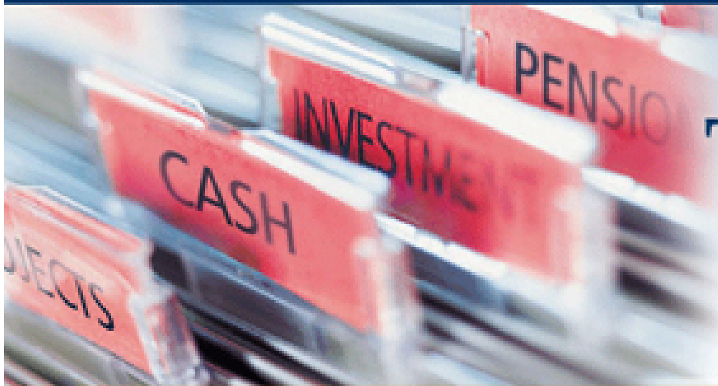
CLIENT LOGIN



TREASURY RESOURCES

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This presentation was originally given by:

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Retail Payments Research: Facts or Fiction?

Financial Electronic Commerce Conference

April 4, 2000

Kathleen O. Paese

Federal Reserve Bank of St. Louis

Background

- Study commissioned by Rivlin Committee in May 1998

- Data will provide FRB decision makers and industry with information about retail payment trends; baseline of entire payments system

Research Objectives

- Determine annual volume and value of retail payments
- Record trends in volume growth/decline
- Assess consumer, business and FI attitudes
- Record trends or changes in attitudes
- Document key factors, drivers and barriers
- Determine industry-specific trends

Payment Instruments Studied

Traditional Mechanisms

- Cash
- Check
- Automated Clearing House
- Debit card
- Credit card
- Stored value cards

Payment Instruments
continued

Emerging Mechanisms

- Electronic Benefits Transfer
- Digital cash
- Electronic Bill Presentment & Payment
- Electronic check - POS conversion

Phase I: Literature Search

- Hired Payment Technologies, Inc. (PTI) to conduct search

- Review existing studies to identify known information and gaps

- More than 1,000 sources reveiwed

Cash Results

- Cash circulation has increased to more than $500 billion in 1999
- No data available on the number of cash transactions (volume vs. dollar value)
- ATM deployments have increased steadily

Cash Results

continued

- Cash is the most common form of payment
- Estimates of cash transactions vary widely
- Cash transactions are lower-value ($5-$10)
- Cash usage is predicted to decline

Check Results

- Current estimates show U.S.check volume of 65 billion items
- 55% of checks written by consumers
- Average annual growth was 2.2% between 1990-1997
- Consumers who prefer checks do not expect to change their usage in the future

CHECK RESULTS

continued

- Fraud is a factor for check acceptance
- Research consensus: total check volume will increase slightly (1-2%) through 2001
- Total check transactions volume will be close to 70 billion in 2001
- Average check transaction costs have increased, but are still lower than credit/debit

Debit Card Results

- Off-line and on-line transactions counted separately
- Off-Line requires a signature; on-line require a PIN
- 1.9 billion transactions worth $74.3 billion in 1997
- 80.5 million debit cards issued

Debit Card results

continued

- On-line transactions
  - 1997 volume =12.4 billion transactions
  - 88% ATM transactions
- Nilson estimates average annual growth:
  - 35% between 1997 and 2000
  - 17% between 2000-2005

Debit Card results

continued

- Off-line transactions increasing at a faster rate than on-line
- Consumers who prefer DB cards use them frequently
- DB cards are expected to reduce cash and checks at the point of sale

Credit Card Results

- 1998 volume was 9.6 billion transactions at a value of $890 billion
- Growth of general purpose cards averaged more than 12.5% annually between ‘95-’97
- Credit cards have the highest costs to merchants per transaction
- Despite the costs, merchant acceptance is growing

Automated Clearing House Results

- 1998 volume = 5.3 billion, worth $16.4 trillion
- Volume grew14.4% annually between ‘90-’97
- 65% of companies offer direct deposit
- Satisfaction is high among consumers using direct deposit
- Cost savings is the primary driver of companies converting to electronic payment

Stored Value Card Results

- Information on volumes very limited
- Definitions vary widely
- Represent less than 1% of all U.S. payments
- Growth projections vary widely
- Stored value cards are used for low-value transactions and are expected to compete with cash & checks

Stored Value Card Results *continued*

- Banking/finance, entertainment and educational industries expect strongest growth

- Consumer awareness of stored value cards is growing: 17% in ‘93 to 27% in ‘95

Electronic Benefits Transfer (EBT) Results

- EBT is the distribution of state food stamps and TANF cash benefits
- 36 states and D.C. have EBT systems
- An estimated $110 billion in state aid will be issued via EBT
- Represents 3.2% of all POS transactions and 4% of total sales volume
- 1/3 of all welfare recipients receive benefits electronically

Digital Cash Results

- Purchasing cash/credits on your PC; making electronic purchases over the Internet
- No published volumes or projections
- No industry standards
- Significant growth potential; 80% purchase are low value
- Consumers lack confidence
- Consumer acceptance most significant barrier

Electronic Bill Presentment & Payment (EBPP) Results

- Several models in place
    - Consolidator model
    - Direct Biller model
- 1 billion bills presented in '97
- Companies can save 50-60% with EBPP

Electronic Bill Presentment & Payment (EBPP) Results

- Consumers express low likelihood of using EBPP in next 3 years
- U.S. household payments growing at 3.8% annually
- Business payments growth estimated at 3.4% annually

Electronic Check Results

- Definition: checks converted at POS to ACH and e-checks issued from a PC
- No volume statistics available
- 1,700 locations piloted check conversion in '98

Electronic Check Results

continued

- Consumers show high level of comfort with check conversion
- Retailers find an average of 20% improvement in check collection
- Check fraud is major driver

Research Conclusions

- The total number of payments is growing
- Emerging payments environment is changing rapidly - difficult to measure
- Few standard measures for transactions exist
- Usage of electronic payments is growing
- Many checks are moving out of the system at the point of sale
- Future of digital cash transactions is uncertain

RESEARCH CONCLUSIONS
continued

- Most consumers who prefer checks will continue to write checks
- Businesses are embracing electronic payments; some ahead of demand curve
- Consolidated, reliable sources for check, cash, and emerging payment data don't exist

Next Steps

- Phase 2
  - Purpose: Gather aggregate data on check and cash transactions; quantify break down of payment instruments at the POS; Identify emerging payment data sources

Next Steps *continued*

- ¬Phase 3
  - Purpose: Gather end-user attitude and volume data; assess trends and future payment substitutions

- Questions??