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Improving Business Payments by Asking What Corporations *Really* Want

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A recent study led by the New York Fed sheds light on the changes in the payment process that large corporations would most like to see. The study's results, summarized in this article, suggest that corporate treasurers and cash managers would particularly value enhancements that decrease unauthorized and insufficiently funded payments, streamline data formats, improve bank services and information posting, and reduce cross-border payment uncertainties.

In 2003, businesses sent and received 90 percent or more of the 81 billion noncash payments made in the United States.[1] Business costs for payment services represent a large share of the roughly $300 billion spent annually on incoming and outgoing payments nationwide.[2] Failures in the efficiency or integrity of the payment process therefore carry a high price tag—yet many proposed improvements to the process have been unable to gain widespread support, particularly for business-to-business payments.

At first glance, one might wonder why some businesses have not opted for a more automated approach to processing payments, especially with the costs of technology declining. However, a closer look at the complexities organizations face when making and receiving payments can help explain such behavior (see box). These complexities underscore the need to clarify the underlying operations and objectives of businesses. Armed with such information, service providers could potentially propose solutions better suited to businesses' payment needs than those now available.

To help broaden the understanding of these needs, the Federal Reserve Bank of New York in 2003-04 led a study of large corporations involved in the payment process.[3] The study's goal was to determine the components of the process most important to businesses, the sources of the greatest service gaps, and the changes that organizations would value most. The study identified a total of about ninety "objectives" that firms must accomplish to make and receive payments, and used the objectives as the basis for a survey of nonfinancial U.S. businesses with 10,000 or more employees on issues of importance and satisfaction. Significantly, while other research into the payment needs of corporations typically has focused separately on perceived barriers to increased use of electronic payments, services deemed most important, or sources of dissatisfaction, the study led by the New York Fed integrates these components. Thus, it pinpoints those services and mechanisms considered by firms to be at once very important to their payment process *and* most in need of improvement.

This edition of *Current Issues* summarizes the study's findings as well as adds new insight to them. Overall, the study reveals that corporate treasurers and cash managers of large organizations place the greatest value on changes that reduce the risk of loss, improve liquidity, decrease explicit fees, and minimize operating expenses. In contrast,

Selected Steps in the Business Payment Process

The process of making business payments involves more than the transfer of funds; it also requires attention to security, precise information, and internal procedures. The three-panel diagram illustrates some of the steps in the process.

Panel A: All Payments (Company as Buyer/Payor or Seller/Payee)

Whether a company makes or receives payments, the process includes these steps:

Fraudulent Payment Activity
- control access to and use of firm's or customers' bank account information
- deter fraudulent payment attempts and losses in firm's bank account

Demand Deposit Accounts
- obtain timely information regarding debits and credits to firm's bank accounts
- obtain accurate information on account activity

Using Multiple Banks for Payment Activity
- accommodate bank-specific data requirements and formats
- redirect payment activity to a different bank

System Costs for Payment Activity
- manage the required capital investment
- control maintenance costs
- manage cost of operating multiple payment methods simultaneously

Constraints That May Prevent Use of a Specific Payment Method
- lack of remittance information (for example, invoice or invoice number)
- inadequate security

Panel B: Money Flows Out (Company as Payor)

To pay bills electronically, a company can initiate a (credit) payment to the seller or it can authorize the seller to request funds (a debit) from its bank account. The process includes these steps:

Company Pays Its Bills
- determine the correct amount to pay
- identify the correct payee
- reconcile outgoing payment activity with accounts payable
- resolve an inquiry on a payment sent

Credit Funds Out
- collect the payee's bank account information
- verify that the payee's bank account information is correct
- verify that the account to be credited belongs to the payee
- collect remittance information that the payee will need to process the payment (for example, invoice number)
- format information so the payee can understand it
- communicate outgoing payment instructions to your firm's bank or issue and mail a check

Debit Funds Out
- authorize debits to firm's bank account
- avoid unauthorized debits to firm's bank account

= payment instructions

Panel C: Money Flows In (Company as Payee)

To receive payments from customers electronically, a company can accept funds (a credit) for payment from the buyer or it can request funds (a debit) from the buyer's bank account, if the buyer agrees. The process includes these steps:

Company Receives Payments
- reconcile incoming payment activity with accounts receivable
- obtain bank notification that your firm has received an incoming payment

Debit Funds In
- collect payor account information needed to create an instruction to debit an account
- determine that the payor is authorized to permit account debiting
- determine if account information is correct before debiting account
- determine if funds are available when debiting an account
- collect on payments returned because of insufficient funds in the payor's bank account

Credit Funds In
- match a payment to a specific business activity
- obtain missing information needed to process an incoming payment
- determine if the payment matches the amount billed
- post a payment to the correct general ledger account at your firm
- reconcile incoming payment activity with accounts receivable

these individuals attach relatively little value to improving the processes of determining payment amounts and communicating outgoing payment instructions to banks. Furthermore, corporate payment experts trust the parties that govern and operate the U.S. payments systems. Thus, the study reveals little impetus for change in these areas.

The Size and Scope of the Payment Process

By one estimate, businesses in the United States send and receive more than 70 billion noncash payments each year.[4] Business-to-consumer and consumer-to-business payments represent the greatest share of these transactions. In this area, the use of electronic payment methods—such as credit and debit cards, direct debit bill payments, and electronic checks—has progressed with the decline in electronic processing costs. In fact, the use of electronic payment methods for these transactions grew by an estimated 13.2 percent between 2000 and 2003.[5]

In contrast, business-to-business transactions account for only about 10 percent of all noncash payments—but they represent approximately 55 percent of all value, or nearly $70 trillion.[6] Yet roughly 80 percent of business-to-business payments are still made by check, despite the reduced cost of processing electronic payments and the increased expense of handling paper.[7] These figures suggest that businesses may not view the current options for automated processing as more efficient or less expensive than paper-based methods.

Determining Which Payment Improvements Businesses Value

Whether paper or electronic, a payment involves many steps on both the payor and payee sides of the transaction (see box). These include orders, confirmations, shipping documentation, invoices, the posting of accounting and account information, and interaction with bank and possibly nonbank payment processors. As one might expect, changes to the payment process require coordination among many participants and work streams (see exhibit below). Improving such a process therefore demands knowledge of the participants' objectives and constraints, and devising useful innovations requires an understanding of both the priorities participants assign to their objectives and the services that dissatisfy them. Moreover, innovations must be targeted to needs that corporate decision makers find sufficiently pressing to justify the investment of resources.

Accordingly, the study led by the New York Fed, conducted in 2003-04, explores the objectives, constraints, and needs for payment services of one key group of participants: the largest nonfinancial businesses in the United States. It identifies the areas of payment services that the group sees as most important as well as the areas where the businesses are least satisfied with current services. Unlike other research into the payment needs of corporations, however, the study integrates information on services deemed most important and sources of dissatisfaction. Therefore, it has the advantage of showing how those areas that firms view as very important intersect with those in which firms' service needs are not being met.

Participants in the Business Payment Process

Buyer/Payor

- operating area
- purchasing department
- inventory control
- accounting
- controller's staff
- treasurer's staff
- vendors that write purchasing, accounting, accounts payable, and other systems

Seller/Payee

- operating area
- sales force
- inventory control
- accounting
- controller's staff
- treasurer's staff
- vendors that write inventory, sales tracking, accounting, accounts receivable, and other systems

Other Entities

- seller's bank
- buyer's bank
- Federal Reserve Bank(s)
- correspondent banks
- freight handlers
- automated clearinghouse operator, wire transfer service provider
- third-party payment processors
- value-added networks to carry invoice remittance information
- telecommunications network provider
- entities that write software, create payment rules, and set payment standards (such as the National Automated Clearing House Association, the American National Standards Institute, and vendors)

These overlapping areas, in our opinion, offer the greatest opportunities for improvement in corporate payment services. As such, the process of gathering information on priorities *and* on open issues is a necessary step toward enhancing processing and, consequently, the efficiency of the payments system generally.

The Study's Methodology and Survey Sample

The payment services study uses a method developed by market researchers to determine those product and service concerns most vital to users.[8] Focus groups of experts are asked to identify the components of a business process and their goals for each part of the process. A facilitator helps specify problems and goals, but not ways to solve the problems or reach the goals. These statements of processes and goals are called business requirements, or *desired outcomes*. A larger sample of product or service users is then surveyed to rank the identified outcomes.

Specifically, the study asked payment experts at large nonfinancial U.S. firms to identify their business goals for each step in the incoming and outgoing payment processes.[9] Ninety-one desired outcomes were deemed important to these processes. The outcomes generally follow the flow of payment activities, from initiation to final posting of funds, and can be grouped according to five underlying goals:

- *risk reduction*: decrease or eliminate losses due to fraud, security lapses, or unrecoverable misdirected payments;
- *liquidity*: collect revenues faster or time payments more precisely to increase access to funds and the amount of time a firm can use the funds;
- *processing efficiency*: develop improvements to reduce the amount of time required to finish a task or the number of steps needed to complete a process, such as obtaining information or responding to inquiries;
- *explicit costs*: minimize the out-of-pocket fees or investment expenses associated with a process;
- *governance and infrastructure*: establish fundamental building blocks of a well-functioning payments system, such as legal basis and operation by trusted parties.

To identify priorities among these desired outcomes for large corporations, the study surveyed a random sample of nonfinancial businesses.[10] The sample was representative of the population in terms of industries accounted for as well as company size based on sales volume.[11] The survey asked payment experts at these organizations to rate each desired

outcome on a five-point scale according to two criteria: first, the importance of the outcome to their firm and, second, their current level of satisfaction with the firm's ability to achieve each outcome.[12]

Determining the Greatest Opportunities for Improvements in Payment Services

For companies to invest in new services—with the attendant direct costs, opportunity costs, and disruptions—or to modify existing ones, the action must at least address a problem that is important and for which current services are not satisfactory. Needless to say, firms are unlikely to invest resources to improve processes that are very important if their needs are already being met. Similarly, they are not likely to assign budget priority to areas of dissatisfaction but low importance.

By combining importance and satisfaction ratings, the study focuses on the most pressing outcomes desired by businesses. Specifically, it ranks the outcomes by the percentage of respondents who rated an outcome to be very or critically important to their firm *and* indicated that their firm is less than satisfied with the ability of its current payment options to achieve that outcome.[13] We call this percentage *the opportunity score*.

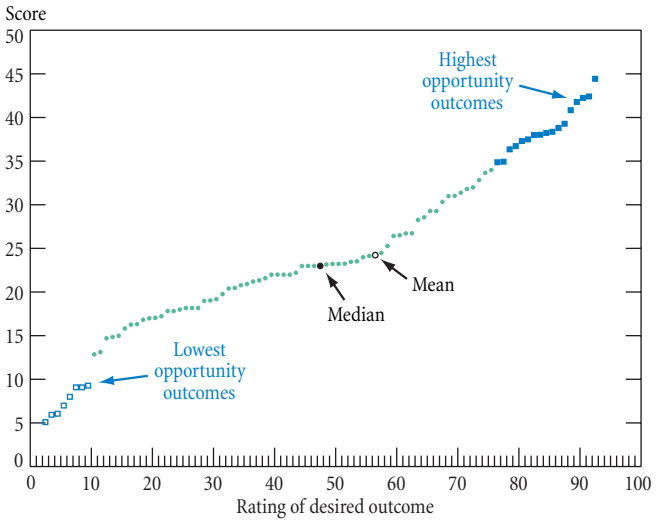
The study tested for, but could not find, statistically significant differences in ratings based on the various business or payment characteristics of respondents. For example, it could not discern differences in views based on the number or type of payment instruments used, the proportion of cross-border payments, the organization's size, or the organization's industry. Therefore, the study's results appear to reflect the interests of a broad range of large corporations.

The chart shows the distribution of the opportunity scores, with outcomes of greatest value to respondents concentrated in the upper-right corner. The study found no statistical difference between the highest scoring outcome and the next sixteen lower ranked outcomes, but did find a significant difference between the highest score and the eighteenth highest score. Thus, the study identified a group of high opportunity outcomes that are effectively equivalent and of most interest to the survey respondents.

Outcomes Offering the Greatest Opportunities for Improvements in Payment Services

The study reveals that while the individuals responsible for collecting and disbursing funds for large corporations want to enhance payment efficiency, they are at least as interested in reducing the risk of loss, improving liquidity (access to and use of funds), and minimizing explicit costs (Table 1).

Distribution of Opportunity Scores



Source: Based on Krieger and Braun (2004).

Note: Highest opportunity outcomes are statistically equivalent at the 80 percent confidence level, as are lowest opportunity outcomes.

More specifically, the top seventeen business outcomes determined from the survey support the five imperatives described in this section.

Risk Reduction: Decrease Monetary Losses Associated with Debits

Seven of the seventeen most needed improvements involve risks inherent in debit transactions. Corporate treasurers and cash managers are uncomfortable with aspects of having their accounts debited and with aspects of debiting customer accounts.

Respondents who make payments using automated clearinghouse debits, credit cards, or debit cards feel too exposed to unauthorized debits and believe that these transactions take too long to correct.[14] Conversely, respondents who debit customer accounts face the risk that the accounts will lack sufficient funds and the expense of collecting on payments returned for insufficient funds. Concern about this type of risk is particularly high among firms with a significant consumer-oriented segment.[15]

Risk Reduction and Liquidity: Minimize the Uncertainty Surrounding Cross-Border Transactions

Shorter intervals between when payments are expected from outside the United States and when they are actually received would reduce transaction risks and heighten firm certainty about the use of funds. Respondents express widespread dissatisfaction with the ability of current services to handle

Table 1
Areas of Greatest Opportunity for Improvements in Payment Services

Statements of Desired Outcome	Opportunity Score
Risk reduction	
When an account belonging to your firm is debited by a payor (for example, via automated clearinghouse debit, credit card, or debit card), you would like to minimize:	
The amount of time it takes to detect an unauthorized debit	44
The amount of time it takes to resolve an unauthorized debit	42
The occurrence of unauthorized debits	41
The risk of loss associated with an unauthorized debit	38
When receiving a payment by debiting an account belonging to a payor, you would like to minimize:	
The amount of time that passes before learning that a payment was returned due to insufficient funds in the payor's bank account	42
The amount of time it takes to collect on payments returned due to insufficient funds in the payor's bank account	38
Financial losses due to insufficient funds in the payor's bank account	37
Liquidity improvements	
When receiving cross-border payments, you would like to minimize:	
The amount of time that passes before an incoming payment sent from a foreign country is credited to your bank account in the United States	42
The number of incoming payments sent from a foreign country that are not credited to your bank account in the United States when expected	39
Process improvements	
When receiving a payment via a credit to your firm's bank account, you would like to minimize:	
The amount of time it takes to obtain missing information needed to process an incoming payment	39
The number of payments received that cannot be matched to a specific business activity (for example, a specific business transaction or customer)	38
The amount of time it takes to match a payment to a specific business activity	35
When working with multiple banks, you would like to minimize:	
Differences in bank-specific data requirements and formats when sending or receiving payments	35
When managing your firm's demand deposit account balances, you would like to minimize:	
The amount of time it takes to reconcile a bank statement with actual payment activity	38
The amount of time it takes to reconcile bank fees with actual usage of payment services	36
Explicit cost reduction	
When receiving payments, you would like to minimize:	
Bank fees associated with incoming payments	38
When making payments, you would like to minimize:	
Bank fees associated with outgoing payments	37

Source: Based on Krieger and Braun (2004).

Note: The opportunity score reflects the proportion of respondents who indicated very high or critical importance and who are not, or are only somewhat, satisfied with current services; the highest possible score is 100.

outgoing cross-border payments; however, these outcomes are not ranked very high in terms of importance.

Processing Efficiency: Improve Information for Posting of Payments

Businesses seek to improve the process—and reduce the costs—of matching incoming payments with their records and posting payments in a timely and efficient manner. In particular, firms express frustration when the information needed for posting is not readily available.

Processing Efficiency: Streamline Data Formats

Firms that interact with multiple banks want to minimize the differences in bank-specific data requirements and formats for sending and receiving payments. Moreover, working with multiple bank formats is said to be too costly and time consuming. This issue echoes themes on the need for widely accepted standard formats expressed in other recent studies.[16]

Processing Efficiency and Explicit Costs: Enhance Bank Services to Corporations

Firms require changes in the services provided by their banks. They seek a simpler solution to reconciling bank fees with their use of services and their payment activities. Respondents also report excessive bank fees. The study compares the corporate goal of minimizing bank fees with the desire to meet other needs. Corporate payment experts understand that out-of-pocket costs must be balanced against value received. Accordingly, their reaction to the level of fees may reflect a misunderstanding between banks and customers about the basis for payment service charges as well as an inadequate understanding of service data and charges.

Outcomes Offering the Lowest Opportunities for Improvements in Payment Services

The study also identified eight outcomes representing the payment service areas least in need of improvement (see chart and Table 2).

Six of the lowest-rated outcomes address specific efficiency characteristics associated with sending payments. The issues reflected in these outcomes pertain to obtaining the correct transaction amount, payee name, and payee account information; transmitting payments to a firm's bank; demonstrating legal proof of payment; and making incorrect payments. As their low-rated outcomes imply, however, these issues do not appear to present significant

Table 2
Areas of Lowest Opportunity for Improvements in Payment Services

Statements of Desired Outcome	Opportunity Score
Process improvements	
When paying, you would like to minimize:	
The amount of time it takes to demonstrate legal proof that a payment has occurred	9
The number of payments made in the wrong amount	9
The amount of time it takes to identify the correct payee	9
The amount of time it takes to determine the correct amount to pay	5
When sending a credit payment to a payee's account, you would like to minimize:	
The amount of time it takes to collect the payee's account information	8
The amount of time it takes to communicate outgoing payment instructions to your firm's bank	6
Governance and infrastructure	
How important is it that a payment method:	
Is operated by trusted parties?	7
Is governed by trusted parties?	6

Source: Based on Krieger and Braun (2004).

Note: The opportunity score reflects the proportion of respondents who indicated very high or critical importance and who are not, or are only somewhat, satisfied with current services; the highest possible score is 100.

problems for businesses. Similarly, information collected from respondents suggests that they trust the institutions that govern and operate the U.S. payments systems and do not assign priority to changing them.

Conclusion

A recent study led by the Federal Reserve Bank of New York asked payment experts at large U.S. firms to evaluate components of the payment process in terms of importance to their business and their satisfaction with current services.

Overall, the study reveals that firms attach great importance to particular outcomes that would reduce cash losses, improve liquidity, minimize fees, and cut operating expenses. They are also interested in increasing their access to the payment-related information that can result in more highly automated processing. In contrast, outcomes such as improving the processes that determine payment amounts and shortening the amount of time required to communicate outgoing payment instructions to banks are assigned relatively little importance by the corporate treasurers and cash managers. Moreover, many fundamental aspects of the payment process, such as system governance and infrastructure, currently meet with their satisfaction.

Improving the integrity and efficiency of the nation's payments system through service enhancements is a multi-step effort. The research presented in the study offers a useful first step that sharpens the focus on where change will add the most value for an important group of payment users. As such, the study's results offer the potential for far-reaching benefits.

Additional benefits could be obtained by working with other key payments system participants—such as smaller business customers, consumers, and banks—to understand their perspectives and priorities. Matching the priorities of the key participants in the payment chain allows synergies as well as conflicts to be identified and considered in future proposals for improvements. Moreover, solutions that address the priorities of multiple payments system participants may expand the opportunities for all parties to operate more effectively in the process.

Notes

1. Figures are authors' calculations, based on Federal Reserve System (2002, 2004). They include payments to and from state and local governments.

2. Figure is calculated as 3 percent of GDP (see Humphrey, Pulley, and Vesala [2000]), updated for 2004 GDP.

3. The study's detailed findings are published in Krieger and Braun (2004).

4. Figures are authors' calculations, based on Federal Reserve System (2002, 2004).

5. "Federal Reserve Studies Confirm Electronic Payments Exceed Check Payments for the First Time," Board of Governors of the Federal Reserve System, Financial Services Policy Committee press release, December 6, 2004.

6. Figures for business-to-business payments are authors' calculations, based on Federal Reserve System (2002, 2004).

7. For example, federal benefits sent by direct deposit on average cost 62 cents less per transaction than those sent by check ("Feds Urge Social Security Direct Deposit," *Associated Press*, October 20, 2004), compared with a 42-cent differential in 2001 ("Statement of Larry Massanari, Acting Commissioner of Social Security, on Direct Deposit," Social Security Administration news release, October 29, 2001). In addition, over the 1996-2003 period, fees for Federal Reserve electronic services, used by many banks to support their customers' payment activities, decreased more than 45 percent while those for paper-based services increased more than 25 percent (see attachment to "Approval of Fee Schedules for Federal Reserve Bank Priced Services," Board of Governors of the Federal Reserve System press release, November 4, 2004). See also Wells (1996).

8. See Ulwick (1999, 2002).

9. Thirty-three payment experts, assembled into four focus groups, were interviewed. The sectors represented included services, retail trade, manufacturing, transportation, energy and communications, education, and government. For the twenty-two nongovernment, noneducational institutions, sales volume tended to exceed $1 billion and total employees were about evenly split between fewer than 10,000 and more than 10,000. Anthony Ulwick, who developed the methodology, led the sessions.

10. The population was 733 firms in a Dun and Bradstreet database, as of June 2003, of U.S. companies with 10,000 or more employees, excluding firms whose business is primarily financial (based on Standard Industrial Classification codes). The survey asked the treasurer or chief financial officer of 200 of these

businesses to designate the person most knowledgeable about the firm's payment activities to complete the survey. It received 101 responses, a sample size consistent with a 90 percent confidence interval of +/- 7.6 percentage points around each reported result. (Some members of the sample who did not respond cited company policy, while others were not interested in participating.)

11. More than a third of respondent organizations were service providers, including service companies, hotels, and educational institutions; more than a quarter were manufacturers; a fifth were retailers; the remainder were wholesale, construction, energy, transportation, or communications companies. About 60 percent of the organizations had annual sales of $1 billion to $10 billion; the remainder were split about equally between sales of more than $10 billion and sales of less than $1 billion.

12. Respondents were asked about the degree of importance of and satisfaction with the ability of current payment options to achieve each desired outcome identified in the group interviews. Rating choices ranged from "of little importance" to "critically important"; the middle rank was "important." The study did not include "not important" in the scale because the focus groups identified only those outcomes of some importance. For the satisfaction category, the lowest rank was "not satisfied," the highest was "completely satisfied," and the middle rank was "satisfied." For more information on the research methodology and sample, see Krieger and Braun (2004).

13. Some outcomes had fewer than the 101 total responses received by the survey because certain questions were asked only if respondents indicated sufficient knowledge of outgoing or incoming payments at the firm and only if the firm used a certain payment type. (For example, only respondents whose companies engaged in cross-border payments were asked about these processes.)

14. The automated clearinghouse is an electronic network that enables the processing of credit and debit payments between depository institutions. Credit transactions include payroll and government payments; debit transactions include prearranged bill payments, Internet- and telephone-initiated electronic checks, and electronic check conversions. In debit transactions, the payor permits the payee to initiate the payment request. By contract and law, these requests must be preapproved by the payor; however, the payment transaction does not indicate whether preapproval has been obtained.

15. The respondents were placed into two groups based on the Standard Industrial Classification codes of their firms: those whose firms are consumer-oriented and those whose firms receive payments primarily from other businesses. Consumer-oriented firms gave higher opportunity rankings, at the 95 percent confidence level, to questions about the risk and expense of collecting on payments returned for insufficient funds. Responses to a third outcome—minimizing the amount of time before learning of a payment returned because of insufficient funds—were not significantly different between the groups.

16. See Board of Governors of the Federal Reserve System (2002), The Clearing House (2002), and Association for Financial Professionals (2000, 2004).

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