

## E-PAYMENTS: THE FUTURE COLOR OF MONEY

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## What is happening in the world of paper payments?

- “Ups and downs”
- Increasing ACH volume
- Growth rates at the Federal Reserve
- Rise in card-based payments
- Virtual payment systems



## “Ups and downs”

### Checks are down and costs are up

- The number of checks processed by the Federal Reserve decreased for the fourth consecutive year in 2003. It processed 15.81 billion checks in 2003, a 4.7% decline from 2002.\*
- The unit cost to the Fed to process a check in 2003 increased by 13.3%, from 4.5 cents in 2002 to 5.1 cents in 2003.

\* The 2003 rate of decline was the steepest of the past four years, more than doubling the 2002 rate of decline of 1.9%.

### ACH is up and costs are down

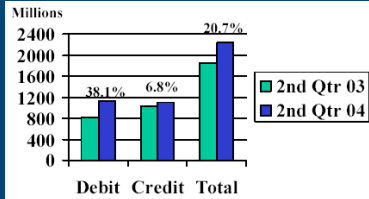
- The Fed’s commercial ACH volume increased by 12.1% in 2003 to 5.59 billion payments.
- The Fed’s unit cost to process an ACH payment decreased by 15.4%, from 1.3 cents in 2002 to 1.1 cents in 2003.

Source: NACHA

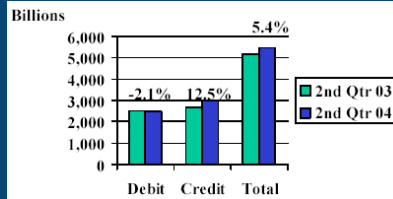


## Increasing ACH volume

ACH transaction volume



ACH dollar volume

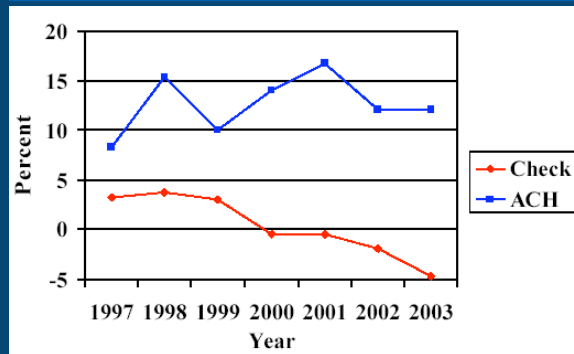


Source: NACHA



## Growth rates at the Federal Reserve

ACH and check growth rates, 1997-2003



Source: NACHA



## Rise in card-based payments

- Payment cards include standard credit cards, debit cards, and stored value cards.
  - Credit card payments will increase from 6% of payments in 2003 to 8.9% by 2008.
  - Debit card payments will increase from 0.8% to 1.5% during the same time period.
  - Legislation requires government benefits payments to be distributed electronically by 2007.
    - Child support payments are being disbursed via stored value cards in four or five states, with others quickly adopting.
    - 48 states, the District of Columbia, the U.S. Virgin Islands and Puerto Rico have online food stamp EBT systems. California is in the process of expanding statewide.

Sources: *Building Payments into e-Government Initiatives*, PayStream Advisors (Fall 2003), Centers for Medicare and Medicaid Services Web site



## Virtual payment systems

- Virtual payment systems include digital cash and electronic wallets.
  - Lack of standards and protocol and the inability of governments to track movement of funds have inhibited acceptance of digital cash payments.
  - E-wallets, however, are on the rise. Constituents do not like to fill in the same information over and over; e-wallets provide government agencies with a secure storage place for credit card data, owner identification, e-cash, and owner contact information.
    - Examples of e-wallets in the private sector include Amazon's "1-Click", Microsoft's .NET Passport and Yahoo! Wallet.

Sources: *Electronic Payments Primer*, National Electronic Commerce Coordinating Council (October 2002)

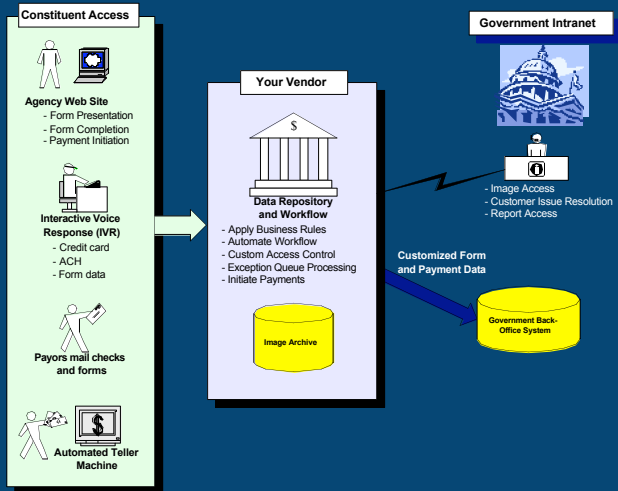


## Multi-channel taxpayer access to government

Integrate core remittance processing, e-payment, VRU, and call center competencies

Allows full multi-channel access to government services

Provides single stream of payment and remittance data



## Moving Checks to Electronics

- Check 21 Overview
- What does Check 21 include?
- Substitute checks: examples, use and acceptance and why
- Electronic check presentment: physical vs. image delivery
- ACH check conversion



## Overview

- On October 28, 2004, the Check Clearing for the 21st Century Act, more commonly known as Check 21, becomes law.
- Check 21 is a bill sponsored by the Federal Reserve Bank and signed into law by President Bush on October 28, 2003. It is also known as the Check Truncation Act.
- This legislation was pursued as a result of the events surrounding September 11, 2001.
- The Fed's objectives:
  - Facilitate check truncation and promote the use of electronics
  - Foster innovation without mandating receipt of images
  - Improve overall efficiency of the nation's payments systems



## What does Check 21 include?

- Check 21 creates the legal equivalence of the original check and a "substitute check".
- Designed to encourage check truncation by removing key barriers
- Excluded from legislation:
  - Image exchange and ECP
  - Check safekeeping products
  - Other truncation products



## Substitute checks

- A substitute check is the legal equivalent of the original check for all purposes.
  - Contains images of front and back of check
  - Conforms to industry standards
    - Magnetic ink character recognition (MICR)
    - Physical characteristics of check
  - Accurately and legibly represents original check
  - Suitable for automated processing
  - Bears image replacement document (IRD) and indemnity legend
  - Includes all endorsements, physical and electronic
  - Includes identification of creating party



## Substitute check example

ANS X9.90 specifications for an image replacement document (IRD)



## Use and acceptance

- The use of substitute checks does not require an agreement between parties.
  - Any party receiving a substitute check must accept it, including the parties in forward collection process and in returns (unpaid) process.
  - All checks may be converted to substitute checks, including consumer and commercial checks, government checks, cashier checks, money orders, traveler's checks, etc.



## Why substitute checks?

- Primary benefit is faster collection and return of checks.
  - Banks could use image technology and print substitute checks closer to receiving banks eliminating transportation.
  - Banks could automate retrieval and processing of return items.
  - Branch and ATM deposits could be captured and image processed, eliminating transportation.
  - Use of substitute checks will allow banks to truncate 100% of transit items.



## Electronic check presentment (ECP) with physical check delivery: today

- This option facilitates more efficient processing by allowing the paying bank to electronically receive MICR data ahead of the physical checks.
  - The paying bank debits their customer accounts on the day of receipt of the MICR file (a day sooner than normal).
  - Most banks hold commercial accounts from end-of-day posting and process the paper items the next day.
  - Physical items are delivered later, then are available for exception handling (NSF, stop payments, etc.), and may be returned with statements.



## ECP with image delivery (image exchange): pilots this year

- The Clearing House Vanguard Bank participants (eight lead banks) are scheduled to conduct image-based ECP pilots this year.
  - Pilot programs will facilitate the same process as current ECP models, but instead of transporting physical checks, participants will exchange images of these items.
    - Most banks will continue to exclude commercial items.
    - Images are available for exception handling (NSF, stop payments, etc.) and for statementing.
  - The process will enable next-day (one-day) settlement with depositing banks.
  - We anticipate the development of a same-day-settlement image exchange window, but it does not exist today.



## ACH check conversion

- Single-entry ACH debit, consumer checks only
  - Check becomes “source document,” no longer a check, but an ACH regulation E transaction
  - Accounts receivable conversion (ARC)
    - Check payment mailed to biller/lockbox or placed in drop box
    - Notice on bill equals authorization
    - Check is imaged and destroyed within 14 days; image retained for two years
  - Point of purchase (POP)
    - Individual presents check at pay window or point of sale
    - Authorization required at time of transaction
    - Consumer-as-keeper current model



## New Collection Alternatives: Low-Value Checks



**Scenario:** Retail lockbox consumer payment for \$100 accepted in Phoenix, AZ, retail lockbox site, drawn on Fleet Bank, NY

- **Option 1 Traditional check clearing:** sent via commercial aircraft to clearing intermediary in New York, presented to Fleet next day, or in two days
- **Option 2 ACH check conversion:** MICR captured in lockbox, settled via ACH next day
- **Option 3 Image exchange (future):** streamlines banks and eliminates transportation; settled next day
- **Option 4 Check 21:** unlikely scenario, as substitute check cost exceeds transportation costs, with no gain in availability

ILLUSTRATIVE



## New Collection Alternatives: Large-Value Checks



ILLUSTRATIVE



**Scenario:** Wholesale lockbox payment for \$10,000,000 accepted in Pasadena, CA and drawn on Fleet Bank, NY

- **Option 1 Traditional check clearing:** cash letter sent via contracted courier to intermediary in New York, presented to Fleet for settlement the next day
- **Option 2 ACH check conversion:** not available for non-consumer items
- **Option 3 Image exchange (future):** streamlines banks, eliminates transportation; settled next day.
- **Option 4 Check 21:** if check can be captured and transmitted as substitute checks to New York before 8 a.m., same-day settlement to Fleet

## New Collection Alternatives: Distributed Capture



ILLUSTRATIVE



**Scenario:** Corporate client collecting \$250 in-person and drop box payments in numerous locations, consumer and corporate payments

- **Option 1** Maintain local depository relationships in every market, reconcile branch deposits, forecast cash and concentrate into headquarters
- **Option 2 ACH check conversion (POP or AEC):** consumer items (roughly 80 percent of items); no business items
- **Option 3 Image exchange (future):** electronically deposit into headquarters
- **Option 4 Check 21:** If check cannot be exchanged or converted to ACH, capture at branch and deposit substitute check in concentration bank



## New Collection Alternatives: Best Fit Analysis

### Substitute Checks

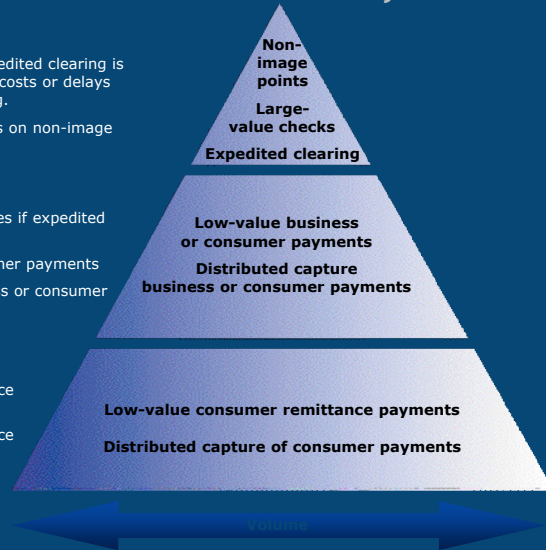
- For larger value checks if expedited clearing is available, or if transportation costs or delays exceed cost of image handling.
- For distributed-capture checks on non-image exchange banks.

### Image Exchange and ECP

- Image exchange or ECP applies if expedited clearing is not available.
- Low-value business or consumer payments
- Distributed capture of business or consumer payments

### ACH Check

- Low value consumer remittance payments via lockbox (ARC)
- Low value consumer remittance payments in person (POP)



## How will these new collection alternatives impact you?

- Key points
- Items to assess
- Strategic realities
- Impact on collections
- Impact on disbursements



## Key points

- The use of substitute checks does not require an agreement between parties.
  - Check 21 and the evolution of other electronic channels (like image exchange) are primarily a back-office change affecting how banks clear and settle items. With electronification, these back-office changes can be extended to you via:
    - Image cash letters and deposits
    - Distributed capture solutions
    - Expedited processing and notification of return items
  - Electronification is expected to lower operating costs and expedite funds availability; however:
    - Declining check volumes are contributing to rising costs.
    - With 80% of items collected in one day, limited improvements in float are available.
    - The industry is years away from a widely adopted image exchange process.



## Items to assess

- Depository and collections
  - Is your internal deposit-gathering process of taxes, fees and licenses (at agencies or at your remittance center) image enabled?
  - What volume of exception payments flows through your agency or remote offices that could be expedited via distributed capture solutions?
  - What impacts could electronification have on your operations, such as end-of-day extensions, depository account consolidations, agency collections or process reengineering?



## Items to assess (cont'd.)

- Need for original items
  - Do you have any requirements to receive and archive original cancelled (paid) checks or drafts?
  - Is this requirement based on legislative statute, perceived requirements or operational practices?
  - Do you have any needs to process original items on check processing or scanning equipment for additional output?
  - Do you require your constituents to produce an original paid check to prove payment of an obligation?



## Strategic realities

- Image exchange is the desired end-state, but is dependent on adoption by thousands of banks.
  - Substitute checks may prove to be more expensive than traditional checks, and at current interest rates may prove feasible only for certain transactions:
    - Large value with expedited settlement
    - Items with transportation delays
    - Automation of NSF items
  - The Fed's ultimate objective is to eliminate all float.
  - Check volumes are declining, putting more pressure on operating costs and site consolidations.
  - Most checks (91%) are under \$1,000, and require physical check processing until image exchange is more broadly in place.
  - Movement to an all-image environment will take many years.



## Impact on collections

- Use of the following solutions will help optimize the collection of funds. These new clearing options position you to take advantage of this optimization process.
  - Image cash letters
    - Reduce transportation costs or delays
    - Provide later cutoff times for deposits
    - Perform image quality testing
    - Optimize clearing and settlement
  - Distributed capture solutions
    - Capture images in remote agency offices
    - Create/transmit deposits
    - Optimize clearing and settlement



## Impact on collections (cont'd.)

- Enhancements to wholesale and retail lockbox services
  - Ability to expedite the clearing of items and pursue the optimal clearing channel, utilizing tools and methods discussed in the depository services section
  - Extension of end-of-day processing windows
  - Enhanced distributed capture solutions to also support integration of remittance data for Accounts Receivable posting
  - Faster notification of return items, including integration of original remittance data and return item images



## Impact on disbursements

- Expedited settlement of collection items impacts core disbursement products by reducing disbursement float.
  - Controlled disbursement and warrant endpoints will be the likely targets for substitute checks attempting to reach same-day-settlement windows or high dollar group sort cutoffs for large value checks.
  - Most ECP and image exchanges will likely exclude controlled disbursement routing numbers (initially) and government routing numbers used for warrant processing.
  - Your vendor should be prepared to support the seamless integration of substitute checks into its disbursement product set. The disbursement product set should be completely image-enabled with online and PC-based archival and reporting tools:
    - Ability to view and print historical items from the archive or current-day exception items
    - Allow customer service staff to access the image archive
    - Archival via online services and CD-ROM



## Questions

