



Regional and Community Bankers Conference

June 7, 2005

Payments Update

Presented by Steve Whitney, Senior Vice President
Federal Reserve Bank of Boston

Discussion Agenda

- 2004 Federal Reserve Payments Study
- Check 21 Act
 - A Review of the Act
 - Status of Federal Reserve Services
 - What's Next?
- Federal Reserve Check Infrastructure Update

The 2004 Federal Reserve Payments Study

- Follow-up to the 2001 Retail Payments Study
- Estimates paper and electronic volumes in 2003 to establish the pace of change over the past three years
- Used similar methodology as 2001 study so that results could be compared
- With an objective of providing information to an industry and others faced with a myriad of future investment decisions

Survey Participation

Two separate studies were conducted

- **The Depository Institution study looked at the volume and value of non-cash payments in the U.S.**
 - 1,500 respondents, 56% response rate
 - All of the 44 largest banks responded, allowing the survey to achieve 95% confidence targets
- **The Electronic Payments Instrument study estimated the number and value of electronic payments originated in the U.S.**
 - 68 electronic payment service providers responded (79% response rate)
 - Covers 98% of total estimated volume

Survey Results

- The number of non-cash retail payments increased by 3.8 billion per year since 2000, to an estimated 81.2 billion payments
 - Check volume declined by over 4 percent between 2000 and 2003
- For the first time, the number of electronic payments exceed the number of check payments
- Debit cards were the big winner, with an annual growth rate of over 23 percent
 - Growth numbers indicate debit cards are substituting for cash and credit cards, as well as for checks.

Annual Number of Non-Cash Payments: 2000 – 2003

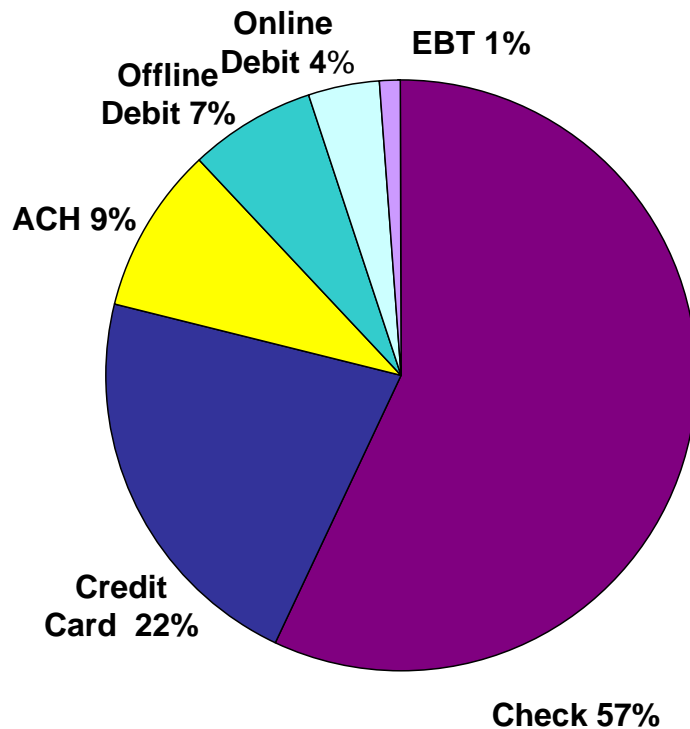
	2000 Estimate (billion)	2003 Estimate (billion)	CAGR*
Noncash Payments	72.5	81.2	3.8%
Check	41.9	36.7	-4.3%
Credit Card	15.6	19.0	6.7%
ACH	6.2	9.1	13.4%
Offline Debit	5.3	10.3	24.9%
Online Debit	3.0	5.3	21.0%

*CAGR is the compound annual growth rate

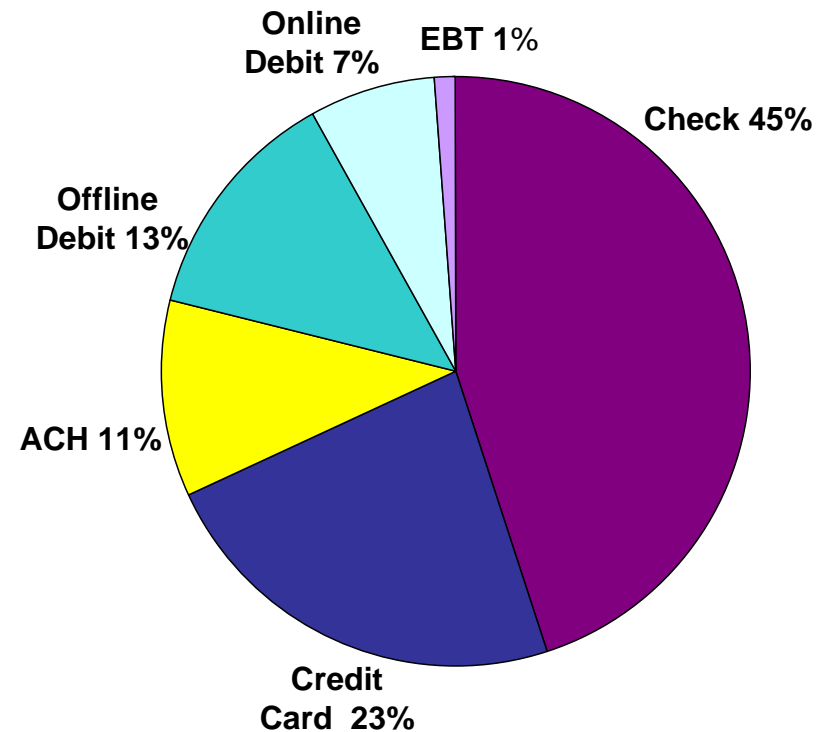
Source: Federal Reserve “2004 Federal Reserve Payments Study”

Distribution of Non-Cash Payments

2000



2003



Source: Federal Reserve "2001 Retail Payments Research Project";
"2004 Federal Reserve Payments Study"

A Closer Look at Check Payments

- Given estimate of 1 to 1.2 billion check conversions in 2003, the rate of check volume decline is accelerating. While paid check volume declined 4.3%, the actual value of checks written declined by only 0.4%
- Average check value grew from \$950 to \$1,070 during same time period
- Data implies the migration of smaller dollar check payments to electronic alternatives, especially debit cards
- Returned checks declined by 7.7%, a greater rate of decline than total checks
 - Likely fueled by overdraft protection and lines of credit

Credit Card Growth Moderates

- Credit card usage grew from 15.6 billion to 19.0 billion, an annual compound growth rate of 6.7%
- While the slowest growing of the electronic alternatives, credit cards are still the most widely used electronic method
- Private label growth is only 4.4%

The ACH Network Grows Relentlessly

- 2003 annual Automated Clearing House volume stands at 9.1 billion, fueled by new payment types and check conversion activity
- The 13.4% CAGR amounts to one billion payments a year, and appears to be accelerating in the short term
- Two US ACH Operators
 - Federal Reserve: 64% market share
 - EPN: 36% market share

The ACH Network Grows Relentlessly

NACHA 2004 ACH Data

- 2004 total ACH volume exceeded 12 billion
- Average amount of transaction was \$2,400 vs. \$1,100 for a check transaction
- Growth is being fueled by “E-Check” transactions
 - ARC grew from 220 million in 2003 to 1.2 billion in 2004
 - Web grew from 690 million in 2003 to 900 million in 2004
- ARC is for consumer checks only, but are conversions for business checks that far away???

Additional Findings

- 6.1 billion ATM transactions were conducted in 2003, of which 2.5 billion were “foreign” ATM transactions
- The doors may finally have opened to the long ballyhooed “checkless society” but 36 billion checks is a large number, and check will be with us for some time

Check 21

A Review of the Act

Check 21: “What it is” & “What it isn’t”

Regulatory Update

- Check Clearing for the 21st Century Act, “Check 21” was signed into law on October 28, 2003 and became effective October 28, 2004
- Federal Reserve’s Regulation CC changes to implement the Check 21 Act were finalized July 27, 2004

Check 21: “What it Is” & “What it Isn’t”

Clearing Up Misconceptions

- Check 21 is not about check imaging and check image exchange
- Check 21 does not mandate check imaging and check image exchange
- Check 21 does not grant check images the same legal status as paper checks

Check 21: "What it Is" & "What it Isn't"

What "Check 21" Is

- "Check 21" is body of law governing the use of the "Substitute Check" – both a forward and a returned substitute check
- Before Check 21, banks had to collect/return original checks in paper form unless they had agreements to do so electronically; it can be difficult to obtain these agreements
- Check 21 legislation is designed to enhance the efficiency of the check collection system by facilitating truncation without mandating electronics
- Banks may still collect/return checks electronically, by agreement, as they did before Check 21
- Substitute checks permitted in place of original checks – without agreements

General Provisions of Substitute Checks

A substitute check is a paper reproduction of the original check that:

- Contains an image of the front and back of the original check
- Conforms to banking industry standards for substitute checks (ANSI X9.100-140)
- Is suitable for automated processing

A substitute check for which a bank has provided Check 21 warranties is the legal equivalent of the original check if it:

- Accurately represents all of the information on the front and back of the original check as of the time the original check was truncated, and
- Bears the legend "This is a legal copy of your check. You can use it the same way you would use the original check".

General Provisions Governing Substitute Checks

- A substitute check is subject to all laws that apply to checks, including any provision of Federal or State law
- A bank can collect or return substitute checks without the need for agreement with the receiving bank
- The Act defines a “Reconverting Bank” as any bank that creates a substitute check
 - Reconverting bank ensures that the substitute check bears all indorsements applied by parties that previously handled the check
 - Reconverting bank shall identify itself as the reconverting bank on the substitute check

Components of a Forward Substitute Check

Creating Institution Routing Number & Creation Date


Legal Legend

Original Truncation Institution

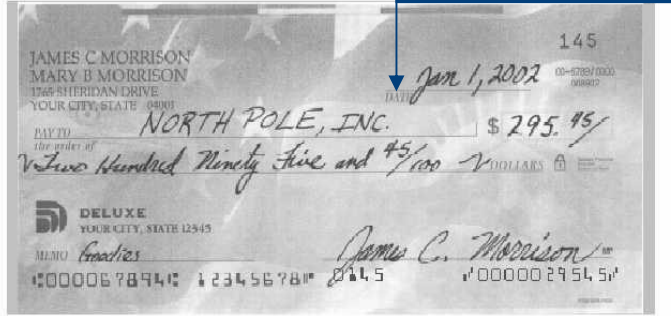
Original Scanned Front Image

011500120
01/03/2002
A5770A979

This is a LEGAL COPY of your check. You can use it the same way you would use the original check.



EEDEE9T9L
E00272710CT100C1E00



JAMES C MORRISON
MARY B MORRISON
1548 SHERIDAN DRIVE
YOUR CITY, STATE 03901

145
Jan 1, 2002 00-4789 0000 988802

PAY TO the order of NORTH POLE, INC. \$ 295.45

DELUXE
YOUR CITY, STATE 12345

MEMO Groceries James C. Morrison

⑆000067894⑆ ⑆2345678⑆ 045 ⑆0000029545⑆

Original Scanned Back Image

050-4187 ⑆FRANCO
BANKING INC. F.A. CO.
CHICAGO, IL 60601

1800539446

⑆031000011⑆ < 01/03/2002
7815830233

FOR DEPOSIT ONLY
FIRST UNION NATIONAL BANK
ACCOUNT # 4234567890123
NORTH POLE, INC.

⑆053000183⑆ 01/03/2002
1800539446
⑆123456789⑆ 01/04/2002
123456789012345

↓ Do not endorse or write below this line. ↓

Optional Security Feature Area

Substitute Check Identifier "4"

MICR Line from Original Check

Initial BOFD Endorsement Printed on Original Substitute Check

Subsequent Endorsements Printed on Original Substitute Check

Check 21

Status of Federal Reserve Services

Check 21: Status of Federal Reserve Services

- Significant financial institution interest in check image exchange from financial institutions of all sizes
- Volume continues to increase
 - November ramped up to approximately 40,000 items per day with an total dollar value of \$700 million
 - December volume continued to increase, reaching 150,000 items per day with value well over \$1 billion
 - January reached 200,000 items per day with value in excess of \$3 billion
 - May – highpoint at 800,000 items per day – over \$9.4 billion
 - Perspective: 1.6% of all checks collected through the Federal Reserve
 - Anticipating processing 2 million electronic items per day by mid-year

Check 21: Status of Federal Reserve Services

What is our Image Exchange Network?

50 banks depositing Image Cash Letters (ICLs) for collection in electronic form

75 banks depositing traditional paper checks for collection and instructing us to accelerate large dollar items for collection via electronics

For all electronic items Federal Reserve Banks are printing substitute checks

Start-up Experience

Just because you say your ready, doesn't mean you really are:

- Communication end-to-end testing
- Capture from FR test deck – image quality
- Full MICR line including dashes and extended field lengths

Conversions moving slower than originally anticipated

- Priority on diversity of customer types, vendors, geography, and business case
- Anticipate conversion speed to accelerate in coming months with vendor and customer experiences
- Currently 40 new customers enter testing process every month

Explanation of Federal Reserve Check 21 Services

FedFoward (ICL): Depositor sends an Image Cash Letter (ICL) to the Federal Reserve, in x9.37 format, containing images of forward collection checks for accelerated processing, and earlier credit. Potential exists for transportation savings. (Service is currently available).

FedReturn (ICL): Depositor sends an ICL to the Federal Reserve in x9.37 format, containing images of return items for accelerated return to the banks of first deposit (BOFD). Depositor benefits from improved availability and potential labor savings. BOFD receives information sooner. (Service available in late June/July).

FedReceipt/FedReceipt Plus): The check processing office local to the paying bank forwards ICL files to the paying bank; or enhances the service by having the Federal Reserve image-capture all items for presentment. Files are sent to the paying bank in x9.37 format, and are used to post to customers' accounts. This service offers potential for backroom savings, and makes possible "end-to-end" electronic processing. (Service available in late June/July).

Benefits of Check 21

Primary initial value proposition: Improved Speed of Collection

- Taking large dollar checks that cannot be cleared on the next business day and leveraging FedForward services to accelerate collection
- 70 percent of initial deposits are of this type of customer
- Current average item value is around \$20,000

Same Day Clearing from Wholesale Lockboxes

- Start-up average dollars per item \$25,000

Leveraging Check 21 to Replace High Cost Transportation Routes

- At least three of the industry's costliest air transportation routes are shifting to clear high dollars items via Check 21 and low-dollar items next day via commercial air freight forwarding

Benefits of Check 21 (continued)

Complete 'Clear all' items from community banks

- Some of these customers have pushed capture back to the branch
- Others are creating ICLs out of their 'in-house' or third party image archive
- Approximately 30 percent of initial deposits with typical average dollar value of around \$1,000 per item
- Operation/transportation savings primary driver, while float is secondary

International Deposit

- Clear all items solution – speed & cost of collection
- Moving clearing speed from a week or longer, to next day clearing

Check 21: Image Exchange Lessons Learned So Far

Supporting infrastructure works

- Some challenges, but electronic file movement and substitute check printing has been generally successful, (except for some duplicates)
- Distributed capture and transmission work (branch image capture and corporate image capture)

Effort required to send and receive image cash letters cannot be underestimated

- True for all participants

The need for substitute check printing and transportation will delay the full realization of the cost efficiencies associated with image clearing

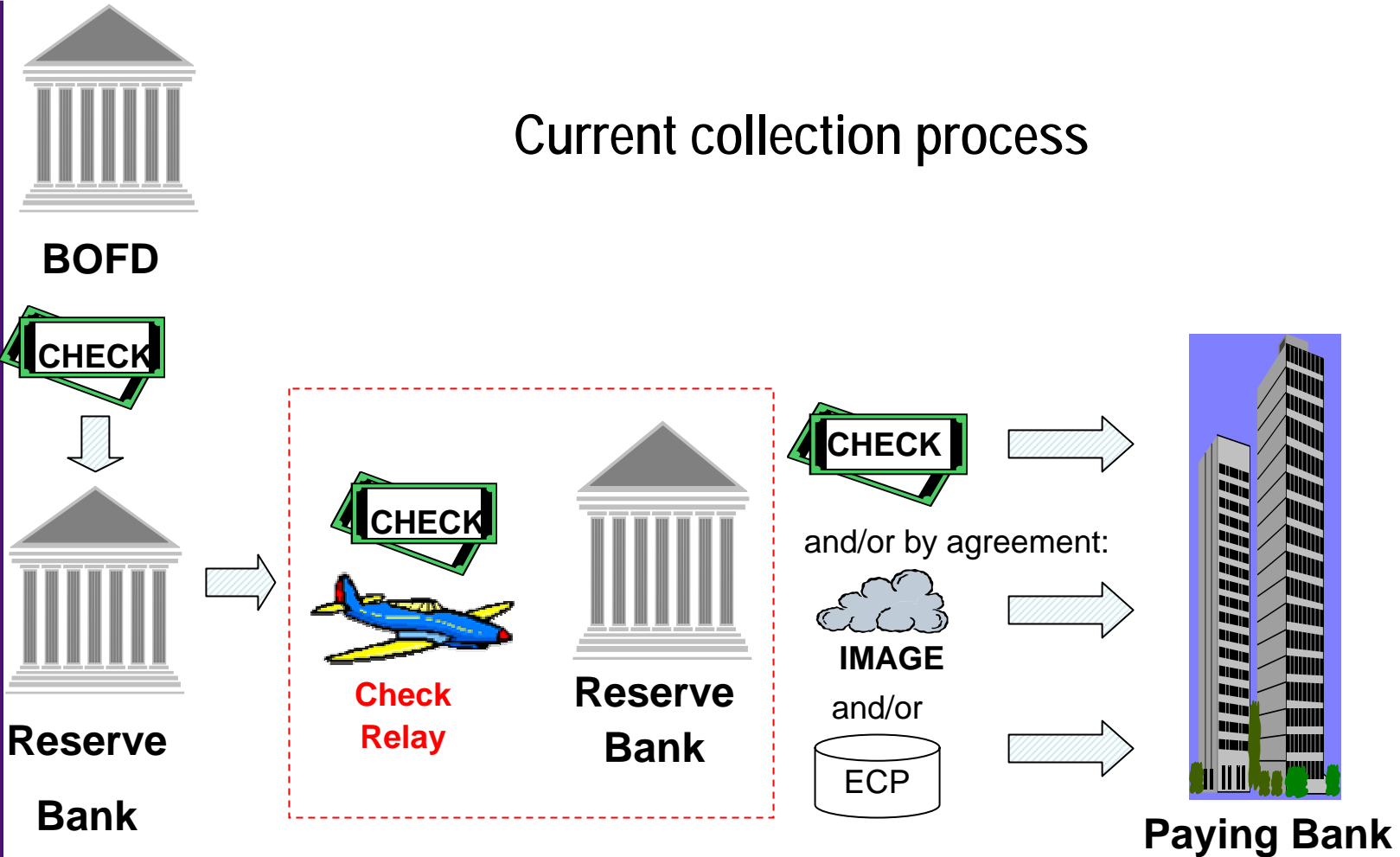
- Many financial institutions will continue to rely on paper presentments until they can implement check imaging and re-engineer back-office processing
- Many consumers and businesses still want paper. UCC allows check writers to receive checks back!!!

Check 21

What's Next?

Current Check Collection Process

Current collection process



The Image Exchange World?

October 28, 2004 –Mid-2005

New and traditional Electronic Participants

- Federal Reserve, SVPCo, Endpoint Exchange, EDS/Net Deposit, Fiserv

Most banks still collect and receive paper (original and substitute checks)

Early Application of Electronics:

- To accelerate return check collection, reducing risk
- To accelerate large dollar, non-local, inter-territory payments – big advantage for West Coast banks
- Image exchange among technology savvy participants

The Image Exchange World?

Late 2005 Operating Environment

- Most electronic participants will have deployed their electronic core solutions and will have selected their vendor/partner of choice
 - Suppliers will have deployed core electronic product solutions
 - Most major banks will have check image origination and receipt capabilities
 - Most major banks will have image-enabled their “back rooms”
- Most participants will begin making decisions concerning the “easy” downsizing of check processing infrastructure
 - Focus will be on “business cases” to selectively reduce infrastructure (reader sorters, ground transportation, air transportation, etc.)
 - Exploration of other changes that will be business-case driven (branch image capture, ATM image capture, etc.)

The Image Exchange World?

2006 and Beyond

- Pace towards image exchange will increase as more and more banks install this capability
- More and more bank back-rooms will be image-enabled
- Check image capture will move closer to the check writer/payee
 - Point of Sale check image capture (back room merchant capture)?
 - Branch check image capture – accelerating rapidly
 - Corporate check image capture – offered by several major banks
 - ATM capture – manufacturers are incorporating check image capture technology into ATMs

The Image Exchange World?

- Substitute check volumes peak at 7 billion per year in 2007 and then fall rapidly as image exchange increases
 - No “rational” industry participant plans to print substitute checks as a long-term strategy – they are costly and risky!!!!
- While there is no consensus on timing, there is consensus on the long-term implications of Check 21
- Within the next decade, most in the payments industry envision that most checks will be electronically captured at their source – ATMs, lockboxes, branches, corporations, point of sale, etc.
- 5 Years Out, one can envision an environment where 50% to 75% of checks can be exchanged electronically

The Image Exchange World: Envisioned Transitional View

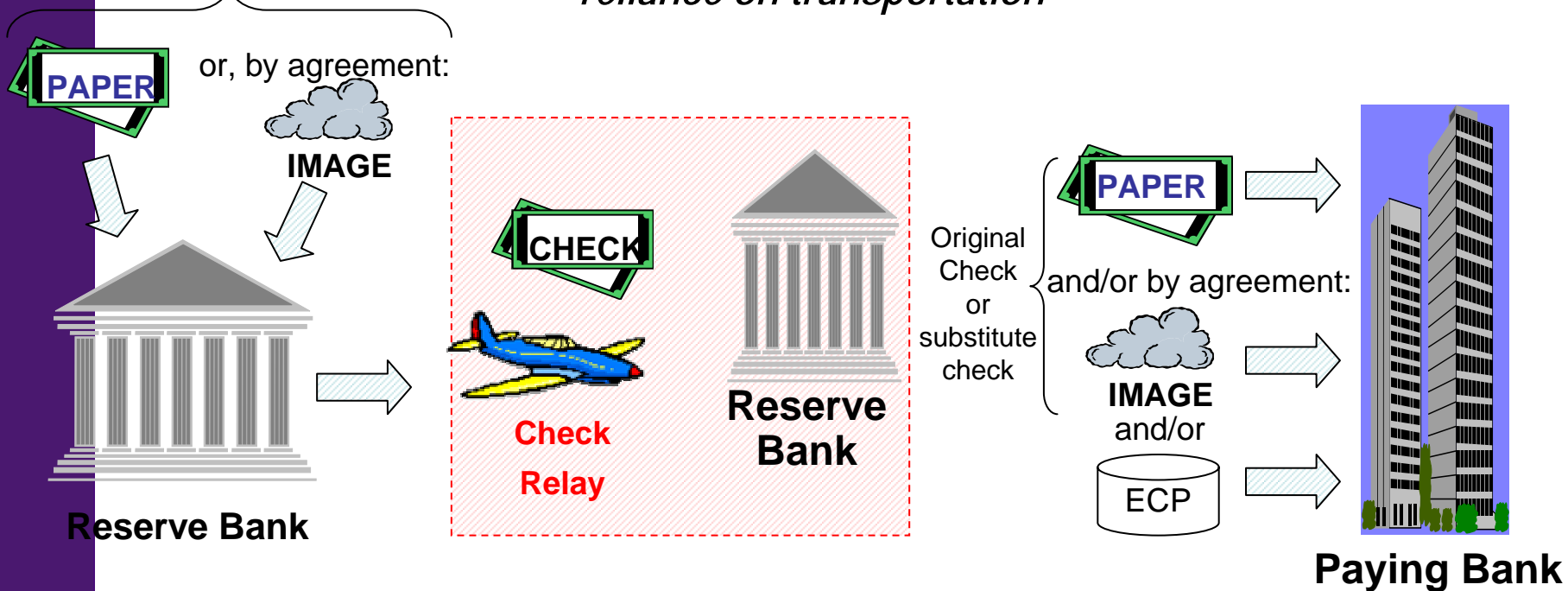


BOFD

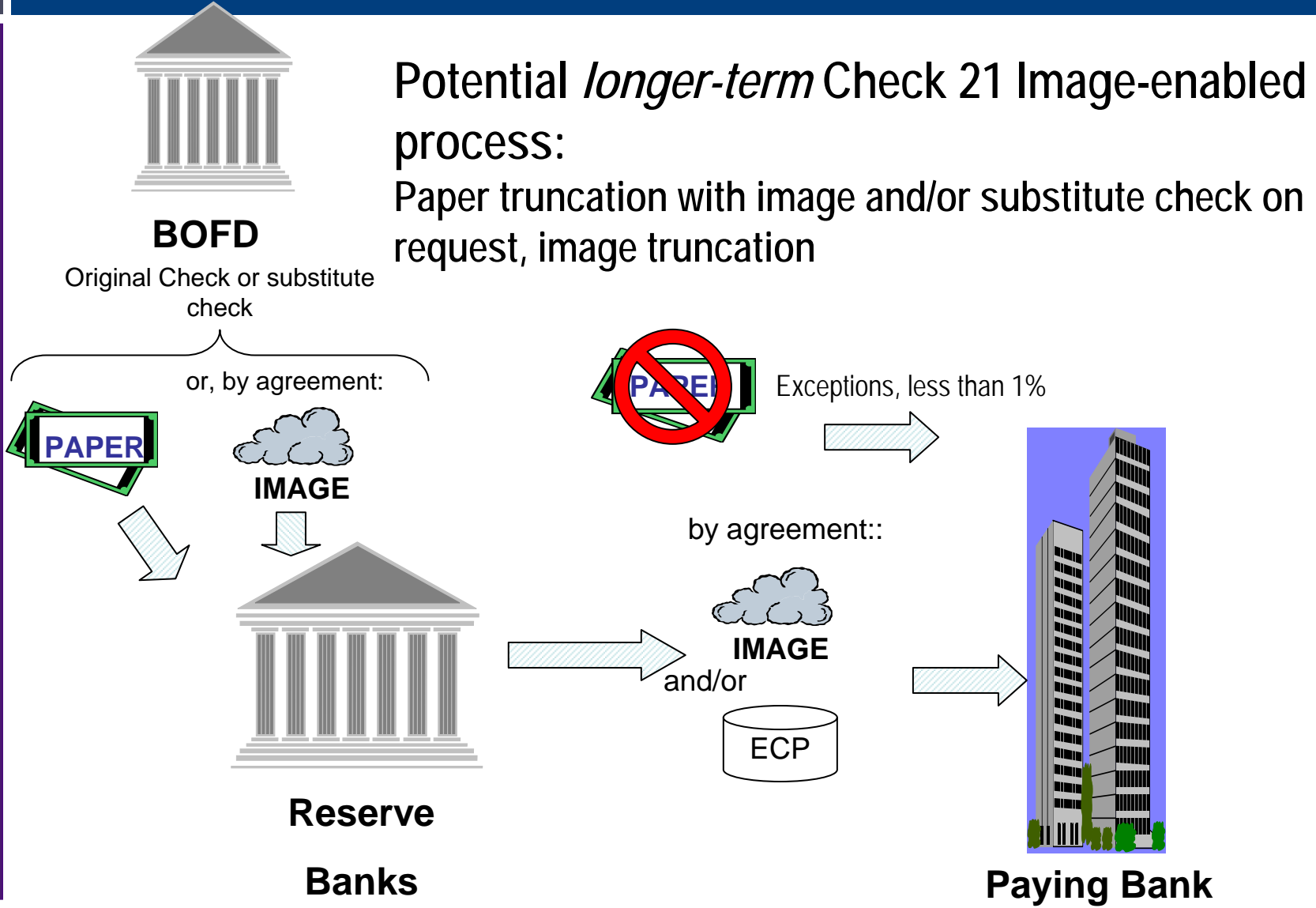
Original Check or substitute check

Potential *transitional* Check 21 Image-enabled process:

Mixed processing environment with decreased reliance on transportation



The Image Exchange World: Longer-Term View



Federal Reserve Check Infrastructure

Update

Federal Reserve Check Infrastructure Phases

- Phase I

Pittsburgh
Louisville
Indianapolis
Charleston
Richmond

Columbia
Miami
Little Rock
El Paso
San Antonio

Omaha
Milwaukee
Peoria

- Phase II

Birmingham
Detroit
Houston
Portland (September, 2005)
Salt Lake City (June, 2005)

Oklahoma City (October, 2005)
Boston (February, 2006)
Columbus (February, 2006)
Nashville (March, 2006)

Federal Reserve Infrastructure Phases (continued)

- Phase III
 EROC (Late 2006)
- This brings the number of FR check processing sites to 22
(as of EROC's consolidation)
- In response to:
 - decline in the volume of checks written (other alternatives)
 - decline in the volume of checks cleared as paper (conversion alternatives)
 - Impact of Check 21 likely to play role in the future

Federal Reserve Check Infrastructure (continued)

- Locally, plans well underway for Boston-to-Windsor Locks Consolidation
 - building renovations scheduled
 - transportation changes being planned
 - “transit point” approach
 - staffing, etc.
 - Check 21 to play role

Questions