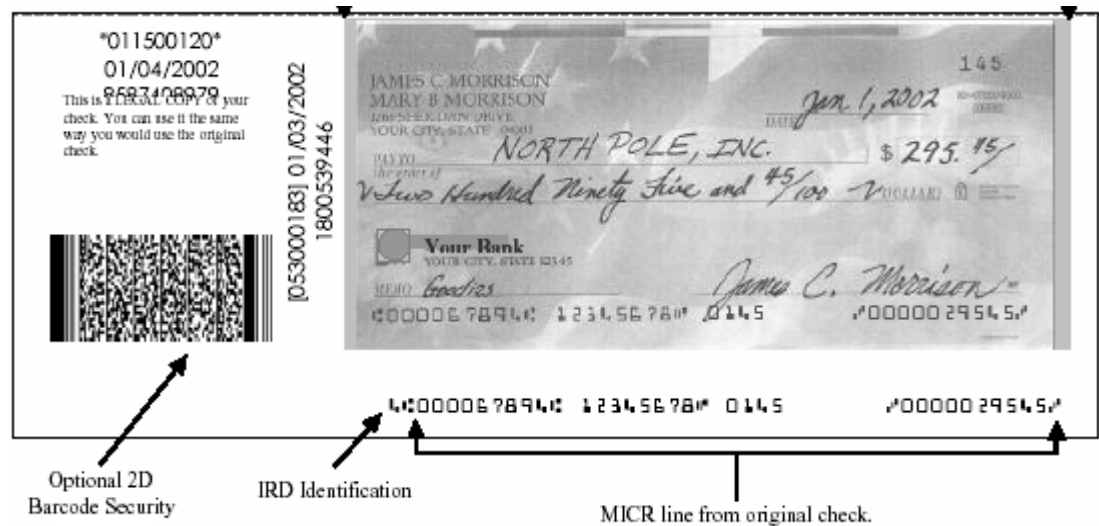


Impact of Check 21 on Corporate Cash Management

Use of the term “Check 21” in current cash management literature goes well beyond the Check Clearing for the 21st Century Act, signed into legislation October 28, 2003. Most often “Check 21” embraces image presentment and exchange, which is not required or even covered by the act. In this paper, we will attempt to provide our interpretation of how the Check 21 legislation and migration toward image check presentment will impact corporate cash management practices and services.

In reality, the Check 21 legislation is quite narrow in scope. It simply provides that a “substitute check” has the same legal status as the original paper check. The Federal Reserve has further interpreted that the ANSI X9.90 Specification for an Image Replacement Document (IRD) “defines” the term “substitute check” in the legislation. An IRD is a paper, MICR-encoded document that can be processed by



current check equipment. Thus the legislation allows an IRD to be presented to the drawee institution instead of the original paper check.

On October 28, 2004, the date the legislation takes effect, presentment of IRD's to paying institutions will begin without the necessity of a private agreement. IRD's should introduce additional efficiencies into the clearing system in that paper may not have to be transported literally from the bank of first deposit to the paying bank. Instead, the bank of first deposit could scan the deposited checks and simply reprint the image closer to the payor bank location. Even the Federal Reserve sees application of the technology to reduce transportation costs in its clearing network.

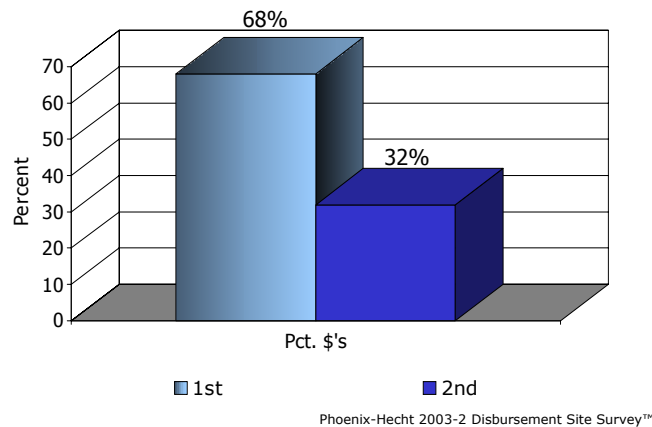
In truth, however, IRD's bear an inherent inefficiency since the paper check is printed at least twice. While IRD's will definitely find applications later this year, they will not, by any stretch of imagination, begin to approach the number of original



paper checks. Most experts expect IRD's to be used for return items and for current 2-day clearing items that can be converted to a one-day IRD. However, the float gain and transportation savings will have to offset the estimated five-plus cent cost of producing the IRD. Note also, that if sufficient volume exists currently, the items would likely already be cleared in one day, using high-dollar group sort or same day settlement programs. Rather than widespread use, the IRD will have the rather specialized applications above unless the estimated cost of printing can be drastically reduced.

Independent of Check 21 legislation, many banks had already begun to plan for and even pilot, electronic exchanges of checks involving truncation. These exchanges require private agreements between the settling parties, even post Check 21 enactment. In some sense, the genesis of this service was the Federal Reserve's payor bank services intended to enhance banks' controlled disbursement services. This Fed service provided an electronic transmission of the MICR check data prior to the delivery of the paper check.

Average Percentage of Dollars Reported
1st Presentment vs. 2nd



Later applications of this became known as electronic check presentment (ECP) with paper to follow. Although posting occurred using the ECP file, paper provided legal finality and the basis of reconciliation and dispute resolution.

Currently, there appear to be four emerging “leaders” in check image exchange. Twenty-two major banks and The Clearing House (formerly the New York Clearing House) own Small Value Payments Co. SVPCo serves very large banks and bases exchanges on The Electronic Check Clearing House Organization (ECCHO) rules. Eight banks, Wells Fargo, KeyCorp, Bank One, JPMorganChase, Wachovia, Comerica, US Bancorp, and Bank of America, will begin exchanges this year, largely based on the ECP with image to follow model. Endpoint Exchange is a private sector initiative owned and operated by CheckClear, LLC. It includes about 4,000 “endpoints” representing smaller banks, savings and loans and credit unions. Check clearing involves true image exchange and common settlement at 2 p.m. central time zone. NetDeposit, Inc. provides services for end-to-end electronic check processing. Well known for its pre-Check 21 advocacy of IRD's, NetDeposit also has image exchange capabilities and uses Western Payments

Alliance (Wespay) for settlement. The final “leader” is, of course, the Federal Reserve. Since specific product announcements have not yet been made, it is a bit unclear whether the Fed will evolve into a fourth exchange “model” or simply participate with the other emerging leaders.

Viewpointe Archive Services, LLC is also a leading vendor in image exchange, but it provides an archive shared by participants as opposed to a settlement mechanism. The interesting concept employed by Viewpointe is that an image would reside in a common repository and not physically move as the paper check does today.

Most visionaries see an unavoidable “evolution” toward image exchange. It is estimated that as much as \$2 billion in float, transportation, and processing costs can be removed from the payment system if we eventually stop moving paper. Such savings are too significant not to realize. Thus, image exchange is likely inevitable, but its final form still has many, many uncertainties. Perhaps the ultimate achievement of image exchange would be to “know” that a check is “good” at the time of its first acceptance into the payment system.

It is certain that 2-day check clearings disappear in an image exchange system.

National Average Check Clearing Times

Drawee Fed District	Calendar Days of Clearing	
	Lockbox Deposits	Over-the-counter Deposits
1	1.56	1.98
2	1.54	1.89
3	1.60	1.97
4	1.55	1.87
5	1.53	1.84
6	1.61	1.94
7	1.52	1.85
8	1.48	1.80
9	1.89	2.19
10	1.58	1.84
11	1.51	1.80
12	1.65	1.86

Source: Phoenix-Hecht 2003-2 Clearing Study

However, it is yet very uncertain how much 0-day clearings will increase. Answering that requires knowing whether the eventual evolution of image exchange involves lower-volume, round-the-clock, near real-time exchanges or high-volume, deadline-driven, batch exchanges. There is still a great deal of debate about just how image exchange will evolve.

National Average Check Clearing Times

Drawee Fed Type	Calendar Days of Clearing	
	Lockbox Deposits	Over-the-counter Deposits
City	1.36	1.60
RCPC	1.74	2.13
Country	2.03	2.29

Source: Phoenix-Hecht 2003-2 Clearing Study

Image exchange will clearly impact corporate treasury. Although pricing for deposit items should decrease below the current rates for paper items (including transit fees), there may be an offsetting image capture charge.

Unencoded Checks Other Fed	
TMA 100224	Average List Price \$0.153

Check Image Capture	
TMA 151351	Average List Price \$0.041

Volume	Expected Price
500	\$ 0.131
1,000	0.127
2,500	0.123
5,000	0.119

Volume	Expected Price
500	\$ 0.038
1,000	0.037
2,500	0.036
5,000	0.035

Source: 2003-2004 Blue Book of Bank Prices™

Source: 2003-2004 Blue Book of Bank Prices™

Likewise, corporations will likely argue that paid item charges should decrease.

Checks Paid Regular	
TMA 150100	Average List Price \$0.182

Checks Paid Controlled Disbursement	
TMA 150110	Average List Price \$0.180

Volume	Expected Price
250	\$0.164
500	0.162
750	0.160
1,500	0.158

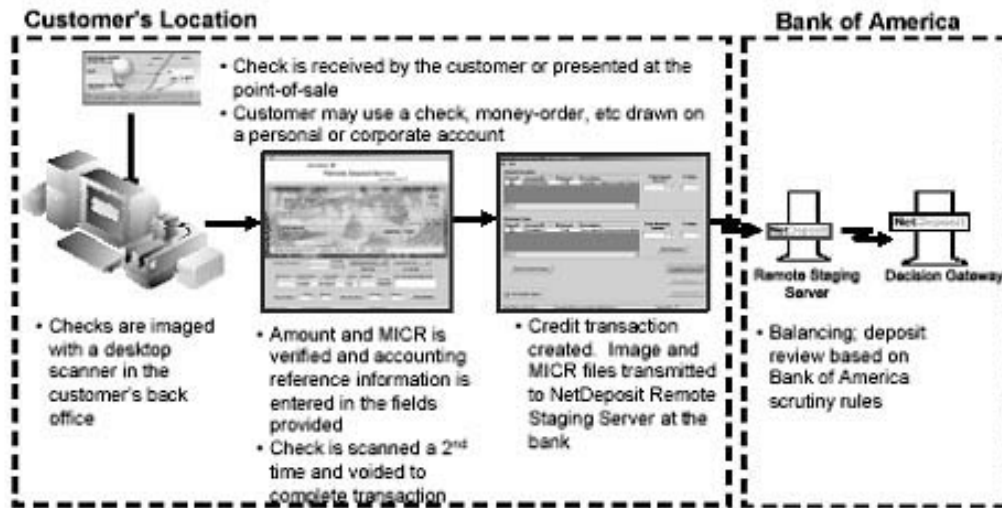
Volume	Expected Price
5,000	\$ 0.136
7,500	0.134
10,000	0.132
15,000	0.130

Source: 2003-2004 Blue Book of Bank Prices™

Source: 2003-2004 Blue Book of Bank Prices™

There will be fewer advantages for having proximate depository relationships, because paper receipts can be imaged and then “deposited” electronically virtually anywhere in the country. Low-volume check scanners are already attractively priced – as low as \$200. Very likely, companies that have required many depository relationships because of field-office and store, small-volume deposits can greatly consolidate those relationships with imaging.

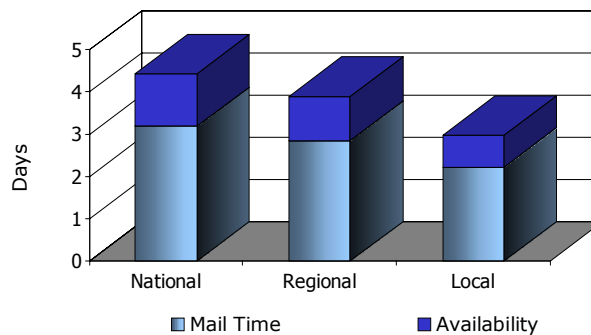
How it Works: Truncating at the Corporate Customer Site



Courtesy Bank of America and NetDeposit

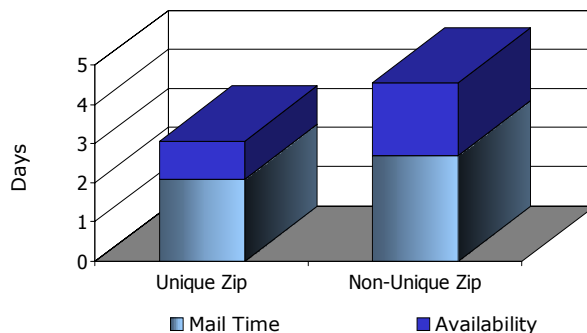
Some vendors argue that lockbox solutions might experience similar disruption. We do not see it that way. First, mail float comprises about two-thirds of total payment float and imaging does not impact mail float.

Wholesale Lockbox Total Float Components



So companies with multiple lockbox locations will continue to need those locations for mail float reduction. Second, the real asset held by a lockbox processor is the unique zip code mail flow. Solutions that convert mail from being processed in a unique zip code environment to a normal box collection environment negatively impact float,

Comparison of Northeast Float for Boston Lockboxes



even if the receiving city does not change. Third, there is always the equipment cost/capacity issue. Lockbox solutions need volume to be cost effective. It is hard to imagine that decentralization of wholesale processing is efficient. It is possible that third-party lockbox processors could benefit from image exchange.

Importance of Lockbox Features

Scale 1 to 5 with 5= Very Important	Middle Market	Upper-Middle	Large Corp
Imaging of Checks	3.27	3.74	3.91
Internet Delivery of Lockbox Information	3.11	3.68	3.85
Imaging of Return Documents	3.23	3.65	3.80
Same Day Access to Remittance Document Image	3.15	3.52	3.72
Consolidation of Paper/Electronic Payments	3.09	3.44	3.62
Multi-Site (Network) Capabilities	2.38	2.68	3.14

Essentially, these processors have many more depository options in the image world. However, we contend that they do still require a unique zip code flow of mail to be effective.

Lockbox availability will respond to changes in check clearing, but just how rapidly? We feel very sure that lockbox availability schedules will not change significantly during 2004, and we believe that banks will be cautious in surrendering clearing-float gains. Initially, costs will rise for banks having to process both image and paper checks. We think banks will be generally reluctant to surrender availability profits in lockbox until competitive pressures rise significantly.

Image exchange will also impact controlled disbursement. Of first concern will be image quality. Since corporations use images to resolve positive-pay exceptions

Positive Pay Service Usage and Importance

Scale 1 to 5 with 5= Very Important	Annual Sales					
	\$40M- \$99M	\$100M- \$249M	\$250M- \$499M	\$500M- \$999M	\$1B- \$2.49B	Over \$2.50B
Do you use Positive Pay?	32.1%	52.8%	74.7%	85.8%	89.7%	92.1%
Rate: Increase in concern about check fraud, last two years	3.29	3.56	3.67	4.02	3.95	3.97
Importance of Positive Pay	3.50	4.00	4.40	4.63	4.69	4.63
Importance of Imaging for on-line approval of Positive Pay items	n/a	3.79	4.13	4.30	4.36	4.34

and other research issues, how does the providing bank guarantee image quality when it did not capture the image? One can imagine all sorts of image compatibility issues as well, including gray scale versus black/white. Further, some providers have positive payee features that may or may not survive in an image. Of second concern will be the “controlled” aspect of daily reporting in the morning. Will banks be able to protect

Importance of Imaging for Disbursements

Scale 1 to 5 with 5= Very Important	Middle Market	Upper- Middle	Large Corporate
On-line Approval of Positive Pay Items	3.31	3.93	4.33
Immediate Retrieval of Paid Items	3.27	3.71	3.97
Long-Term Storage of Paid Items	3.49	3.95	4.09

their disbursement points from later presentments? Initially, the answer seems clearly yes, since presentments will be controlled by agreement between banks. Longer term, there is uncertainty however. Again, it depends on whether the eventual exchange mechanism occurs throughout the day in near “real time” or continues to have a batch/deadline aspect. It also depends on how much 0-day clearing evolves.

Perhaps the most realistic statement being made about image exchange is that it will “evolve slowly, but gain scale rapidly”. Image exchange will increase the number of options available to corporate treasurers on many fronts. While it is unlikely that change will become precipitous, treasurers would be well served to stay in close touch with current and potential providers to understand the impact of change and which new options may be attractive. The old Chinese wish “may you live in interesting times” will definitely be fulfilled.