. Prepaid (including EBT)

Electronic (ACH-based use of bank accounts)

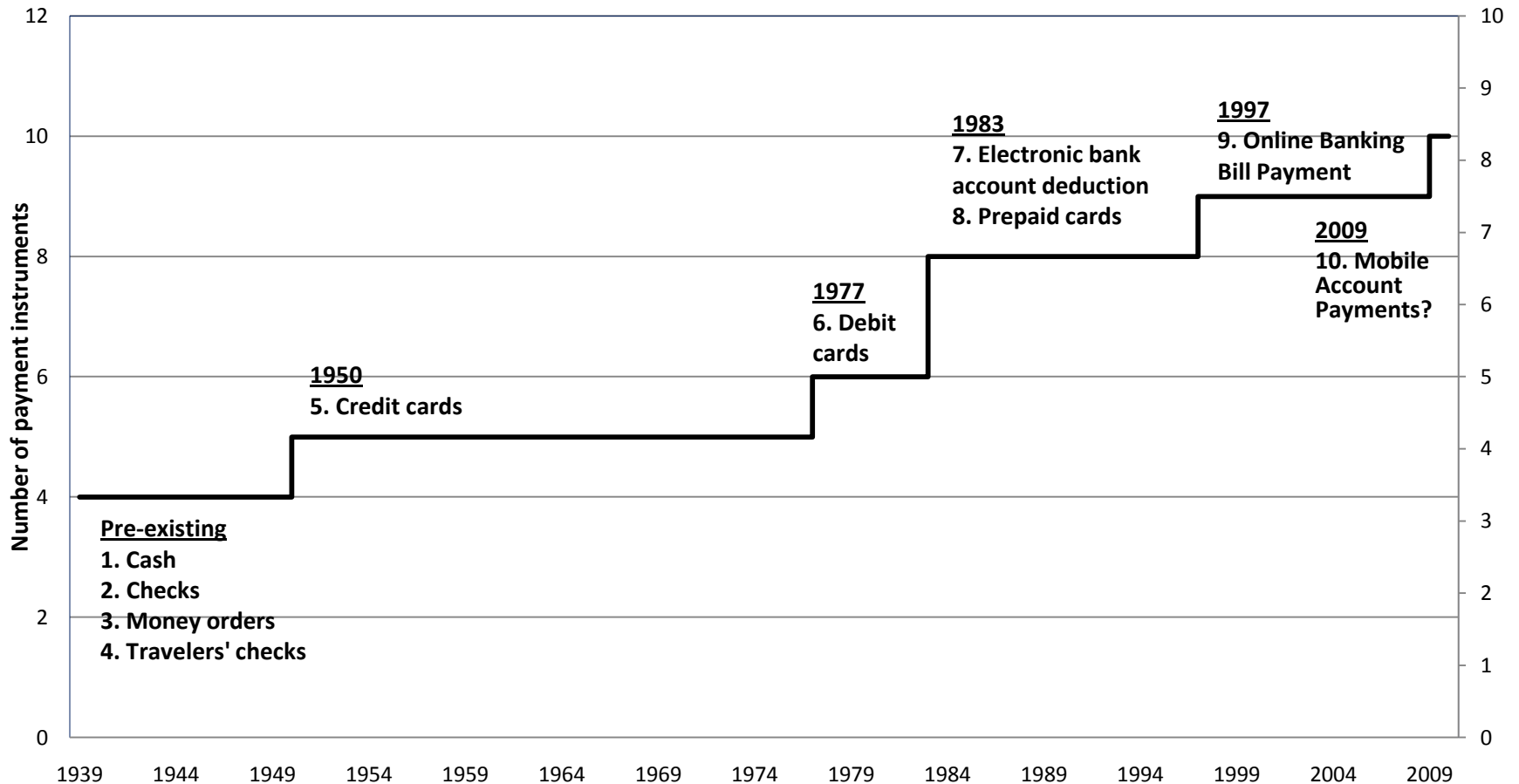
8. Online banking bill payment (OBBP)
Initiated by consumer from "inside" his/her bank without disclosing BA number
9. Electronic bank account deduction (EBAD)
Consumer use of BA number or information to authorize third-party payment

Payments concepts

- **Adoption** – “Do you have...?”
 - *Historical* – ever had?
 - *Current* – have now?
 - *Discarding* – ever discarded? (historical minus current)
- **Use** – “How many payments do you make...?”
 - *Incidence* – use at least once during a period? (yes or no)
 - *Frequency* – intensity of use in a period (# of payments)
 - Dollar value of payments not collected (time limited, more difficult)

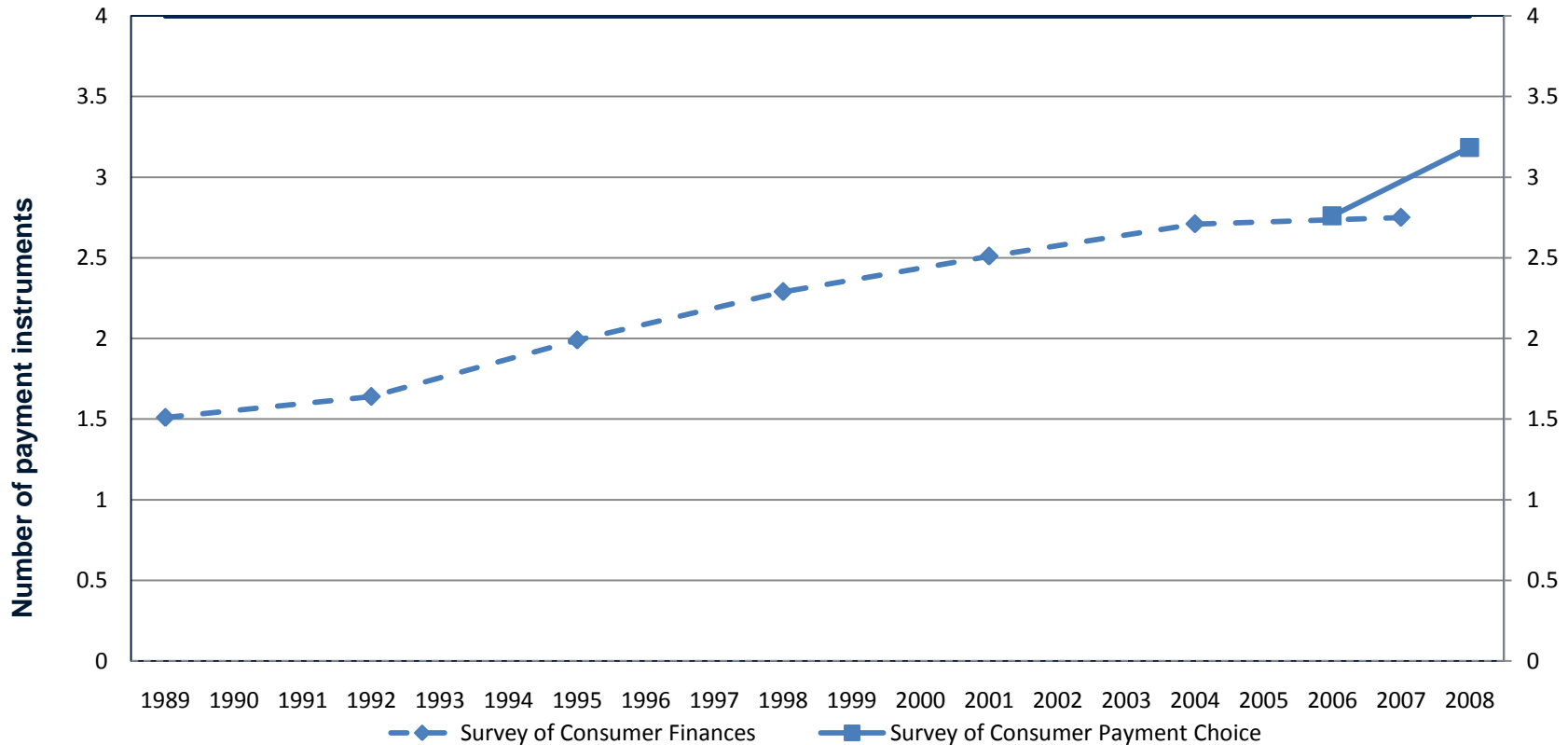
History of payment instruments

The number of payment instruments available to consumers is rising



Payment instruments per consumer

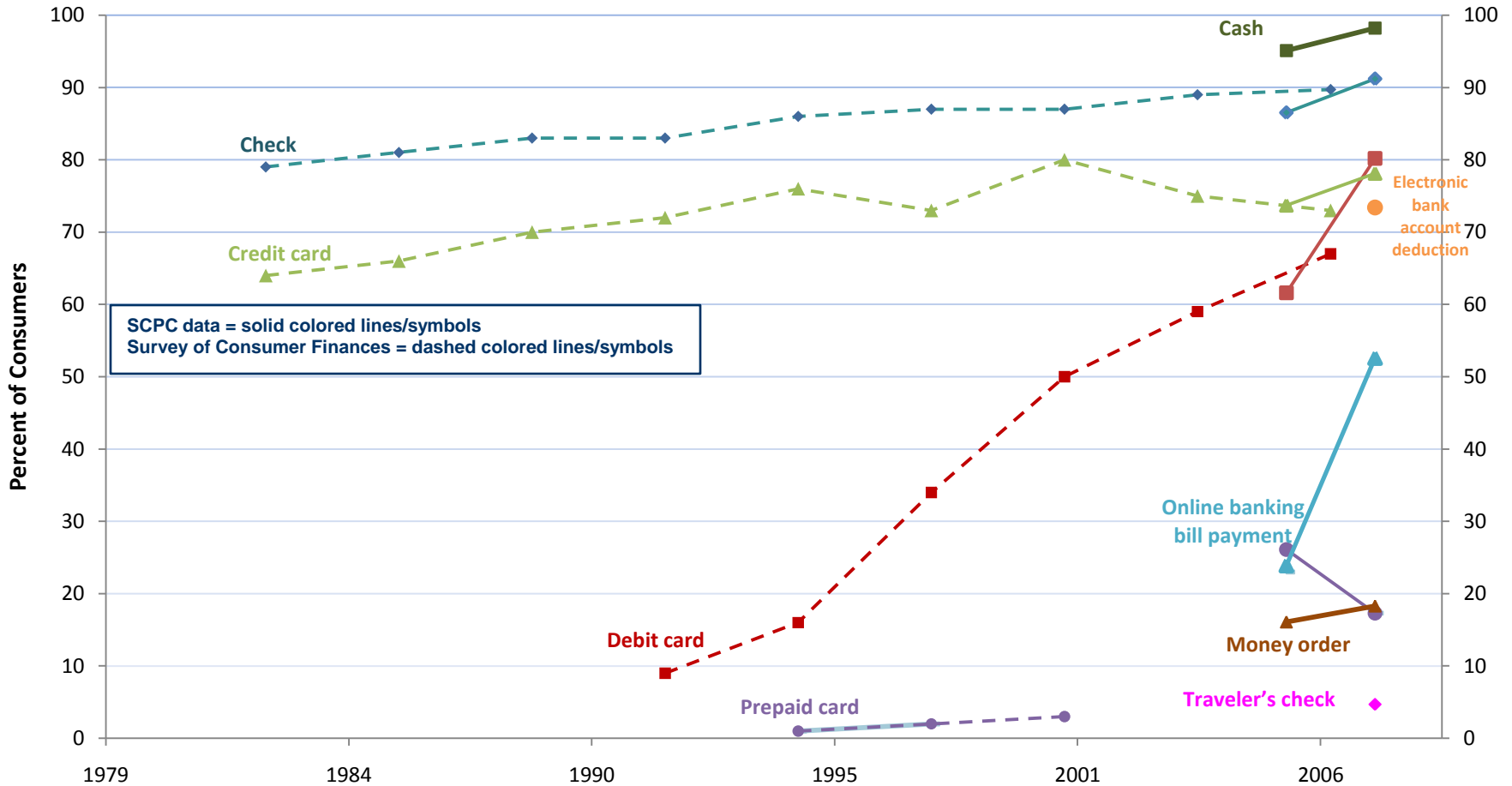
The average consumer has twice as many payment instruments as in 1989
(Four instruments = Check, CC, DC, and ABP)



SOURCES: 1983-2007 Survey of Consumer Finances; 2006, 2008 Survey of Consumer Payment Choice, subject to revision. See 2008 SCPC Table 8.

Adoption of payment instruments

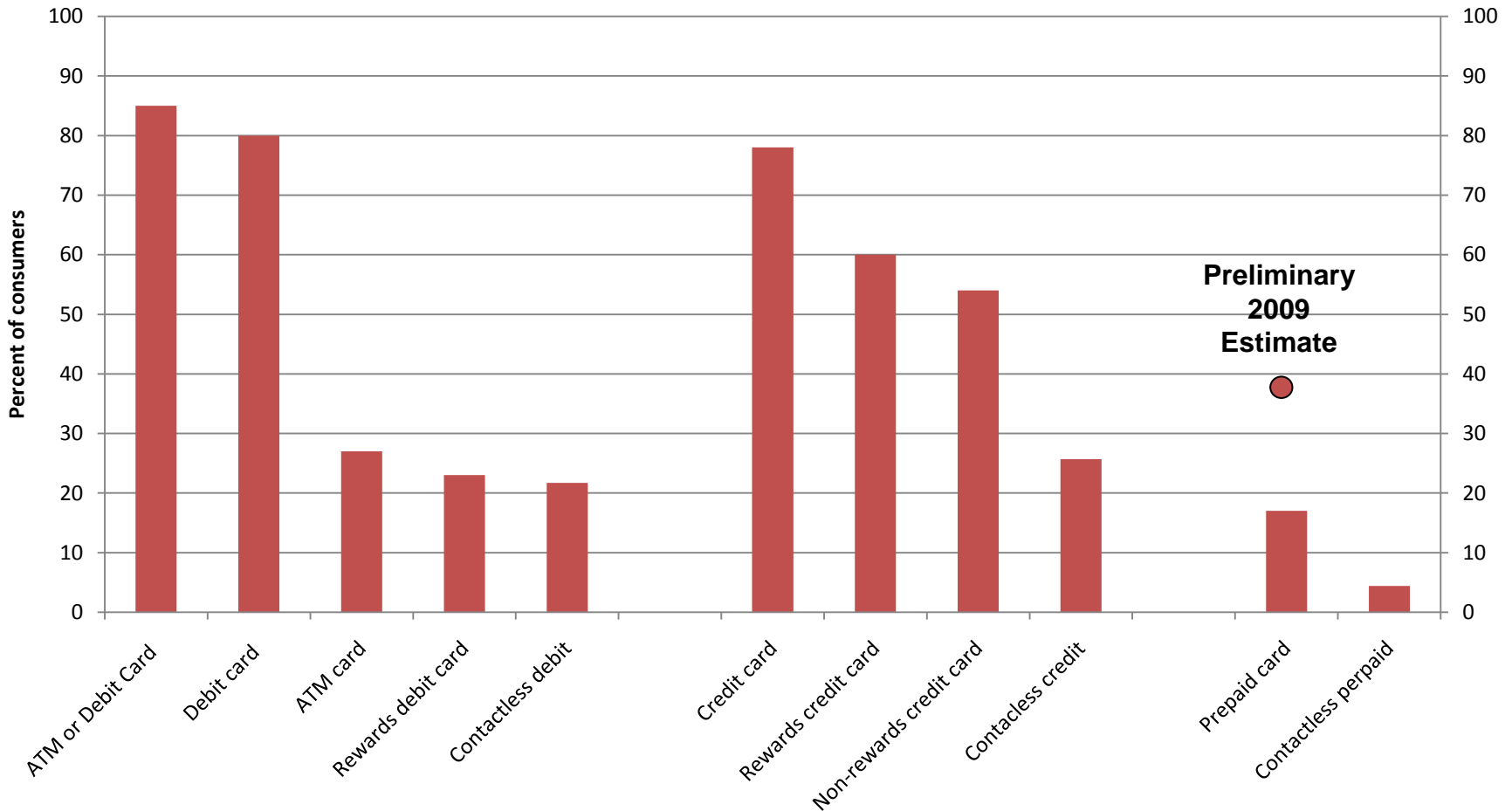
Consumers are adding new technologies (but not dropping old ones...)



SOURCES: 1983-2007 Survey of Consumer Finances; 2006, 2008 Survey of Consumer Payment Choice, subject to revision. See 2008 SCPC Table 4.

Adoption of payment cards, 2008

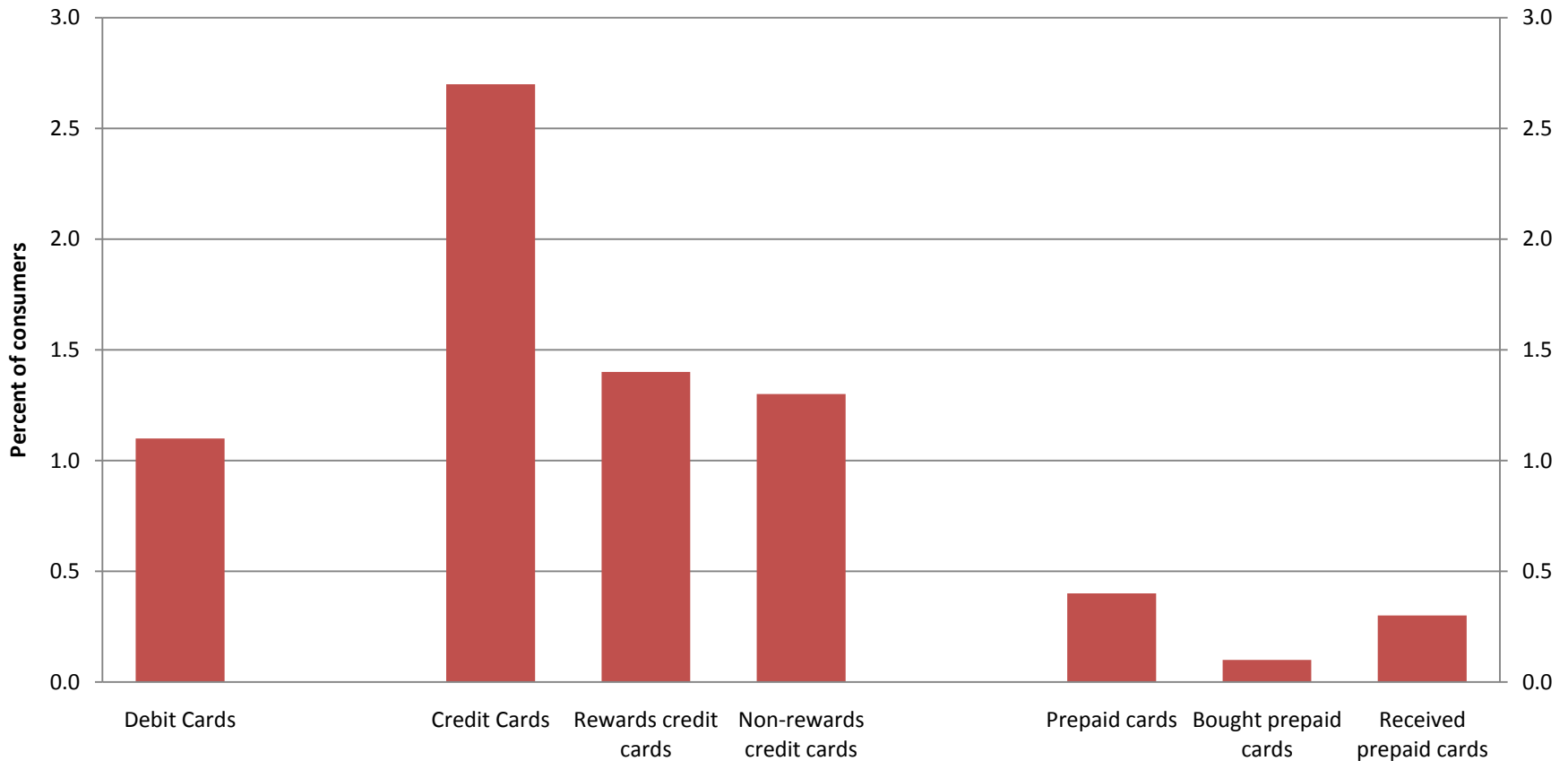
Debit cards and credit cards are far more popular than prepaid cards



SOURCE: 2008 Survey of Consumer Payment Choice statistics subject to revision. See 2008 SCPC Table 5.

Number of cards per consumer

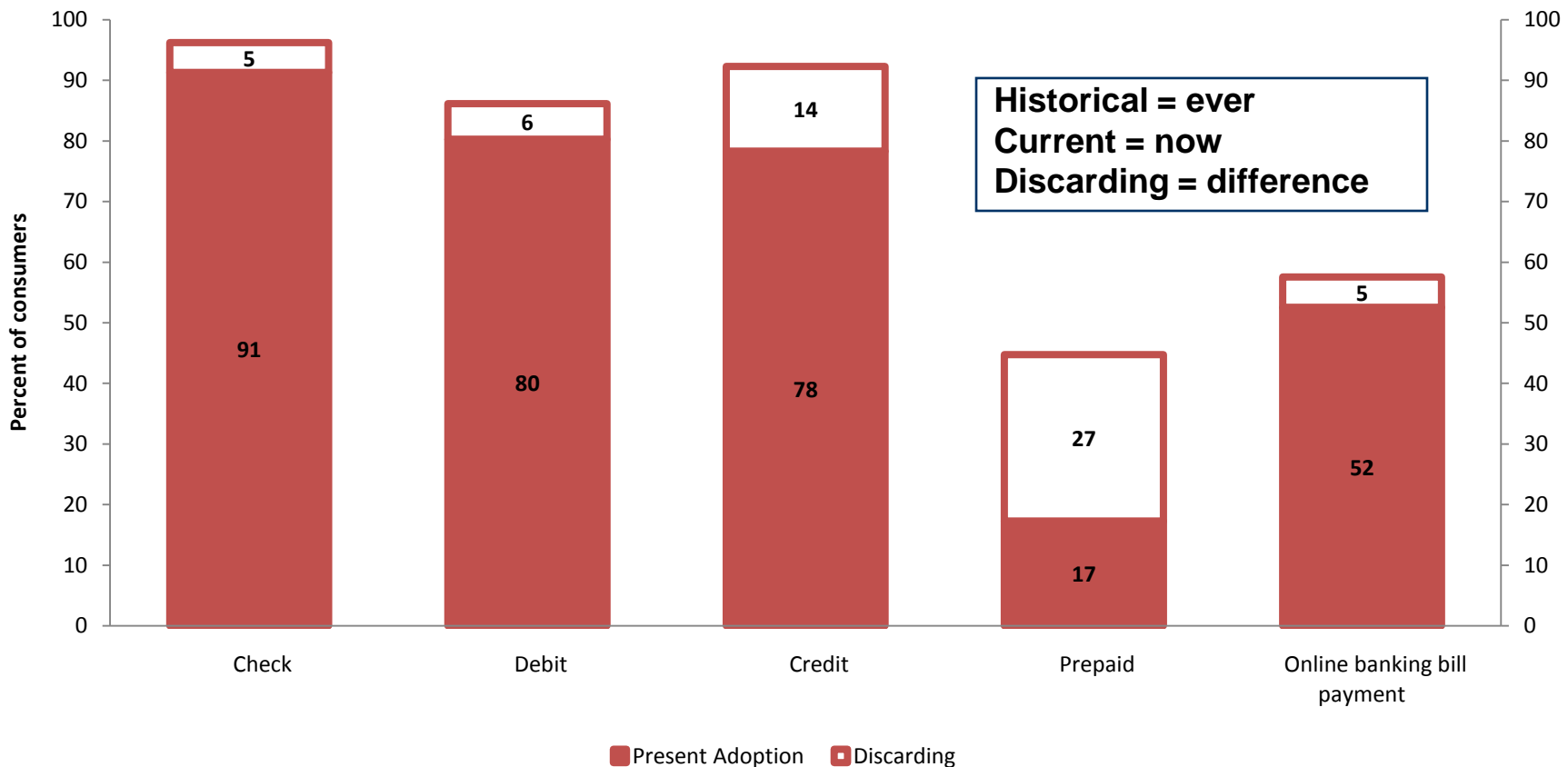
Consumers have more credit cards than debit cards; many offer rewards



SOURCE: 2008 Survey of Consumer Payment Choice statistics subject to revision. See 2008 SCPC Table 7.

Historical adoption of payment instruments, 2008

Consumers do not keep their payment instruments forever

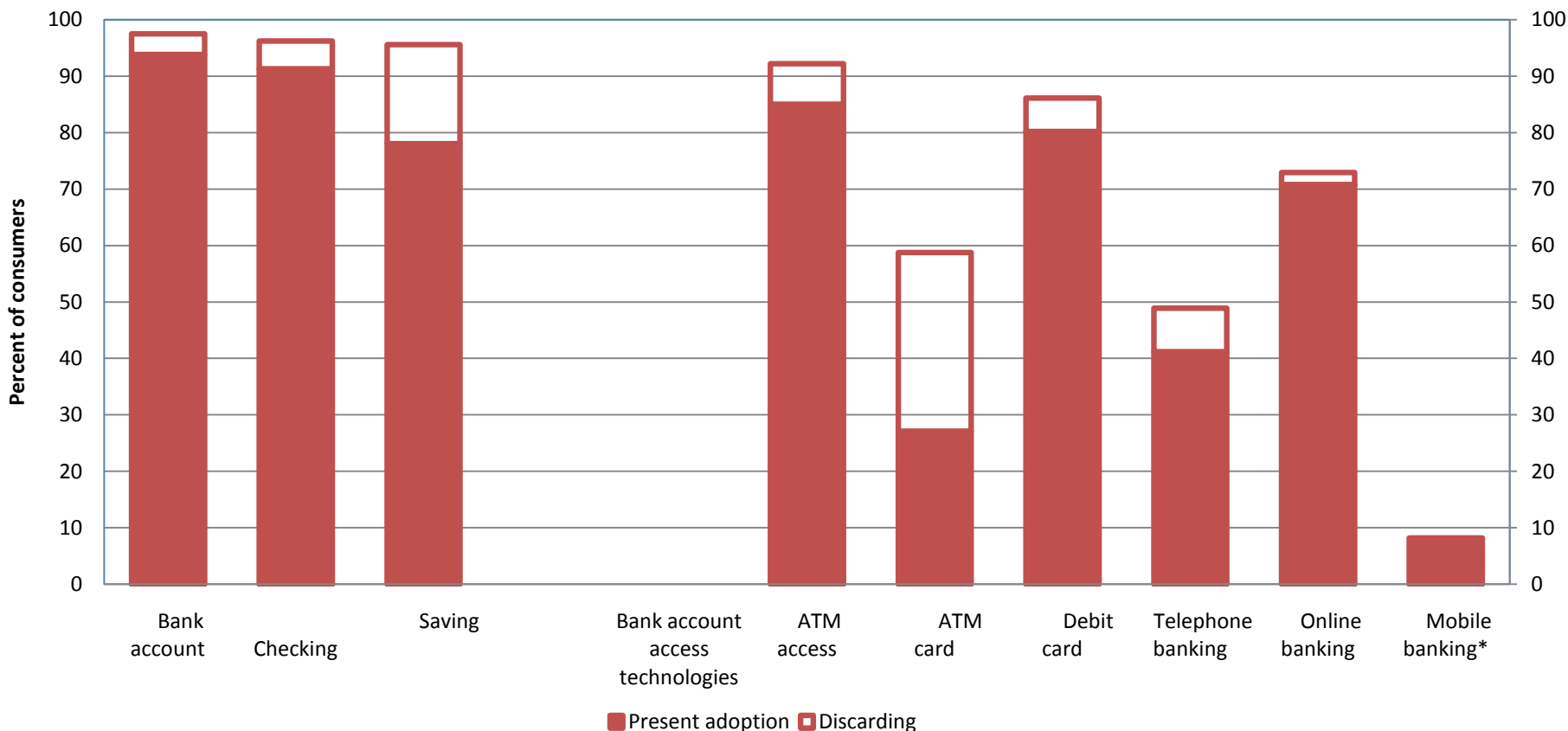


Note: For all other payment instruments, adoption is a function of use, and the 2008 SCPC does not ask about historical use. Mobile payments were not considered a payment instrument in 2008.

SOURCE: 2008 Survey of Consumer Payment Choice statistics subject to revision. See 2008 SCPC Tables 4 and 6.

Historical adoption of bank accounts, 2008

And consumers do not keep their bank accounts forever either

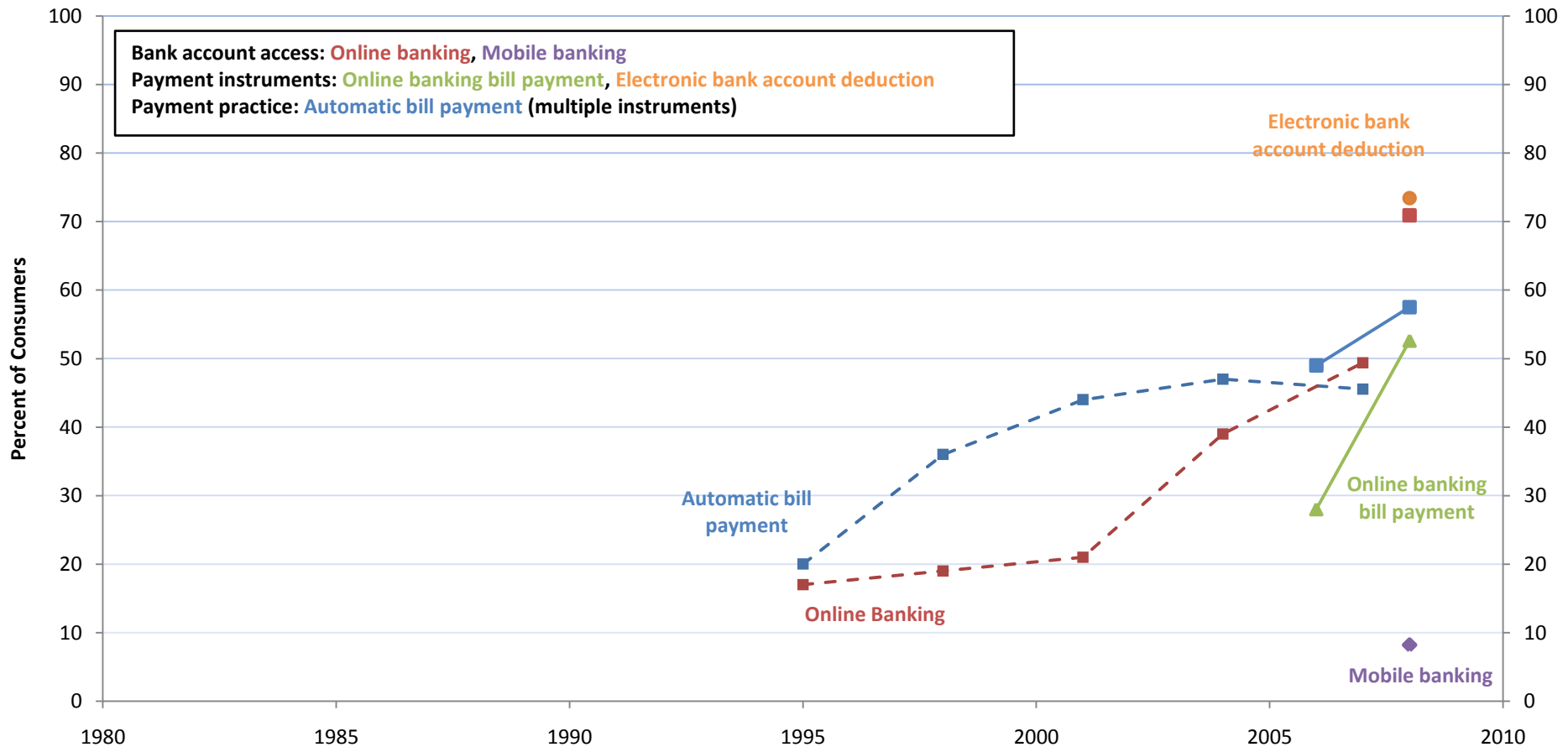


* Consumers were only asked if they have adopted Mobile banking this year, by assumption they have not discarded it.

SOURCE: 2008 Survey of Consumer Payment Choice statistics subject to revision . See 2008 SCPC Tables 1 and 2.

Adoption of payment practices

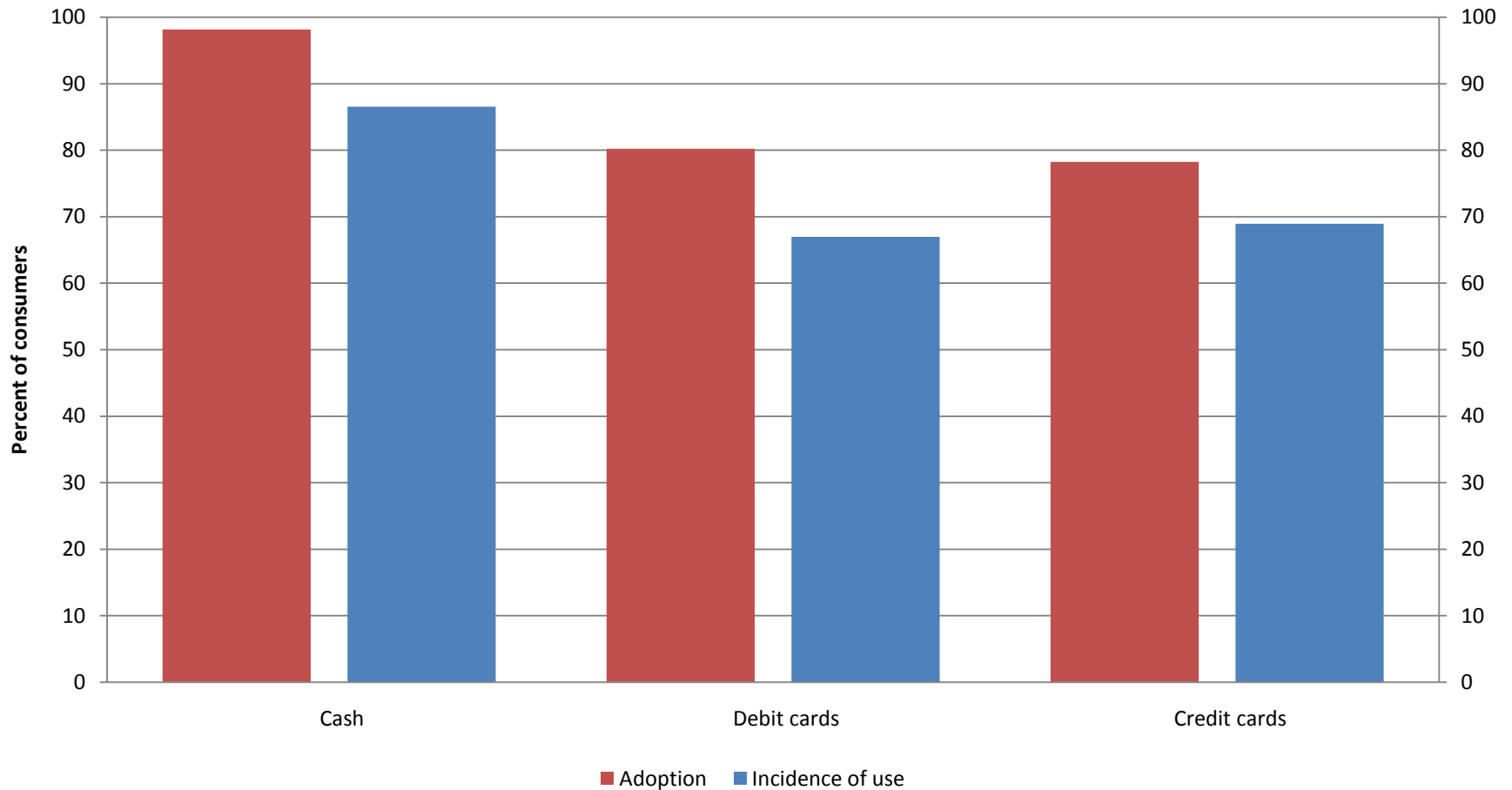
Consumers are finding new ways to access banks, make payments



SOURCE: 2008 Survey of Consumer Payment Choice statistics subject to revision. See 2008 SCPC Tables 1, 4 , and 15.

Adoption and incidence of use, 2008

Not all consumers use their payment instruments each month

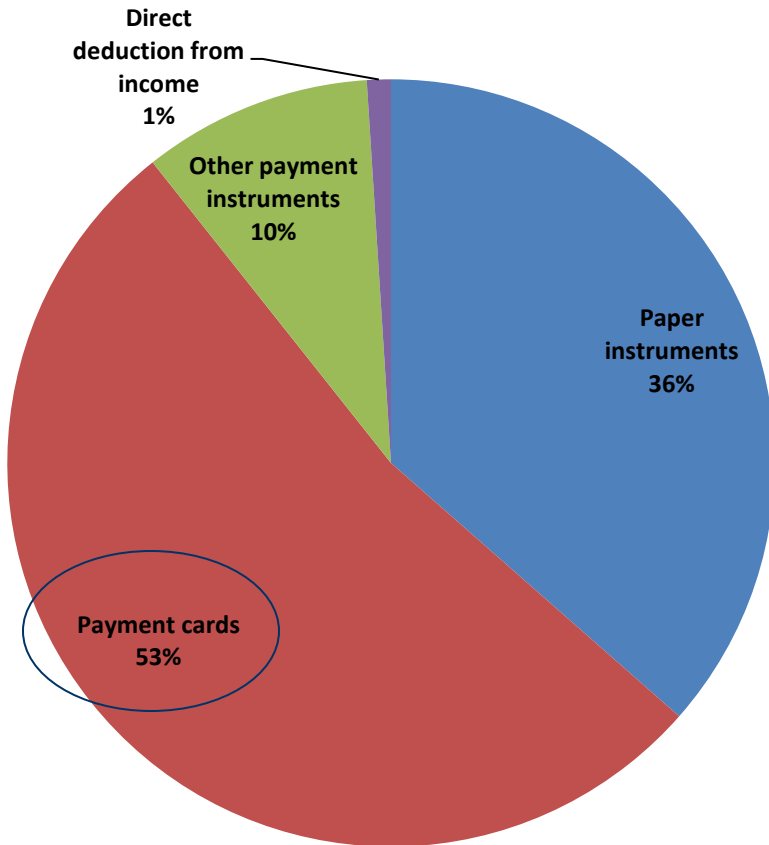


SOURCE: 2008 Survey of Consumer Payment Choice statistics subject to revision. See 2008 SCPC Tables 4 and 14.

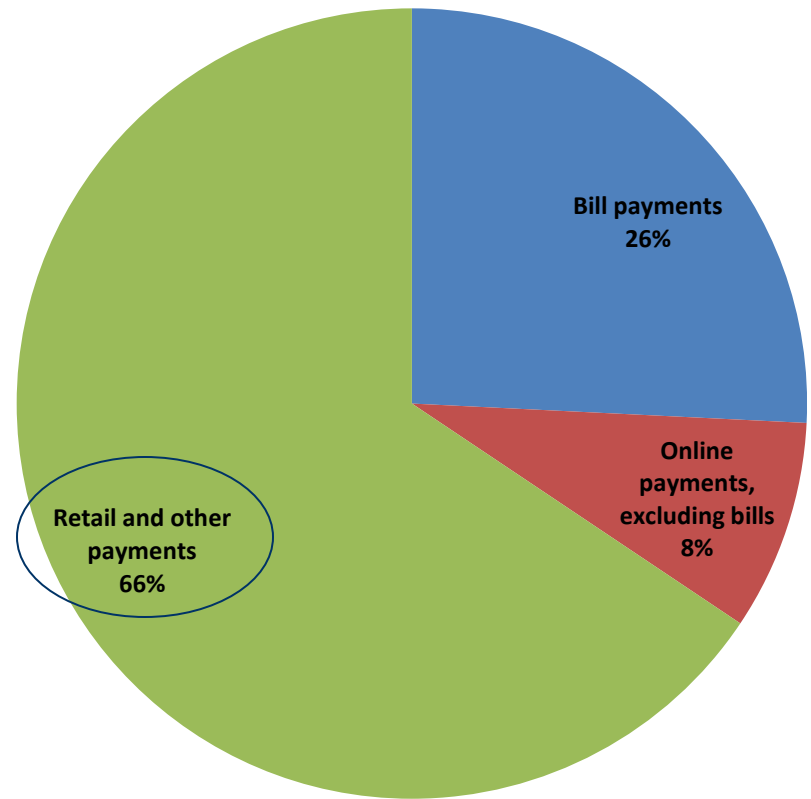
Payment use, 2008

Share of monthly volume of payments, 2008

By Payment Instrument



By Transaction Type

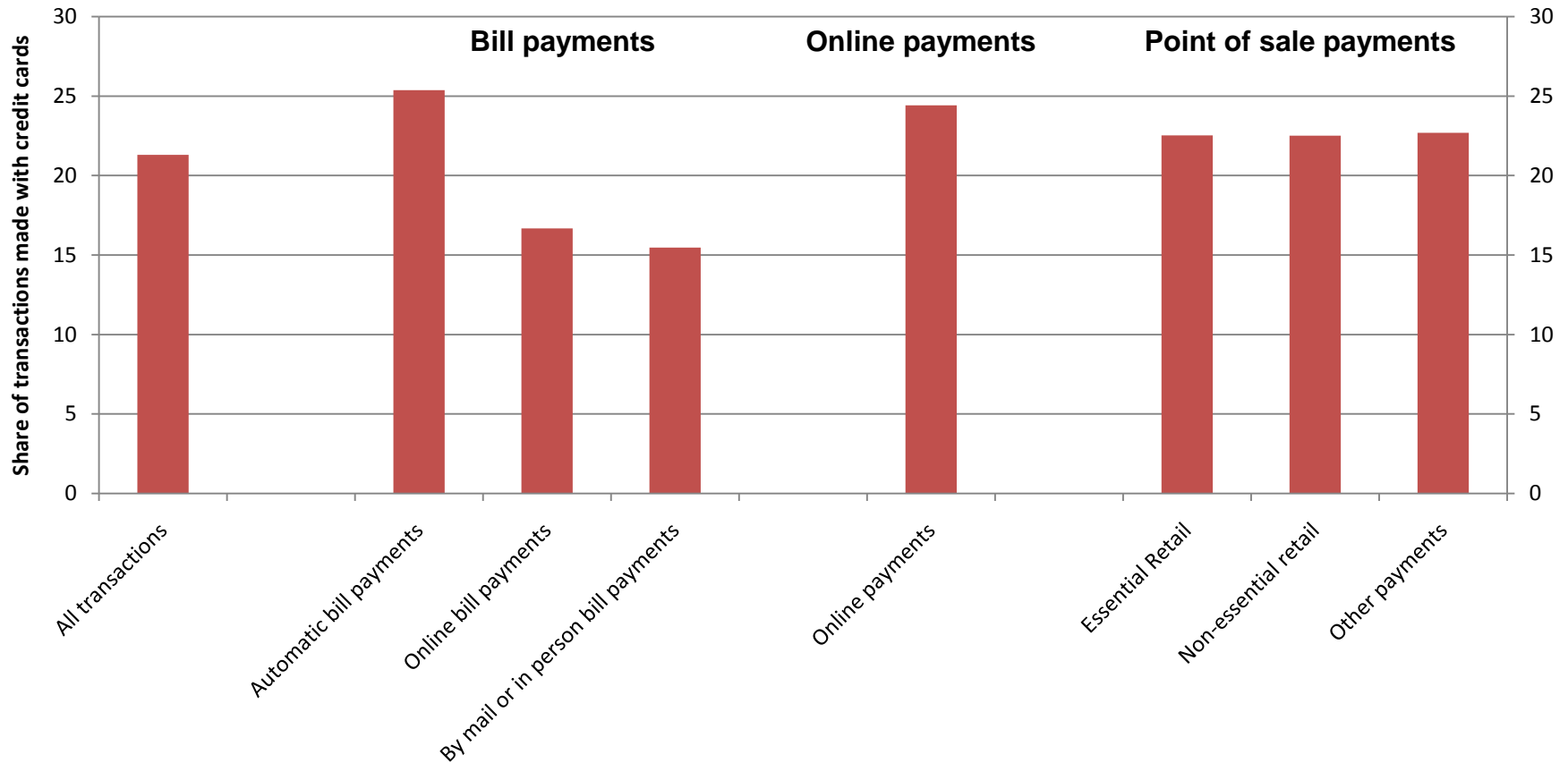


SOURCE: 2008 Survey of Consumer Payment Choice statistics subject to revision . See 2008 SCPC Tables 19 and 20.

Credit card use, 2008

Consumers use credits cards for all kinds of transactions

Credit card shares of payments by transaction

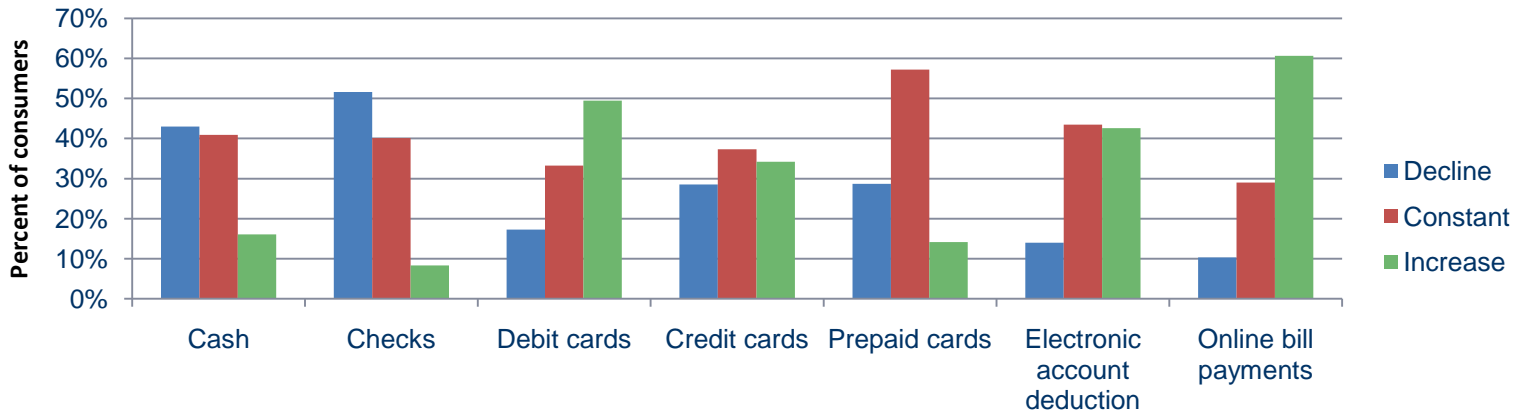


SOURCE: 2008 Survey of Consumer Payment Choice statistics subject to revision . See 2008 SCPC Tables 19-23.

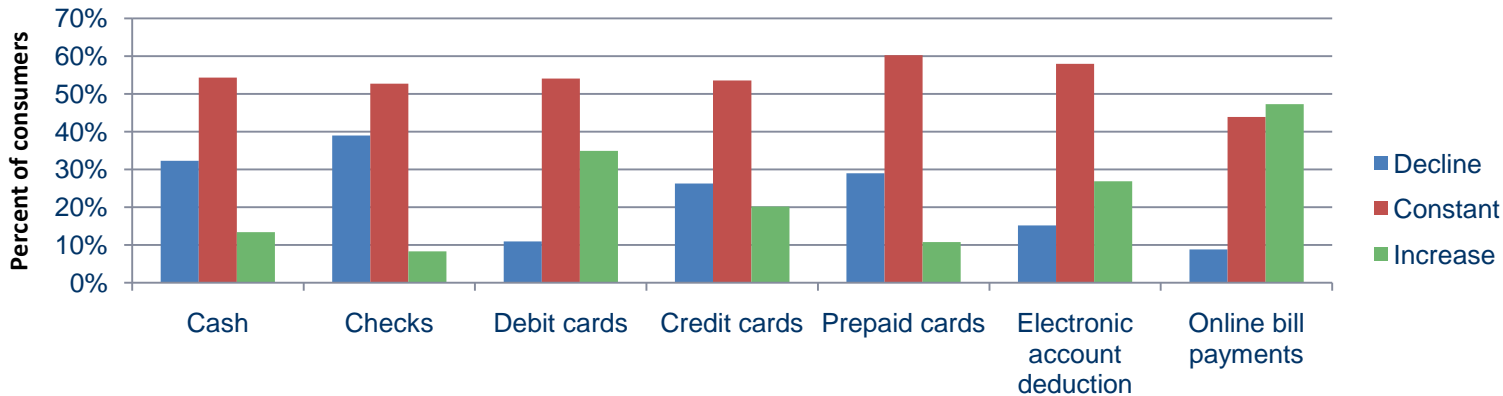
Change in payment use

Past 3 years saw much change, but next 3 may see less....

Actual use, past three years (2005-2008)



Expected change in use, next three years (2008-2011)



SOURCE: 2008 Survey of Consumer Payment Choice statistics subject to revision . See 2008 SCPC Table 25.

Cash use

Consumers make one-quarter of their payments with cash; most cash payments are for retail and other transactions

Share of consumer payments made with cash (%)

	Bill payments by mail or in person	Essential retail payments*	Other retail payments*	Other non-retail payments*	Payments where cash is not accepted	Cash share of all payments
Share of cash payments in category	14	34	32	30	0	23

Payment category	Examples
Essential retail payments	Groceries, prescription drugs, food from restaurants and payments for gas (petrol)
Other retail payments	General merchandise, electronics, household goods, hardware, office supplies and others
Other non-retail payments	Tolls, medical, entertainment, charitable donations, person to person payments among other payments
All other payments	Any payments made online, bill payments, payments made by travelers checks or money orders

SOURCE: 2008 Survey of Consumer Payment Choice statistics subject to revision. See 2008 SCPC Tables 19 and 21-23.

Consumer cash management

The median consumer gets and holds much less cash than the average consumer, reflecting heavy cash use by relatively few consumers

Statistic	Current Cash Holdings			Typical Cash Withdrawals		
	Total (\$)	On Person (\$)	Other (\$)	Monthly Amount (\$)	Typical Amount (\$)	Monthly Frequency (#)
Mean	230	79	157	335	102	4.3
Median	70	30	14	180	50	3.0

SOURCE: 2008 Survey of Consumer Payment Choice statistics subject to revision. See 2008 SCPC Table 10.

Consumer cash withdrawals

Consumers get cash most often at ATMs and using an ATM card

LOCATIONS where consumers get cash most often (% of consumers)

	ATM	Bank Teller	Check Cashing Store	Retail or Grocery Store	Employer	Family	Other
First Choice	54	23	2	9	5	3	0
Second Choice	14	44	2	24	2	5	1

METHODS consumers use to get cash most often (% of consumers)

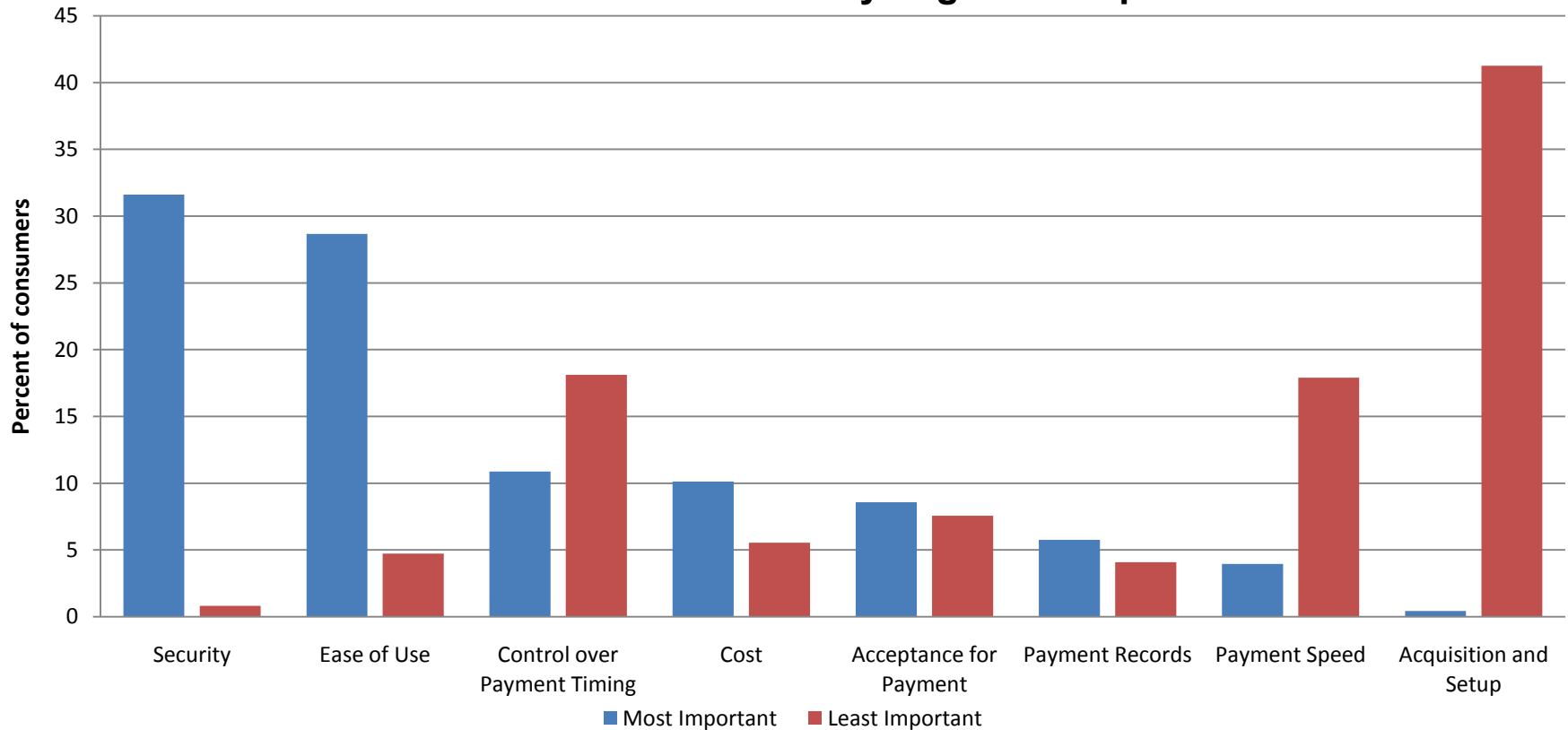
	ATM or debit card – ATM	ATM or debit card – cash back	Account withdrawal	Cashing personal check	Cashing paycheck	Paid by employer in cash	Unknown Methods
First Choice	54	7	11	7	10	2	3
Second Choice	14	21	29	14	6	1	5

SOURCE: 2008 Survey of Consumer Payment Choice statistics subject to revision. See 2008 SCPC Table 13.

Payment instrument characteristics

Security and ease of use are most important to consumers

Consumers' assessments by degree of importance



SOURCE: 2008 Survey of Consumer Payment Choice statistics subject to revision. See 2008 SCPC Table 26

Payment characteristic ratings

Consumers rate most characteristics of debit cards very favorably

	Acceptance for payment	Acquisition & setup	Control over payment	Cost	Ease of use	Record keeping	Security	Speed	ROW AVG
Cash	4.6	4.4	4.0	4.5	4.2	2.4	2.5	4.4	3.9
Check	3.6	3.8	3.2	3.8	3.4	4.2	2.9	2.9	3.5
Debit card	4.3	3.9	3.7	3.9	4.3	4.0	2.9	4.1	3.9
Credit card	4.6	3.7	3.6	2.8	4.4	4.3	3.0	4.1	3.8
Stored value card	3.8	3.4	3.4	3.3	3.7	2.9	2.6	3.8	3.4
Electronic account deduction	3.1	3.3	3.7	3.8	3.7	4.0	3.3	3.8	3.6
COL AVG	4.0	3.8	3.6	3.7	3.9	3.6	2.9	3.8	3.7

NOTE: Ratings are on a 5-point scale (1 is lowest, 5 is highest)

SOURCE: 2008 Survey of Consumer Payment Choice statistics subject to revision. See 2008 SCPC Table 27.

Simulated changes in check share, 2003–2006

Changes in cost and convenience partly explain decline in check use

SIMULATION	Estimated change in check share	Percent of actual change in check share
Actual change (0.310 to 0.226)	-0.084	100
Increase in number of payment instruments (0.25 per consumer)	-0.021	25
Decrease in relative convenience of checks (30 percent)	-0.029	34
Increase in relative cost of checks (30 percent)	-0.009	11

NOTE: Each simulation is independent and the results are not a complete decomposition of the actual change in check share.

SOURCE: Scott Schuh and Joanna Stavins, "Why Are (Some) Consumers (Finally) Writing Fewer Checks? The Role of Payment Characteristics," *Journal of Banking and Finance* (2009)

SCPC production plans

Date	Projects
2010:Q2	<ul style="list-style-type: none">• Release 2008 micro data (4/1/2010)• Publish 2008 overview paper• Publish 2009 official tables
2010:Q3	<ul style="list-style-type: none">• Publish 2008–2009 overview paper• Release 2009 micro data
2010:Q4	<ul style="list-style-type: none">• Implement 2010 survey
2011:Q1	<ul style="list-style-type: none">• Board of Advisors meeting (March)
2011:Q2	<ul style="list-style-type: none">• Publish 2010 official tables
2011:Q3	<ul style="list-style-type: none">• Publish 2008–2010 overview paper• Release 2010 micro data

More information

To download this presentation, the SCPC Tables publication, and/or SCPC micro data, or for more information about the

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visit our web site:

<http://www.bos.frb.org/economic/cprc/index.htm>