ORDERS AND INCENTIVES AS REGULATORY METHODS: THE EXPEDITED FUNDS AVAILABILITY ACT OF 1987

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INTRODUCTION

We have reached the stage in the development of our administrative state where new regulatory enactments call forth a re-evaluation of our theory of regulation, as well as an analysis of the enactment's particular effects. This is certainly the case with the Expedited Funds Availability Act,¹ which became law in August, 1987. The Act is an important regulatory initiative, which imposes a complex series of requirements and significantly expands the jurisdiction of the federal government. In addition, it is composed of a breath-

taking mixture of regulatory techniques, which Congress seems to have adopted largely by intuition. Examination of this Act, therefore, provides an opportunity to re-assess the manner in which regulation is conceived, as well as to explain the Act's substantive requirements.

The Expedited Funds Availability Act was initially designed to deal with the problem of check holds on consumer bank accounts. When consumers deposit checks made out to them in their bank accounts, the bank credits the amount of the check to their accounts that same day, but often places a "hold" on the funds, which means that the money cannot be withdrawn until several days, or several weeks, have passed. A few years ago this counted as one of life's minor and ineluctable annoyances. Then, for no immediately apparent reason, it suddenly became an important consumer issue. Congress was deluged with letters and responded with a succession of bills reflecting a variety of legislative solutions. The law that finally passed incorporates virtually every solution that had been discussed. It requires prompt payment of interest by the bank, mandates disclosure of availability schedules, establishes its own availability schedule, and delegates comprehensive rulemaking power over the check collection system to the Federal Reserve Board.


Funds availability legislation came close to passage during the 99th Congress but ultimately became enmeshed in the general legislative struggle over the banking industry. See 1986 Cong. Q. 2683.

4. For discussions of the general subject and of the legislative proposals, see Baxter & Patrikis, The Check-Hold Revolution, 18 U.C.C. L.J. 99 (1985); Cooper, Checks Held Hostage—Current Legislation on Funds Availability, 103 Banking L.J. 4 (1986); Cooper, Checks Held Hostage—The Funds Availability Controversy, 102 Banking L.J. 532 (1985); Jordan, Ending the Floating Check Game: The Policy Arguments for
This is clearly the most important legal event concerning the check collection system since the promulgation of the Uniform Commercial Code (UCC) thirty years ago.\(^5\) Conceivably, its impact will be even greater than that of the UCC, and greater than the UCC's statutory predecessor, the Negotiable Instruments Law (NIL).\(^6\) While each of these prior statutes introduced a variety of new provisions, they largely codified the framework of pre-existing law.\(^7\) Their major innovation was the act of codification itself; the power to implement and change the law remained vested in the same bodies, namely the state courts and state legislatures, respectively.

The Expedited Funds Availability Act imposes a set of entirely new legal rules. To the extent that these rules have

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\(^6\) The NIL was drafted during the 1890s, under the auspices of the National Conference of Commissioners on Uniform State Laws, promulgated in 1896, and adopted in every state by 1924. See F. Beutel, *Brannan's Negotiable Instruments Law* 73-79 (7th ed. 1948); R. Braucher & R. Riegert, supra note 5, at xxxviii-xxxix; Brewster, *A Defense of the Negotiable Instruments Law*, 10 Yale L.J. 84 (1901). For the text of the NIL, see F. Beutel, supra, at 117-208.

Perhaps more significantly, the Act shifts implementation and rulemaking authority from state courts and state legislatures to the Federal Reserve Board. Precisely how much of its new-found authority the Fed will choose to exercise remains an open question. It would appear, however, that state law control of the check collection system, long an anomaly in the highly federalized financial services field, is coming to an end, and a new regime of federal regulation is beginning.

The Expedited Funds Availability Act raises some major questions about the techniques of regulation. The Act is largely a body of complex instructions issued to the Federal Reserve Board. One set of instructions consists of specific rules, which the Fed is required to implement by means of regulations. The other set of instructions consists of suggestions, guidelines, or generalized grants of power to the Fed. In other words, the Fed has been presented with the task of enforcing a fairly traditional set of rules, and with the parallel task of exercising broad discretion, of a form unique to our modern administrative state. Consequently, its response will provide an interesting illustration of regulatory

8. This is particularly true with respect to the civil liability provisions, see infra text accompanying notes 111-14 and the recommendations to the Federal Reserve, see infra text accompanying notes 124-25. Also, the drafting style is reminiscent of other federal statutes, such as the Electronic Fund Transfer Act, 15 U.S.C. § 1693 (1982).

9. The term “Federal Reserve Board,” or “Fed” refers to the Board of Governors of the Federal Reserve System in Washington, D.C., which is charged by the Act with promulgation of the regulations. The regulations are actually drafted by staff members, most of whom work at the central offices in Washington, under direct supervision of the Board. The Federal Reserve System also includes twelve Reserve Banks, located in major commercial cities throughout the United States. Its direct role in the payment system, as the operator of the nation’s largest check collection network, is carried out by these Reserve Banks. On the general organization of the Federal Reserve System, see B. Beckhart, Federal Reserve System (1972); W. Greider, Secrets of the Temple (1987); T. Mayer, J. Duesenberry & R. Aliber, Money, Banking, and the Economy, 132-50 (2d ed. 1984); T. de Saint Phalle, The Federal Reserve (1985).


11. §§ 606(b), 606(c) (codified at 12 U.S.C. § 4005); see infra text accompanying notes 124-27.
strategy, as well as leading to the transformation of the check collection process.

The Federal Reserve Board might respond by enacting regulations that resemble traditional legal rules. Such rules would be homologous with the traditional rules that the Act itself contains. These have two basic parts: first an order, a normative declaration that some specified act is considered wrongful or obligatory, and second, a sanction, a punishment for violations of the order.12 If the Fed adopts this approach, it will try to determine the proper standard of behavior and enact it as a legal requirement. Violations of this standard would then be sanctioned, the extent of the sanction increasing with the severity of the offense. This style of legislation has been dubbed command-and-control; it is much more general, however, since it represents our traditional view of law itself.

For some of the Act's provisions, this traditional approach is clearly required.13 With respect to others, however, the Federal Reserve might adopt the alternative approach of using its broad discretion to alter the incentive structure of the participants in the check collection process. The most straightforward means of doing so in a predominately commercial area like check collection is to officially impose a pricing mechanism. Under this approach, the Fed would try to determine the costs that an action like delayed availability imposes upon others, and then would charge those costs to the actor. Such an official price, when properly set, forces private parties to take social costs into account when making decisions. The private party, here a financial institution, could then determine its course of action, subject to the duty to pay the required price.14 Strate-


13. E.g., § 603(a)-(c) (codified at 12 U.S.C. § 4002); see infra text accompanying notes 124-27.

gic regulation of this sort, which operates by means of prices rather than sanctions, is foreign to our traditional idea of law. Instead, it represents an instrumental or strategic approach that is characteristic of a modern, administrative state.

There is much to be said, from a pragmatic perspective, for strategic regulation. In the context of the check collection system, the advantages of strategic regulation can be explored in terms of the particular virtues of a pricing mechanism. Orders backed by sanctions tend to be inflexible as a regulatory approach and demand that officials possess a great deal of information and good will. Pricing is more flexible because it does not impose an absolute prohibition, but rather exerts continuous pressure through the incentive structure of the actor. In addition, it requires less information on the part of officials because these officials are no longer required to set legal standards of behavior; they need only estimate the extent of the external harm, which is generally easier to do. These advantages have been widely discussed, particularly in the environmental area. Nonetheless, regulation by official pricing remains relatively rare.

Part I of this Article discusses the funds availability problem. The various efforts to solve that problem, culmi-
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nating in the Expedited Funds Availability Act, are treated in Part II. Part III explores the alternatives for enforcing the Act's principal provisions and, on the basis of an economic analysis, concludes that a strategic pricing mechanism is the most effective solution to the funds availability problem in general, and that this solution could be used as a means of implementing the Act. Finally, Part IV of the Article discusses why this solution did not occur to Congress, and why government administrators perennially overlook this type of strategic regulation.

I. THE FUNDS AVAILABILITY PROBLEM

To understand the Expedited Funds Availability Act and the regulatory issues that it raises, it is necessary to understand the problem to which the Act is addressed. As previously stated, the Act is designed to reduce or eliminate the hold periods that banks place on the availability of deposited funds. Banks gain two major economic advantages from delayed availability: first, they protect themselves against dishonor losses; second, they obtain interest income on the funds that they hold. These two advantages serve as the motivations for the delay, and are thus the natural focus of any legislative effort to restrict or eliminate the practice.

The possibility of dishonor losses arises from the nature of the check collection process, specifically from the lapse of time between deposit and dishonor. When a check is deposited in a bank, that bank, known as the depositary bank, sends the check through the collection channels to the bank on which the check is drawn (known as the drawee, or payor bank). The payor bank never informs the depositary bank that it has paid the check; to do so would increase the cost of

18. See U.C.C. § 4-105(a)-(b) (1977) (defining terms). A third type of bank is an "intermediary bank," which is defined as any bank in the collection chain between the depositary and payor banks. Id. § 4-105(c). Depositary and intermediary banks are collectively known as "collecting banks;" thus, this last term refers to any bank in the collection chain other than the payor bank. Id. § 4-105(d).

The Expedited Funds Availability Act uses different terminology to describe the same entities. Instead of the term "bank," the Act uses the term depository (with an "o") institution, as does other federal regulation. Pub. L. 100-86, 101 Stat. 552, § 602(12) (1987) (codified at 12 U.S.C. § 4001 (West 1980 & Supp. 1988)). The payor or drawee bank is called the originating depository institution, id. § 602(17), while the UCC's depository (with an "a") bank is called the "receiv-
processing each check by a factor of ten to one hundred.\textsuperscript{19} Instead, the check is paid when the payor performs its internal accounting process, or by the mere passage of time.\textsuperscript{20}

The payor bank must take definitive action only if it decides not to pay the check. It must stamp the check "dishonored" and return it either to the depositary bank, or through the collection chain with the depositary bank as its final destination.\textsuperscript{21} The UCC, which governs these matters, requires the payor bank to dishonor by midnight of the banking day after the day it receives the check (the so-called "midnight deadline").\textsuperscript{22} Once this deadline has passed without dishonor, the payor bank has paid the check, whether it intended to or not.

Since the UCC requires that the check itself—the physical piece of paper—be transferred from the depositary bank to the payor bank,\textsuperscript{23} this forward journey of the check will


20. U.C.C. § 4-213. The most notorious commercial paper case in recent memory, \textit{West Side Bank v. Marine Nat'l Exch. Bank, 37 Wis. 2d 661, 155 N.W.2d 587 (1968)}, dealt with the relationship between these two means of paying a check.

21. U.C.C. §§ 4-301, 4-212. U.C.C. § 4-212(2), which provides for direct returns, is bracketed as optional in the U.C.C., but it has been adopted in all but four states. Cooper, \textit{supra} note 4, at 29 n.115; \textit{see infra} note 59.

22. U.C.C. § 4-302. The midnight deadline is defined in U.C.C. § 4-104(1)(h).

23. U.C.C. § 4-204(1) states that the "collecting bank must send items by reasonably prompt method" and §§ 4-301 and 4-302 make the payor bank's obligation to pay or return the item dependent on physical receipt of that item. "Item," defined in § 4-104(g) as any instrument for the payment of money, refers to a
obviously take some time. How much time it takes depends on the distance between the depositary bank and the payor bank. If they happen to be the same bank, the transfer of the check, which is called an "on us" check, takes no time at all. If they are major banks in the same city, it usually takes one day. If they are located at opposite ends of the country, and one is a small, rural bank, the journey will lead through a succession of correspondent and intermediary banking institutions, and may require more than a week.\textsuperscript{24}

Should the payor bank decide to dishonor the check, returning it will take an even longer time. Checks are processed on their forward journey by large, automated machines, and whisked through the air in specially marked containers. When dishonored checks make their way back to their starting point, however, they are subjected to the inefficiency of human handling and the ignominy of ordinary mail.\textsuperscript{25} The depositary bank will not learn that the check has been dishonored until this sad, rejected piece of paper shows up at its door.

The only way for a depositary bank to be certain that a check has not been dishonored is to wait until the time when the check would have been returned. This is exactly one day for an "on us" check and two or three days for a check drawn on another bank in the same city. However, it may be two weeks, or even more, for a check drawn on that small, rural, distant institution. If the bank allows the funds repre-


\textsuperscript{25} See 1985 House Hearings, supra note 2, at 214-19 (statement of Preston Martin); The Fair Deposit Availability Act: Hearings on S. 573 Before the Subcomm. on Consumer Affairs of the Senate Comm. on Banking, Housing & Urban Affairs, 98th Cong., 1st Sess. 67-71 (1983) (statement of Steven Wechsler) [hereinafter 1983 Senate Hearings]; Jordan, supra note 4, at 531-33; Wechsler, supra note 4, at 1126-39. According to Martin, the Vice Chairman of the Board of Governors of the Federal Reserve System, the average return took 5.2 calendar days, three times as long as the average forward journey, and 15\% of all checks took ten or more calendar days to complete the entire round trip. 1985 House Hearings, supra note 2, at 217.
sented by the check to be withdrawn earlier, it will generally incur some risk in the event that the check is dishonored.\footnote{26}

Dishonor can occur for a number of reasons. First, there may be insufficient funds in the drawer’s account. If this is merely a liquidity problem, and there is no other problem with the check, there will generally be no loss; the account will be replenished, and the check redeposited in some form. On the other hand, if the drawer is insolvent, the check will never be paid; its holder will end up as the drawer’s general creditor, which usually means that it will suffer a loss. Should the depositary bank allow the payee to withdraw the funds represented by the check, it would then be in the unenviable position of needing to retrieve these funds from its customer in exchange for the much-devalued check. The UCC gives the depositary bank some fairly powerful legal remedies for doing so,\footnote{27} but they are obviously not preferable to the simple act of returning the check to the payee, and never placing any of the bank’s own funds at risk. Risks of this kind, probably the most common ones involving checks, are known as credit risks. A second reason for dishonor is that the drawer has exercised its right to stop the check.\footnote{28} Again, the depositary bank may legally retrieve the funds from the payee,\footnote{29} but it is in a better business position if it holds onto its funds, and simply tells the payee the bad news.

\begin{footnotes}
\item[26] The Investment Company Institute (hereinafter “ICI”) conducted a check aging study in 1984 in which it determined the length of time required for 200 dishonored checks payable to investment companies to be returned. 44 percent were returned in one to five days, 41.3 percent in six to ten days, 10.7 percent in eleven to fifteen days, and 4 percent in sixteen days or more. Letter from Donald O’Connor to Donald Ray Kaminer and Kathryn Mcgrath (October 1985) (copies on file with author). This represents a great improvement over 1980, when a similar survey found that only 28% were returned in 1-5 days. \textit{1984 House Hearings, supra} note 19, at 367-71.

\item[27] See \textit{U.C.C. \S\nolink{4-208} (bank has security interest in any item for which it has given credit available for withdrawal as of right, or if it makes an advance against the item); id. \S\nolink{4-209} (bank which has security interest has given value, for purpose of determining holder in due course status); id. \S\nolink{4-212} (depositary bank may charge back item against account if it fails to receive final settlement).}

\item[28] See \textit{U.C.C. \S\nolink{4-403}.}

\item[29] \textit{See supra} note 27. If one assumes that checks are often stopped for valid reasons, there is a higher than average likelihood that the payee is a shady operator in this situation, so that the depositary bank’s prospects of retrieving the funds from that person will be reduced. Under \textit{U.C.C. \S\nolink{4-208-4-209}}, the bank may sue the drawer as a holder in due course, but that is, once again, not as desirable as having never paid the money in the first place.
\end{footnotes}
Finally, checks may be dishonored because they are fraudulent. In this case the depositor, almost always a thief, can be expected to disappear, and the loss will generally fall upon the depositary bank. The only way for a depositary bank to obtain complete protection is to delay availability until the time when the dishonored check would have been returned.

Of course, a significant proportion of fraudulent checks will be effective frauds; the payor bank will not sense that there is anything amiss and will dutifully pay the check, rather than dishonoring it. It may be months or years before the fraud finally comes to light. Delayed availability does

30. Since the payor bank has no obligation to pay even a valid check, U.C.C. § 3-409, the depositary bank has no cause of action against the payor. There may be a cause of action against a negligent drawer under U.C.C. §§ 3-405 or 3-406. This will not be possible, however, in cases where sophisticated thieves make use of funds availability practices themselves, through such devises as "check kiting" and MICR fraud.

To set up a kite, the thief opens accounts at two different banks. After making a small deposit in each bank, the thief draws a large check on the first bank and deposits it in the second, receiving a credit to his or her account. Before that check is bounced by the second bank for insufficient funds, the thief goes to that second bank and deposits a larger check, drawn on the first bank. As the checks go back and forth, the kite flies higher and higher, until the thief withdraws one of the large balances and disappears. See B. CLARK, THE LAW OF BANK DEPOSITS, COLLECTIONS AND CREDIT CARDS § 4.12 (rev. ed. 1981); Jordan, supra note 4, at 544. For a case in which a corporation was kiting checks between two accounts, see Capital City First Nat'l Bank v. Lewis State Bank, 341 So. 2d 1025 (Fla. App. 1977).

MICR fraud takes advantage of the extent to which the modern check collection system relies on the magnetic ink character recognition (MICR) numbers printed at the bottom of the check. If these numbers indicate that the check is drawn on a particular bank, the automated check processing machinery will route the check to that bank, even if the check is a fake or has a completely different payor bank indicated on its face. By the time the bewildered machines kick the check out of their automated processes and into the hands of a responsible human being, enough time will have passed for the depositary bank to assume that it will not be dishonored. For leading examples, see United States Fidelity & Guar. Co. v. Federal Reserve Bank of New York, 590 F. Supp. 486 (S.D.N.Y. 1984), aff'd mem. 786 F.2d 77 (2d Cir. 1986); Northpark Nat'l Bank v. Bankers Trust Co., 572 F. Supp. 524 (S.D.N.Y. 1983). See generally Leary & Fry, MICR Fraud: A Systems Approach to Foiling the Felon's Fun, 40 U. MIAMI L. REV. 737 (1986).

31. Once it does, liability will be allocated according to the rules in the U.C.C. In general, these rules impose the loss on the payor bank if the fraud involves a forged drawer's signature, U.C.C. § 4-401 (by implication), but that bank can shift the loss back to the depositary bank, the payee, or its own customer, the drawer, if any of them acts negligently. See U.C.C. §§ 3-405, 3-406, 4-406. If the fraud involves a forged indorsement, the depositary bank is generally responsible for the loss. See id. §§ 3-417, 4-207.
not offer protection against this occurrence; delayed availability is designed to prevent loss to the depositary bank as a result of dishonor by the payor. Thus, delay can protect the depositary bank against fraud, but only when the fraud is sufficiently outrageous or maladroit to be discovered at the time of payment.

A bank can do more than avoid losses by delaying availability; it can also make money. Banks do not place the funds they receive from depositors in the vault, of course. They lend it, earning most of their income from the interest on the loans. If the bank receives usable money for the check before it makes that money available to the customer, it can earn additional income for itself during the intervening period.\textsuperscript{32} This free use of funds, which have drifted away from the person who is paying but have not quite settled on the person being paid, is known as "float."\textsuperscript{33}

\textsuperscript{32} Although pre-Act hold periods almost always varied with the distance of the payor bank, the length of these holds suggests a pecuniary motivation as well. \textit{See}, e.g., \textit{1984 House Hearings, supra} note 19, at 103-20 (California State Banking Department Delayed Funds Availability Survey) (In 1983 California banks held checks drawn on local banks for an average of three business days, and checks drawn on all New York banks for average of eight business days, while some California banks held New York City checks for thirteen business days); \textit{id.} at 237 (In 1984, First American Bank, Washington D.C., held local checks for three business days, and small California checks for eight or nine business days); \textit{1983 Senate Hearings, supra} note 25, at 210-16 (Florida Public Interest Research Group Survey) (In 1983, Florida thrift institutions generally held local checks from one to seven business days, in-state checks from four to ten days, out-of-state checks from ten to fourteen days); \textit{Delayed Funds Availability: Hearings Before the Subcomm. on Consumer Affairs of the Senate Comm. on Banking, Housing & Urban Affairs, 97th Cong., 2d Sess. at 186 (1982) [hereinafter \textit{1982 Senate Hearings}]; (Federal Reserve Board Survey) (In 1978, 28.6 percent of banks placed no holds on same-city checks, but 39.9 percent placed one to three day holds; for out-of-state checks, 38.5 percent placed ten to twelve day holds, and 14.6 percent placed thirteen or more day holds).

\textsuperscript{33} The float referred to here is a float against a customer. Float can also occur against a bank, to the benefit of either a customer or another bank. \textit{When} people write a check on the second to last day of the month, knowing that it will not be charged against their account until their first-of-the-month paycheck has been credited, they are floating the amount of the check against the bank. Interbank float is also common; until the passage of the Monetary Control Act of 1980, Pub. L. No. 96-221, 94 Stat. 132 (1980) (codified in scattered sections of 12 U.S.C.), the Federal Reserve System allowed massive float against itself, totalling 6.3 billion dollars in 1979. \textit{See The Role of the Federal Reserve in Check Clearing and the Nation's Payments System: Joint Hearings Before the Comm. on Government Operations and the Comm. on Banking, Finance & Urban Affairs, 98th Cong., 1st Sess. 311 (1983) (statement of E. Gerald Corrigan) [hereinafter \textit{1983 Joint Hearings}]; see also Jordan, supra} note 4, at 529.
The actual mechanism by which float generates income for a depositary bank depends on the debit and credit aspects of the check collection process. This process takes various forms, depending on the nature of the intermediary banks that implement it. The largest intermediary, by far, is the Federal Reserve System, which enters debits and credits through its reserve accounts at its various Reserve Banks. Reserve accounts are a product of reserve requirements, a regulatory mechanism which requires banks to keep a certain percentage of their deposits in the form of vault cash, or in accounts at a Federal Reserve Bank.34 These reserves were originally designed to protect banks against liquidity crises, but they are now used as a primary instrument of monetary control.35 Reserve accounts do not pay interest. However, excess reserves—amounts deposited in the reserve account over and above the amount required to support the bank’s existing deposits—can be lent (bankers say “sold”) to other banks through the so-called “Federal Funds” market and can earn a market rate of interest.36

These reserve accounts are used to “settle” for checks collected through the Federal Reserve System. As each check passes through the system, it is credited to the reserve account of the presenting bank, and debited from the reserve account of the bank to which it is sent.37 In a simple case, where the Federal Reserve Bank is the only intermediary, the depositary bank will present a check to the Fed and receive a credit in its reserve account. The Fed will then transmit the check to the payor bank, debiting the payor’s reserve account as it does so. The Federal Reserve has established its own schedule for giving credit to the presenting bank; this generally provides that the funds will be available to the bank within one or two days after it presents a check.

36. See M. Mayer, supra note 24, at 215-41; M. Stigum, supra note 35, at 279-309; P. Willis, The Federal Funds Market (1970). Federal funds, because they are excess funds over and above the bank’s reserve requirement, are not federally owned, nor are they federally required. They are private funds on deposit at the Fed.
for collection. The credit is "provisional" because the Federal Reserve has the right to reverse it if the check is dishonored, but it is a real credit, and thus real money.

Customers receive real money only when the bank allows them to withdraw their funds. In other words, the credit, once made available to the bank, increases the balance of the bank's reserve account, while the bank's customer has no offsetting power to withdraw these funds. As a result, the bank's reserve account is always somewhat larger than it would otherwise be because it is continually inflated by the provisional credits it has received but does not pass on to the customer in usable form until some later time. These credits constitute additional reserves, which can be lent in the Federal Funds market as described above, thereby earning interest for the bank at the going rate.

Just as delayed availability offers advantages to banks, the practice imposes disadvantages on customers. The first disadvantage is lost liquidity: while the bank is protecting itself against fraud, the customer is denied access to deposited funds. Anyone who has moved to another city, innocently deposited a personal check in a new account and then been compelled to live for the next two weeks in penury will appreciate the nature of this problem. The second disadvan-

38. The twelve regional Reserve Banks publish availability schedules, pursuant to 12 C.F.R. § 210.10(a) (1988), for checks presented to them. See, e.g., Federal Reserve Bank of New York, Operating Circular No. 5 (Nov. 9, 1976). At present, these schedules generally provide for immediate, one-day or two-day credit. See Baxter & Patrikis, supra note 4, at 116-17; Jordan, supra note 4, at 527-28. More precisely, the Fed enters a credit immediately, as an accounting entry, and the funds represented by this "deferred credit" become available according to the schedule.


40. 12 C.F.R. §§ 210.10, 210.13 (1988). According to § 210.10, the credit, when given, is counted as a reserve under 12 C.F.R. § 204. As stated above, this description applies to checks collected through the Federal Reserve System. Other checks follow a different path, but the process by which float is created from delayed availability is essentially the same. If the check is collected through a correspondent bank, for example, the float against the customer would increase the depository bank's balance in its correspondent account, on which it can earn the equivalent of a market rate of interest.

41. Any other special deposit, like a first paycheck or a check from one's parents, will cause similar inconvenience if funds availability is delayed. Delayed availability of a regular payment like a salary check, should not cause the same problem, but it is possible that people organize their personal budgets on a monthly basis, and thus need to make relatively large withdrawals during the first few days after the salary check is deposited. A related problem is that people may
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tage is lost interest: while the bank is lending the credit it received for the customer’s check on the Federal Funds market, it is often delaying interest payments to the customer on the ground that the customer’s credit is not final.\textsuperscript{42}

Given these disadvantages, one might wonder why customers do not insist on greater funds availability, and why banks do not compete with each other by providing it. In fact, this is precisely what occurs for business customers. Virtually all large businesses, and a number of smaller ones, have money managers who sweep funds in and out of various accounts on a daily basis to maximize interest income while maintaining the required level of liquidity. Banks compete for commercial accounts by offering competitive terms. Generally speaking, there is no indication that businesses are at any disadvantage in dealing with banks about these matters.\textsuperscript{43}

The funds availability problem arises, as might be expected, where individual consumers are involved. Very few consumers have their own money managers (those who do are probably not entitled to be called consumers), and only a few more have the expertise to manage their own funds as a business does.\textsuperscript{44} The vast majority are ignorant about the issue. They do not know whether their respective banks al-


\textsuperscript{43} Indeed, large businesses may be able to place banks at a disadvantage, as the recent overdrafting practices by E.F. Hutton suggest. See generally E.F. Hutton Mail and Wire Fraud Case: Hearings Before the Subcomm. on Crime of the House Comm. on the Judiciary, 99th Cong., 1st Sess. (1985).

\textsuperscript{44} A consumer can be defined as a natural person, which is the definition used in the Electronic Fund Transfers Act, 15 U.S.C. § 1693(a)(5) (1982). Alternatively, the term can be defined as the owner of a consumer account, which the Expedited Funds Availability Act defines as “any account used primarily for personal, family, or household purposes.” Pub. L. No. 100-86, 101 Stat. 552 § 602(10) (1987) (codified at 12 U.S.C. § 4001 (West 1980 & Supp. 1988)). The latter definition is more vague, but also more narrow, since it would not include
low interest to accrue from the time of provisional credit or rather postpone the accrual of interest until final payment. Similarly, they are not aware of hold policies until confronted with an immediate problem of liquidity. They are thus incapable of evaluating differential bank performance, which gives banks no incentive to compete or otherwise make concessions to consumer desires. This phenomenon, of course, is known as a market failure—in this case the failure of otherwise competing banks to create a competitive market for funds availability services.

II. The UCC, Federal Reserve, and Congressional Solutions

There have been several responses to this market failure in recent years, first by the Federal Reserve System, and more recently by Congress. In addition, Article 4 of the UCC contains a response of sorts. These three responses represent a broad range of substantive approaches and, more significantly, a broad range of regulatory techniques. Their differences are attributable to a number of factors, but a leading one is certainly their disparate origins in state law, federal regulation, and federal legislation, respectively.

A. The UCC Solution

The provisions of the UCC that deal with check collection are classic examples of traditional law; they consist almost entirely of orders backed by sanctions. This is hardly surprising, given the UCC's origin and purpose. While Arti-
Article 4 has no common law predecessor,\textsuperscript{45} it is linked to the common law rules of Article 3 and relies on the common law mechanism of enforcement, that is, private litigation before courts of general jurisdiction. The drafters naturally thought in traditional terms in dealing with the funds availability issue and were quite remote from the conceptual framework of modern, strategically-oriented regulation. There is also a substantive divergence between the UCC and the more recent federal efforts. The Expedited Funds Availability Act was largely the product of the consumer movement; the UCC is not a consumer protection statute, to say the least.\textsuperscript{46} Its primary concern in establishing rules for availability of deposited funds is to protect the depositary bank and the other banks in the collection chain.\textsuperscript{47}

The only types of checks for which the UCC establishes a definitive time limit are "on us" checks\textsuperscript{48}—hardly the fighting issue in the funds availability debate. That limit, moreover, allows one intervening day between deposit and availability because, after all, "time must be allowed to permit the check . . . to reach the bookkeeper."\textsuperscript{49} Thus, when a good check is deposited on Monday, the bank is required to make the funds available by the opening of business on Wednesday.

If the check is drawn on some bank other than the depositary, the bank is given "a reasonable time" to learn that the check has been paid by the payor bank.\textsuperscript{50} As the UCC Official Comment acknowledges, the bank generally learns this by not learning that the check has been dishonored.\textsuperscript{51} The amount of time that is reasonable depends, therefore,

\textsuperscript{45} It does, however, have a predecessor in the Uniform Bank Collection Code. See Beutel, supra note 7, at 359-60; Note, supra note 7 at 805-09, 814-26.
\textsuperscript{46} The general view is that it was drafted by and for the banks. See, e.g., J. White & R. Summers, Handbook of the Law Under the Uniform Commercial Code, 593, 639 (2d ed. 1980); Beutel, supra note 7, at 357-63; Gilmore, The Uniform Commercial Code: A Reply to Professor Beutel, 61 Yale L.J. 364, 374-77 (1952); Leary & Schmitt, supra note 6, at 611.
\textsuperscript{47} See U.C.C. § 4-213 comment 10; Jordan, supra note 4, at 533-35.
\textsuperscript{48} U.C.C. § 4-213(4)(b).
\textsuperscript{49} Id. comment 11.
\textsuperscript{50} Id. § 4-213(4)(a).
\textsuperscript{51} Id. comment 10 ("the collecting bank will usually learn that this debit or credit is final . . . merely by not learning the opposite within a reasonable time"). The proposed revision of Articles 3 and 4, would change the wording of § 4-213(4)(c) to reflect this fact. See Article 3 and 4 Revisions, supra note 23, at 57.
on the amount of time required to send, dishonor, and return the particular check. The UCC does not set any overall time for this process; instead, it imposes a deadline—the "midnight deadline"—on each bank in the collection chain. The collecting (depository and intermediary) banks are expected to send an item to the next bank in the chain by midnight of the banking day after the day they receive it, and the payor bank must return an item that it does not want to pay in that same time period, and the collecting bank, again, must transmit a returned item, or provide a notice of nonpayment, by that deadline as well. The "reasonable" time allotted for the depositary bank to make the funds represented by a check available to its depositor is simply the sum of the successive deadlines by which the check travels from the depositary bank, through the intermediary banks, to the payor bank, and back through a similar succession of transfers.

The UCC does allow a collecting bank to send a check directly to the payor bank, and also allows the drawee bank to return a check directly to the depositary bank. As a result of these provisions, the depositary bank may receive notice of dishonor much earlier than it would if the check followed the more circuitous path through a succession of intermediary banks. However, direct collection and return are merely permitted, not required, by the UCC. Because

52. See supra note 22 and accompanying text.
53. See supra note 18.
54. U.C.C. § 4-202(1)(a), 4-202(2). Subsection 2 also provides that "taking action within a reasonably longer time may be seasonable but the bank has the burden of so establishing." In addition, § 4-108(1) provides that a collecting bank may unilaterally extend its deadline by one additional day "in a good faith effort to secure payment."
55. Id. §§ 4-301, 4-302. This requirement is unconditional.
56. Id. §§ 4-202(1)(b), 4-202(2).
57. Id. § 4-213 comment 10.
58. Id. § 4-204(2)(a).
59. Id. at § 4-212(2). This section is bracketed in the Code because, as the note that follows it explains, "[d]irect returns is recognized as an innovation that is not yet established bank practice." The brackets mean that the provision is optional; i.e., failure to adopt it is not regarded as a breach of uniformity. Of course, states can choose to adopt or omit any provision they wish, whether it is optional or not. In fact, direct return has become well-accepted since the Code was drafted, and all but a few states have adopted § 4-212(2). See 1983 Joint Hearings, supra note 33, at 1366–69; Cooper, supra note 4, at 29 n.115.
60. U.C.C. § 4-204(1) simply requires the collecting bank to send items "by reasonably prompt method." The authorization of direct sending states that the
they tend to be more expensive options, most checks drawn on distant banks are still collected or returned in the traditional manner, with the attendant delay in providing notice of dishonor to the depositary bank.\textsuperscript{61}

To provide a set of sanctions for these somewhat leisurely requirements, the UCC utilizes an enforcement mechanism borrowed from another area: the allocation of liability for loss. If a bank misses its midnight deadline, and the check is subsequently not paid, the tardy bank will be liable for the loss of some or all of the funds represented by the check itself. There are two levels of liability, depending on whether the bank responsible for the delay is a collecting bank or a payor bank. Collecting banks that negligently miss the deadline in either sending or returning an item are liable for losses proximately caused by the delay, up to the amount of the item.\textsuperscript{62} Payor banks that miss the deadline for dishonoring an item are responsible for the amount of the item, whether they caused the loss or not.\textsuperscript{63} In other words, collecting banks are responsible for losses caused by their own negligence, while payor banks are strictly liable for any loss.

Whether liability for delay is strict or based on fault, it will result only when there has been some underlying loss involving the funds represented by the check. The most common reasons for a loss are that the check is fraudulent or the drawer is insolvent. In other situations, the check,

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\item bank “may send” the item directly. Id. § 4-204(2)(a). As comment 1 explains, “Because of the many types of methods available and the desirability of preserving flexibility, any attempt to prescribe limited or precise methods is avoided.”
\item Section 4-212(2), even if adopted by the states, is also permissive; it states that the bank “may return an unpaid item directly to the depositary bank.” To maintain its right of charge-back, the bank need only return the item or send notification of the facts regarding dishonor. See Jordan, supra note 4, at 524–25, 558–60.
\item See 1983 Senate Hearings, supra note 25, at 37 (statement of Preston Martin).
\item U.C.C. § 4-202(1) (“A collecting bank must use ordinary care in presenting an item or sending it for presentment . . .”); id. § 202(2) (“A collecting bank taking proper action before its midnight deadline following receipt of an item, notice or payment acts seasonably”); id. § 4-103(5) (“The measure of damages for failure to exercise ordinary care in handling an item is the amount of the item reduced by an amount which could not have been realized by the use of ordinary care . . . .”).
\item Id. § 4-302 (payor bank is accountable for the amount of item when it retains item past midnight deadline). If the item turns out to be fraudulent, the payor bank may not charge customer’s account. Id. § 4-401 (by implication).
\end{itemize}
though delayed, will result in the desired transfer of funds, and there will be no loss, as that concept is used in the UCC. Imposing liability for fraud or insolvency losses is a rational means of enforcing standards of care that are specifically designed to combat fraud and forgery. If a bank cashes a check without determining the identity of the checkholder, it makes sense to hold that bank responsible for any loss that has resulted from its carelessness.\textsuperscript{64} On the other hand, to employ liability for losses as a means of enforcing a collection schedule is inappropriate. The relationship between the extent of liability the bank suffers and the behavior that the liability is intended to prevent is completely adventitious. In the case of bad checks, the liability does create some incentive to process the check promptly. But, in the case of good checks—obviously the main concern for funds availability legislation—there will be no liability because there has been no loss.\textsuperscript{65} Of course, the bank does not generally know in advance whether the check it is handling is good or bad. However, the level of compliance that is induced by this uncertainty depends on the proportion of bad checks that the bank is processing, not the social cost of delaying availability on all the good ones.

Moreover, the use of liability for loss rules as the enforcement mechanism precludes any direct enforcement of funds availability requirements, even to the extent that such requirements are stated. When a depositary bank delays availability, the funds represented by the check are never at risk as a result of the delay; if anything, delay is a precaution against loss. The UCC does impose liability for the conse-


\textsuperscript{65} Since the collecting bank is liable only for losses, it would have no liability for delaying a valid check. For the payor bank, there is no such thing as delaying a good check; if the check is good, there is nothing the bank is required to do with it. It becomes accountable for the check, but that is its function, since it is the drawee.
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sequential losses caused by wrongful dishonor of a check.\textsuperscript{66} Thus, if the bank\textsuperscript{67} bounces its customer's check on the ground that the available funds in the account are insufficient when in fact there were additional funds that should have been made available at that time, it would be liable for wrongful dishonor. Again, this sanction depends on fortuitous circumstances, not upon the bank's violation of the basic availability rules. Customers who are aware of these fortuities, and respond by having a cushion of additional funds in their accounts to protect against excessive holds, will never have a cause of action; they will simply internalize the cost of the bank's delay. In general, randomly distributed penalties provide poor incentives for minimizing predictable social costs.\textsuperscript{68}

B. The Federal Reserve's Solution—Regulation J

The Federal Reserve's role in check collection, as originally conceived, was to establish and operate its own network of check processing centers, and its rule-making powers were officially limited to that function.\textsuperscript{69} One of the major purposes of establishing the network was to speed the collection of checks and the consequent availability of de-

\begin{itemize}
  \item \textsuperscript{66} U.C.C. § 4-402. This section makes the payor bank liable for damages proximately caused by the wrongful dishonor. But the comment specifically rejects the so-called "trader rule" which allows merchants per se damages in wrongful dishonor cases. \textit{Id.} comment 3 (but rejection may be limited to mistaken as opposed to intentional dishonors). As might be imagined, damages for wrongful dishonor are notoriously difficult to establish without a per se rule or a statutory liquidated amount. \textit{See} Daniels, \textit{Bank Liability for Wrongful Dishonor: UCC Section 4-402: Is Revision Needed?}, 8 \textit{Ind. L. Rev.} 802 (1975); Davenport, \textit{Wrongful Dishonor: UCC Section 4-402 and the Trader Rule}, 56 \textit{N.Y.U. L. Rev.} 1113 (1981); Dow, \textit{Damas and Proof in Cases of Wrongful Dishonor: The Unsettled Issues Under UCC Section 4-402}, 63 \textit{Wash. U.L.Q.} 237 (1986); Comment, \textit{Wrongful Dishonor of a Check: Payor Bank's Liability Under Section 4-402}, 11 \textit{B.C. Ind. & Com. L. Rev.} 116 (1969).
  \item \textsuperscript{67} This bank is a depositary bank with respect to the checks deposited by the customer, but a drawee or payor bank with respect to the checks the customer has written.
  \item \textsuperscript{68} The sponsors of the UCC, specifically the National Conference of Commissioners on Uniform State Laws (NCCUSL) are in the process of revising Articles 3 and 4. A number of the revisions would change the return rules in Article 4 so that they incorporate or parallel the existing provisions in Regulation J. These proposed revisions are not described here because they track provisions in Regulation J that are described below, \textit{see infra} text accompanying notes 85-86, and because their status remains indeterminate. For a description of the proposed revision, see Rubin, \textit{supra} note 23.
  \item \textsuperscript{69} Federal Reserve Act, Ch. 6, § 16, 38 Stat. 261 (1913) (current version at 12 U.S.C. §§ 248(o), 342, 560 (1983)).
\end{itemize}
posited funds.\textsuperscript{70} Banks were not obligated to use the Federal collection system,\textsuperscript{71} but it was expected that they would perceive the advantage of a nationally-organized system committed to rapid collection. This decision to influence collection practices by setting up a separate system, owned and operated by a Federal agency, represented an important policy choice, repeated in recent years with respect to electronic fund transfers.\textsuperscript{72}

The Federal Reserve's check collection system achieved notable success. It quickly became the processor of a substantial proportion of inter-city checks and a technological innovator in techniques of check collection.\textsuperscript{73} With this success came a natural commitment to its continuation. The Federal Reserve's check collection system was providing it with a significant proportion of its employees, the bulk of its influence over the checking system, and perhaps its general sense of institutional well-being.\textsuperscript{74} In addition, the Federal Reserve Act can be fairly read to encourage the Fed's continued involvement in, and even domination of, the check collection system.\textsuperscript{75} As a result, the Fed sought to encourage the use of its system by providing its check collection serv-

\textsuperscript{70} At the time, many banks charged fees, called exchange, when paying checks that had been presented to them by mail, or when acting as a collection agent for another bank. To avoid these charges, the depositary bank would send the check to one of its correspondents, which would in turn send it to one of its correspondents, until it reached the drawee bank. The collection routes that resulted from this practice were often circuitous, and the delays substantial. To end this practice, the Federal Reserve attempted to eliminate the fees and force all banks to remit at face value or par. See —, MILLER, THE PAR CHECK COLLECTION AND ABSORPTION OF EXCHANGE CONTROVERSIES (1949); W. SPAHR, THE CLEARING AND COLLECTION OF CHECKS 101-107 (1926); Scott, The Risk Fixers, 91 HARV. L. REV. 737, 748-55 (1978); Wyatt, THE PAR CLEARANCE CONTROVERSY, 30 VA. L. REV. 361 (1944).

\textsuperscript{71} See Scott, supra note 70, at 750-52.

\textsuperscript{72} The Federal Reserve's electronic fund transfer system is called Fedwire. Originally, it was used to transfer funds among the District Banks, but it has evolved into the dominant system for domestic electronic fund transfers. See N. PENNEY & D. BAKER, THE LAW OF ELECTRONIC FUND TRANSFER SYSTEMS § 9.02 (1980 & Cum. Supp. 1987 (D. Baker & R. Brandel)).


\textsuperscript{74} In 1977, 6,147 of the Fed's 24,221 employees, or about 25.4 percent, were involved in check processing. With the advent of pricing, the proportion declined, but still amounted to 21.0 percent (4,820 out of 22,968) in 1982. 1983 Joint Hearings, supra note 33 at 453-54.

\textsuperscript{75} See W. SPAHR supra note 70, at 164-231; Scott, supra note 70, at 748-55.
It also granted provisional credit early, without demanding that credit be granted to it with equivalent alacrity, thus permitting a substantial amount of float against itself. The free services and the float represented a subsidy to banks that chose to use the federal collection system.

Because the Federal Reserve's direct authority over the check collection system was largely limited to the operation of its network, and because it wanted to preserve and expand that network by making it more attractive than private banking services, the Fed was disinclined to increase funds availability for customers by either mandating a schedule or by requiring disclosure of check-hold policies. Such efforts could only have involved checks processed through the Fed's own system, and thus could only have decreased the banks' desire to use the Federal facilities. By the 1980s, however, the demand for action had become insistent. The Monetary Control Act of 1980, requiring the Federal Reserve to price its check collection services and to eliminate the interbank float against itself, ended any public policy justification for the Federal Reserve's efforts to protect its check collection business by offering banks favorable treatment. At the same time, consumer awareness of the funds availability problem skyrocketed, and bills began to appear in both houses of Congress.

The Federal Reserve remained unenthusiastic, and perhaps unalterably opposed, to mandating any availability schedule for the checks it collected. Its continuing desire to preserve the competitive position of its check collection services was amplified by a genuine concern that schedules

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77. See M. Mayer, supra note 24, at 141-42; 1983 Joint Hearings, supra note 33, at 845-55 (Federal Reserve memorandum on elimination of float). As of 1982, the average daily float amounted to 1.76 billion dollars per day.

78. The Federal Reserve's strongly stated preference was voluntary action by financial institutions. See 1983 House Hearings, supra note 2, at 225-26 (statement of Preston Martin); 1984 House Hearings, supra note 19, at 195-201 (statement of Preston Martin); 1983 Senate Hearings, supra note 25, at 31-35 (statement of Preston Martin); 1982 Senate Hearings, supra note 32, at 11-14 (statement of Theodore Allison).


80. See generally 1983 Joint Hearings, supra note 33, at 1-8.
would increase fraud losses, and a more questionable concern that they would impair the financial viability of smaller institutions. Thus, Federal Reserve officials testified in opposition to the various bills that contained mandated schedules; indeed, they also testified against mandated disclosure of funds availability practices. Their preference was to shorten availability periods by improving the check collection process.

The Fed believed, quite correctly, that major delays were being caused by the slowness with which unpaid checks made their return journey to the depositary bank. If this return process could be improved—if it could be brought into the twentieth century, as the forward journey had been—the depositary bank would learn much sooner that a check had been dishonored and could thus assume, also much sooner, that an unreturned check had been paid. To this end, the Federal Reserve established a pilot program at the Dallas Reserve Bank to facilitate the direct return of unpaid items from the payor to the depositary bank. As noted above, the UCC allows direct return, but relatively little has been done to encourage its implementation, and banks have no particular incentive to do so on their own. The Dallas pilot program demonstrated that direct return is feasible but did nothing to increase the incentive.

Second, and more important, the Federal Reserve required payor banks to provide rapid notice of nonpayment to the depositary bank when dishonoring checks collected through the Federal system. These requirements appeared in the operating circulars issued by the Reserve Banks, but

81. See 1985 House Hearings, supra note 2, at 225-26 (statement of Preston Martin); 1984 House Hearings, supra note 19, at 202-04 (statement of Preston Martin).

82. See 1983 Senate Hearings, supra note 25, at 29-35 (statement of Preston Martin); 1982 Senate Hearings, supra note 32, at 11-14, 29 (statement of Theodore Allison). By the time passage of a mandated schedule seemed likely, the Federal Reserve abandoned its opposition to disclosure legislation. See 1983 House Hearings, supra note 2, at 220, 223.

83. See 1985 House Hearings, supra note 2, at 219-23 (statement of Preston Martin); 1984 House Hearings, supra note 19, at 195-202 (statement of Preston Martin); 1983 Senate Hearings, supra note 25, at 29-35 (statement of Preston Martin).

84. See 1984 House Hearings, supra note 19, at 197-201; 1983 Joint Hearings, supra note 33, at 1558-75; Wechsler, supra note 4, at 1203-05.

85. See, e.g., Operating Circular No. 5 (Nov. 9, 1976); 1984 House Hearings, supra note 19, at 199-201.
no sanction was specified for ignoring them. The policy was formalized and clarified by regulations proposed in 1984 and adopted in 1985. These required the payor bank to inform the depositary bank of a dishonor by the second banking day following the day on which it was required to dishonor. Thus, notice must be given three days after the day of receipt because the UCC requires banks to dishonor by the midnight deadline, that is, one day after the day of receipt. To meet this deadline, the payor bank can either mail the deposited check back to the depositary bank, call that bank on the telephone, or initiate a message through the Federal Reserve's wire system. Since all those alternatives are expensive, particularly the latter two, the regulation was limited to checks over $2,500. A bank that fails to provide the notice is liable for any losses suffered as a result of its failure, up to the amount of the item.

The Federal Reserve notification requirement removes one reason for delaying the availability of funds and creates a new line of business for the Federal Reserve, but it does not solve the problem of funds availability. One difficulty with this requirement is that it addresses only the customer liquidity issue, without affecting the problem of lost interest. Even with respect to liquidity, the requirement, like the UCC, affects funds availability indirectly, by altering collection practices, rather than directly reducing incentives for the depositary bank to delay the availability of funds. Finally, in imposing liability only for actual losses, the regulation, like the UCC, has crafted a random penalty, unrelated to the harm that the delay causes to depositors of valid checks.

Conscious of the former shortcoming, the Federal Reserve resorted to hortatory and admonitory declarations. In conjunction with the other Federal regulatory agencies, it issued a "policy statement" in 1984 urging banks to provide early availability of their own volition. "If it appears that voluntary action is inadequate to address the delayed availability issue," the statement warned, "the agencies will consider further action to deal with the practice and the problems it causes." The Fed backed up this threat, accord-

ing to its testimony before Congress, by “pressure on the trade associations.” Such non-binding declarations may have some impact, but they are not the same as law, particularly when they are attempting to affect a group of over 21,000 depository institutions.

The Federal Reserve’s approach to regulation of the check collection system, up to the time of the Expedited Funds Availability Act, was determined by its scope of jurisdiction. Because it was the leading intermediary bank, it could exercise direct control over much of the collection process. However, because it was not a comprehensive regulator, its actions were largely limited to collection issues. It might have taken a more aggressive approach, using its direct power as a wedge for broader regulatory efforts, but it was concerned that banks would cease to use its services, thereby decreasing its power to produce any effect at all. Within its established scope of jurisdiction, the Fed relied on a fairly nontraditional combination of direct control, experiment, and orders backed by general assertions of authority, rather than specified sanctions. This might be expected, given the nature of the Fed. It is a regulatory agency, whose tasks have virtually no common law origin. Indeed, its most critical task, controlling the money supply, is totally strategic in nature, accomplished largely by buying and selling securities on the open market, and not by orders or sanctions.

C. The Congressional Solution—The Expedited Funds Availability Act

Given the state of public opinion, and the perceived inadequacies of both the UCC and Federal Reserve approaches, the members of Congress concluded that a funds availability statute was required. The Fed’s reluctance to take further action, which many of the legislators perceived as actual recalcitrance, ultimately served as a further stimu-

89. For a description of the Fed’s Open Market operations, see T. Mayer, J. Dusenberry & R. Aliber, supra note 42, at 370-73; M. Stigum, supra note 35, at 184-98.
90. See, e.g. 1985 House Hearings, supra note 2, at 211 (“Mr. Martin, ... [Y]ou are giving me all the reasons why it can’t be done instead of telling us how you are going to see to it that it will be done.”) (statement of Chairman St. Germain); 1984 House Hearings, supra note 19, at 42 (“So it is obvious to me, Mr. Chairman,
A succession of funds availability bills were introduced, beginning in 1983, and the House and Senate both passed bills in 1986. Final legislation was approved by both houses in August, 1987, and signed by the President that same month.

The enacted legislation contains four basic provisions. First, it requires banks to disclose their funds availability policy to all their customers. This disclosure must be provided by three distinct means: by written notice before a new account is opened, by written summary on all preprinted deposit slips, and by posted notice at each deposit-taking location and automated teller machine. In addition, banks must send written disclosures by mail to all customers who had accounts when the Act went into effect. They must also mail notices to all their customers at least thirty days before changing their availability policies.

The second basic provision of the Act is a requirement that banks begin paying interest on deposited amounts, to the extent that they pay interest at all, on the business day that they receive provisional credit for the item.

These two provisions were included in the earliest bill, Senator Dodd's 1983 proposal, and appeared in every major bill that was subsequently introduced. Compulsory interest payments are an effective and essentially complete solution to the problem of forgone interest. Disclosure may
be regarded as a nonintrusive solution to the liquidity problem, but it was regarded as sufficient only by the Senate, and only as long as a Republican majority prevailed.

The third provision of the Act, and by far the most controversial, is its mandated availability schedule. In essence, the schedule divides all check and other deposits into three categories: "local checks," "nonlocal checks," and a third, unnamed category that may be referred to as "low-risk items." Local checks are identified as checks drawn on a bank located in the same "check processing region" as the depositary bank, with a check processing region being defined as "the geographical area served by a Federal Reserve bank check processing center or such larger area as the Board may prescribe by regulations." Nonlocal checks are those drawn on a bank outside the check processing region. Low-risk items are enumerated rather than defined. The list includes all cash deposits and wire transfers, all U.S. Treasury checks endorsed only by the payee, all state and local government checks deposited by the payee at a bank within that same state, all cashier's checks, certified checks, and teller's checks endorsed only by the payee, all "on us" checks, including checks drawn on other in-state branches of the same bank, and the first $100 deposited by check on any given business day.

The Act provides that by September 1, 1988, a depositary bank must make the enumerated low-risk items available on the next business day after the day of deposit (i.e., Monday deposit requires Tuesday availability). By September 1, 1990, it must make local checks available on the second business day after deposit (i.e., Monday deposit requires

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96. § 603(b)(1) (codified at 12 U.S.C. § 4002) (defining local check as "check drawn on a local originating depository institution"); § 602(13) (codified at 12 U.S.C. § 4001) (defining local originating depository institution as being "located in the same check processing region as the receiving depository institution").

97. § 602(9).

98. §§ 603(b)(2), 602(15).

99. § 603(a). In addition to being indorsed by the payee, government checks, cashier's checks, certified checks, and teller's checks must be deposited with a special deposit slip that indicates their nature and at a facility staffed by employees of the depositary bank. Many customers will be unaware that a special deposit slip is required to ensure rapid availability, but the Federal Reserve addresses this problem in its regulations. See 12 C.F.R § 229.10(c)(3)(ii), 53 Fed. Reg. 19,436; 19,468 (1988).

100. § 603(a).
Wednesday availability) and must make nonlocal checks available on the fifth business day (i.e., Monday deposit requires availability on the following Monday).101 These time limits for local and nonlocal checks designate the time when the depositor may draw a check upon the funds in question. For purposes of cash withdrawal, the funds must be available on the next business day after the check availability day.102 However, up to $400 must be made available for cash withdrawal not later than 5:00 p.m. on the check availability day.103 In addition to these time limits, the Act provides a temporary schedule for checks, applicable between September 1, 1988 and August 31, 1990. According to this temporary schedule, local checks must be available on the third business day after deposit (i.e., Monday deposit requires Thursday availability), and nonlocal checks must be available on the seventh business day (i.e., Monday deposit requires availability on Wednesday of the following week).104

This mandated schedule is sufficiently complex to merit an example. Suppose a customer deposits a $1000 check into a previously empty account at his or her bank some Monday after 1990. If the check is a U.S. Treasury check, the funds must be made available for all purposes on Tuesday. This means that the bank must honor the customer’s $500 check that arrives at the bank on Tuesday, and must also allow the customer to withdraw $500 in cash that same day. If the check deposited on Monday were a “local check,” the first $100 would also be available, for both check payment and cash withdrawal purposes, on Tuesday. However, the bank may dishonor a $900 check that arrives on that day. It would be required to honor the $900 check on Wednesday, the second business day after receiving the deposit. Alternatively, it would be required to allow the customer to

101. §§ 603(b)(1), 603(b)(2). Deposits made at automated teller machines owned by the bank (or located at or near the bank, see § 602 (16), are treated the same way as deposits made at the bank itself. § 603(e)(3). If the deposit is made at a machine that is not owned by the bank or located near it, an additional day’s delay will be allowed for low-risk items, but all other deadlines are the same. § 603(e)(2).
102. § 603(b)(3)(A).
103. § 603(b)(3)(B). However, if the bank restricts the maximum withdrawal from the automated teller machine to a lower limit, that limit shall apply. At present, banks often impose a $200 limit.
104. § 603(c).
withdraw up to $400 by 5:00 p.m. on Wednesday, in addition to the $100 that had been withdrawn in cash on Tuesday. The remaining $500 would be available for cash withdrawal on Thursday, the day after the availability of the $900 for check payment purposes. A nonlocal check would be treated in a homologous way, but with longer deadlines. One hundred dollars would be available for check payment and cash withdrawal on Tuesday, and the remaining $900 would be available for check payment on the following Monday. The customer could withdraw $400 in cash after 5:00 p.m. Monday, and the remaining $500 on Tuesday.

The rationale behind this schedule is not difficult to discern, although it is not explicitly articulated in the Act or its Conference Report. For the most part, the schedule is structured around the desire of banks to protect themselves from the credit risk and stop payment risk connected with checks, rather than their desire to protect themselves against fraud risk. Government checks and checks drawn on banks present virtually no credit risk, and payment on such checks is hardly ever stopped, except in cases of suspected fraud. “On us” checks do present these risks, but the depositary bank can find out if there are insufficient funds or an outstanding stop payment order when it processes the check on the evening of receipt. Finally, the first $100 of a deposit is a sufficiently small sum so that the aggregate loss due to insolvency or stop orders will be of manageable proportions. For the remaining categories of checks, the schedule reflects Congress’ estimates of reasonable times in which the depositary is likely to learn about dishonors due to insufficient funds or stop payment orders. Government and “on us” checks can be fraudulently deposited, of course, but the

106. The rationale for the special provision regarding cash withdrawal is that checks drawn on the customer’s account are generally posted to that account after business hours on the day the check is received. See M. Mayer, supra note 24, at 154-62. Thus, the bank would have an opportunity to react to any information, such as notice of dishonor, that it received on the same day as the customer’s check. On the other hand, a cash withdrawal would take place during business hours, and thus before the bank had time to learn of and react to the day’s events. To equalize the bank’s ability to react to information about dishonor before allowing cash withdrawal with its ability to react before paying a check, the cash withdrawal needs to come the day after the day on which a check would be honored.
availability schedule is not constructed with that problem in mind. Similarly, many frauds, including the sophisticated varieties, will only be discovered some time after the check has been paid, but again, the Act does not allow this to control the availability of funds.

In response to the concern about fraud losses, voiced by both banking industry representatives and the Federal Reserve, Congress established a series of exceptions to the mandated availability schedule. For the first thirty days after a new account is opened, the time limits for availability of local and nonlocal checks do not apply. Cash and wire transfer deposits must still be made available on the next business day after deposit, but next-day availability is provided only for the first $5,000 of government and bank check deposits, with the remaining amounts of these government and bank checks being made available on the ninth business day after deposit. In addition, two types of decisionmakers are authorized to effect additional delays in an effort to prevent fraud. First, banks may ignore the availability schedule if they have “reasonable cause to believe that the check is uncollectible,” but they may do so only for specific checks, not for general categories. Second, the Federal Reserve may issue regulations extending any time limits under the schedule for the amount of deposits that exceed $5,000 in one day, for redeposited checks, and for checks on accounts that have been repeatedly overdrawn. In addition, the Fed may suspend the Act, in whole or part, for forty-five business days, if it determines that banks “are experiencing an unacceptable level of losses due to check-related fraud.”

To enforce the availability schedule, the Act provides three classes of remedies: civil liability, general regulatory remedies, and specific Federal Reserve Board remedies. The civil liability provisions follow the formula developed in the course of Congress’ experience with Truth-in-Lending. Suits may be brought in federal court for actual dam-

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108. § 604(c). “Reasonable cause to believe” is unilluminatingly described as requiring “the existence of facts which would cause a well-grounded belief in the mind of a reasonable person.”
109. § 604(b).
110. § 604(e). If this power is used, the Federal Reserve must report the circumstances of the suspension to Congress.
ages, or for statutory damages ranging from $100 to $1,000, plus attorneys' fees in either case.\footnote{112} Class actions may also be brought, with recoveries limited to $500,000 or one percent of the bank's net worth, whichever is less.\footnote{113} There is an exception for bona fide errors by the bank, such as clerical, computation and printing errors, and for computer malfunction or misprogramming.\footnote{114} With respect to general regulatory remedies, violation of the Act's provisions are declared to be enforceable under a variety of existing statutory provisions.\footnote{115} The basic sanction for such violations, which each regulator can impose on its own group of regulatees, is cancellation of Federal Deposit Insurance—presumably a financial death sentence. The regulators can also issue cease and desist orders against violations, with monetary penalties as the threat for noncompliance.\footnote{116} In addition, the Board is given general authority to enforce the statute. This autho-


The civil liability sections of the Expedited Funds Availability Act, however, apply to violations of anyone's statutory rights (except those of a depository institution). Thus, business customers are covered, as well as consumers.


\footnote{114. § 611(C).}

\footnote{115. § 610(a) (codified at 12 U.S.C. § 4009). The principal provision is 12 U.S.C. § 1818(a) (1982). This is to be applied to national banks by the Comptroller of the Currency, to state member banks by the Federal Reserve, and to insured, nonmember banks by the Federal Deposit Insurance Corporation. For thrift institutions, the Act is to be enforced under essentially equivalent provisions of the relevant legislation.

\footnote{116. See 12 U.S.C. § 1818(b) (1982). The penalty is set at no more than $1,000 per day for each day during which the violation continues.}
ity at first appears residual, being limited to any institution not governed by the Federal financial services regulators, but the provision extends it to "any other person subject to the authority of the Board" under its general responsibility for the payment system—in other words, anybody. 117 The sanction that the Fed may utilize is an order prohibiting any person under its authority from engaging in any activity or transaction which directly or indirectly involves such non-complying depositary institution. 118 This is obviously another financial death sentence.

The mandated schedule, with its attendant sanctions, has the virtue of addressing the funds availability problem directly, specifically its liquidity component. Having taken this decisive action, however, Congress hedged it with a series of limitations and exceptions that betoken a certain sense of ill-ease. Fifth-day availability is excessively generous, even for checks being sent to other Federal Reserve districts; many banks already do significantly better. 119 The exception for new accounts may perpetuate one of the major availability problems, namely, the difficulty of transferring a bank balance by check when one has moved to a different city. More generally, the number of categories, and the uncertain terms that define many of these categories (accounts that are "repeatedly overdrawn," "bona fide" errors by the bank, "reasonable suspicion" that the funds are uncollectible) will generate a highly complex regulatory structure, with massive regulations, and legions of conflicting precedents. Enforcement of all these provisions, moreover, is likely to be unwieldy. Civil liability, even with statutorily liquidated damages and attorneys’ fees, will probably operate haphazardly, particularly in consumer cases. 120 The sanctions that the Federal regulators may impose quite properly require elaborate procedures. 121 In addition, they may ap-

117. § 610(c)(2)(B).
118. § 610(c)(2).
119. Interview with Peter J. Reed, Vice President, First Chicago National Bank, Nov. 5, 1986 (notes on file at UCLA Law Review Office); Interview with Harold Weisblatt, Assistant General Counsel, Chemical Bank, August 12, 1986 (notes on file at UCLA Law Review Office).
120. See infra text accompanying notes 177–80.
121. Cancellation of deposit insurance typically involves giving the bank written notice, allowing it 120 days to correct the violation, providing 30 days’ written notice of intention to terminate if the correction does not occur, adjudicating the
appear to be excessively Draconian, at least for inadvertent violations, and will probably be underused or used only as a basis for "administrative guidance."  

The Act's final provision, which may have the greatest long-range significance, concerns administrative control. For the first time, the Federal Reserve Board has been granted general regulatory authority over the entire check collection system, not just its own network. Federal Reserve authority is established by three successive subsections, each one more broadly worded than the previous one. First, the Fed is instructed to promulgate regulations "to carry out the provisions of this chapter."  

This is its authority for implementing the mandated availability schedule described above. Second, the Fed is authorized to promulgate regulations "to improve the check processing system" and is given a list of actions that it "shall consider."  

Some of the listed actions are directly related to the problems with the dishonor process, and thus to the Federal Reserve's existing efforts. They include regulations that banks:  be permitted to return unpaid checks directly to the depositary bank; that they "be provided incentives to return items promptly to the depositary institution of first deposit;"  that they notify the depositary bank of dishonors within one business day; "automate the process of returning unpaid checks;"  automate the process of reading indorsements; and return all checks through

termination in an evidentiary hearing, and sustaining the decision if the bank appeals. 12 U.S.C. § 1818 (a), (h) (1982). A cease and desist order requires written notice to the bank and a hearing held at least 30 days after the notice. Such an order applies only to future conduct. Once issued, the order can be enforced with monetary penalties, but enforcement requires a formal agency hearing, with all issues to be determined on the record, and with an opportunity for appeal. Id. at (b), (i).

122. "Administrative guidance" is a translation of the Japanese term gyosei shido. See C. Johnson, MITI AND THE JAPANESE ECONOMIC MIRACLE 242-74 (1982); Young, Judicial Review of Administrative Guidance: Governmentally Encouraged Consensual Dispute Resolution in Japan, 84 Colum. L. Rev. 923 (1984). It refers to nonobligatory instructions that an agency issues to regulated parties to carry out the regulator's policy, with the regulator's legal power being held in reserve. See infra notes 177-180 and accompanying text. For an account of analogous actions by American regulators, see M. Asimow, ADVICE TO THE PUBLIC FROM FEDERAL ADMINISTRATIVE AGENCIES (1973).

123. § 609(a) (codified at 12 U.S.C. § 4008). The same section adds, in a classic example of statutory surplusage, that the Board shall prescribe regulations to "facilitate compliance" with the Act, and "to prevent the circumvention or evasion" of it. Id.

124. § 609(b).
the Federal Reserve System, regardless of where the checks were initially collected. Other actions that the Board is instructed to consider affect the collection process more generally. These include regulations charging banks “based upon notification that a check . . . will be presented for payment,” instituting “check truncation,” and instituting “an electronic clearinghouse process.”

Having articulated these specific authorizations, the Act then declares that the Federal Reserve has the power to regulate the entire payment system. The language is that the Federal Reserve may regulate “any aspect of the payment system, including the receipt, payment, collection, or clearing of checks; and . . . any related function of the payment system with respect to checks.” As if this were not enough, a separate provision authorizes the Fed to “impose on or allocate among depository institutions the risks of loss and liability in connection with any aspect of the payment system . . . .” It is not quite clear, given these broad mandates, why the specific list of powers and possibilities was required. What is clear, however, is that the Federal Reserve Board is authorized to displace all state law governing checks, including the entirety of UCC Articles 3 and 4, and that it is explicitly encouraged to displace all provisions governing the mechanics of the collection process.

The first and most specific grant of authority to the Federal Reserve clearly anticipates the promulgation of traditional rules. The Act’s substantive provisions state a set of orders concerning when funds are to be made available, and a set of sanctions, albeit unwieldy ones, to be imposed if those prohibitions are disobeyed. However, the other grants of authority are quite different in nature. In one case, there is simply a series of suggested approaches, rather than any substantive orders: the Fed is invited to explore a

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125. Id. A separate subsection, § 609(f), declares that the Federal Reserve Board “shall study the feasibility of modernizing and accelerating the check payment system through the development of an electronic clearinghouse process.” The repetition of this specific possibility suggests that Congress has particularly high hopes for it.

126. § 609(c).

127. § 611(f) (codified at 12 U.S.C. § 4010). This provision appears in the section of the Act entitled “Civil Liability.” Although apparently conceived as an additional means of enforcement, it in fact confirms the Federal Reserve’s authority over all matters concerning checks.
number of strategies for direct control and transformation of the check collection system. Many of these strategies are taken directly from the Fed's existing, and relatively non-traditional efforts; almost all imply, or virtually require, the operational, experimental, and strategic attitude that has characterized the Fed's involvement in the check collection system to the present time. The final grant of authority has no substantive provisions behind it at all. It simply creates regulatory jurisdiction, and can thus be said to acknowledge the predominance of regulatory process, with all its divergences from the traditional pattern of prohibitions backed by sanctions.

D. *The Federal Reserve's Response—Regulation CC*

The Federal Reserve's first response to its mandate under the Expedited Funds Availability Act is a rather hefty new regulation, designated "Regulation CC."128 It is designed to implement the temporary schedule which goes into effect on September 1, 1988, and therefore falls under that part of the Act's grant of authority that anticipates the promulgation of traditional rules.129 In fact, Regulation CC is quite traditional in both the form and content of its many provisions, but the operational, administrative orientation of the Fed, as a regulatory agency, shows through at a number of points. The Fed's tendency, as a major provider of payment services, to increase the scope of its own operations is also apparent; Regulation CC contains a number of provisions that are most readily complied with by making use of Federal Reserve facilities.

The Regulation consists of two major substantive sections: Subpart B, which deals with the funds availability schedule and the bank's obligations to disclose that schedule; and Subpart C, which changes certain aspects of the check collection system to reduce the risk from earlier avail-

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128. 53 Fed. Reg. 19,372 (1988), to be codified at C.F.R. § 229. Federal Reserve regulations are designated by letter, beginning with Regulation A. Since the Fed has proven to be too big for the alphabet, it has been required to go on beyond Regulation Z into double letters. The last new regulation, implementing the Community Reinvestment Act, 12 U.S.C. §§ 2901-2905 (1982), was BB.

ability. The Fed's promulgation of Subpart B is largely obligatory and simply restates the provisions of the Act with the sort of supplementary details that regulatory agencies are expected to provide. It does, however, accelerate availability for low-risk items that are not deposited in person. In addition, it includes several amplifications of the Act's disclosure requirements. If the bank treats all checks of a given type in the same manner, it must disclose that treatment to the customer when the customer opens an account, or in the first regular mailing for accounts existing when the Act takes effect. This disclosure must be sufficiently specific so that the customer can tell precisely when deposited funds will be available for each type of check. However, a bank may choose to make funds for all checks routinely available before the statutory limit, but retain funds up to that limit on a case-by-case basis. The Fed was concerned that banks would be unable to disclose the precise day of availability under this procedure, and so would abandon it, and hold all funds up to the statutory limit. Because such a result would be counterproductive, Regulation CC allows banks to disclose the simple existence of a case-by-case procedure, without enabling customers to determine the precise day of availability in advance. However, if the bank decides to delay availability, that is, if it decides to hold any particular check beyond the time it generally makes funds available, it would be required to inform the customer that a delay was being imposed, and how long that delay would be. Such notice must be given at the time of deposit if imposed at that time, or by the business day following the day of deposit.

Subpart C of the Regulation, which addresses the collection process, represents discretionary action by the Fed-

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131. 12 C.F.R. § 229.10(c)(2). The statute requires next day availability for low-risk items deposited at a facility staffed by employees of the depositary bank. See supra note 99. The regulations add that such items must be available on the second day after the day of deposit, when not given to a bank employee. The proposed regulations required next day availability in this situation, but bank commentators strongly objected. See 53 Fed. Reg. at 19,377; id. at 19,396.
eral Reserve. While the Act grants the Fed broad authority to regulate collection, it does not contain any direct instructions in this area. The Fed perceived, however, that the shortened availability periods could expose banks to an increased risk of fraud unless the collection process were accelerated, and the depositary bank were informed of dishonors in a more expeditious manner. As stated above, the return of dishonored checks is the slow part of the process, and so it is dishonor and return that Regulation CC addresses.

The Regulation begins by building on a distinction that the Federal Reserve has already established in Regulation J for checks returned through its own collection system—the distinction between the physical check and the information it contains. Clearly, the information can be moved more quickly than the check itself. When a bank dishonors a check over $2,500, Regulation CC instructs the bank to transmit this information to the depositary bank through a notice of dishonor that is independent of the physical check. Such notice must be provided for all checks over $2,500, not just checks collected through the Fed's system, as was previously required.

In addition, Regulation CC shortens the time by which this notice must reach the depositary bank. Instead of requiring that the notice arrive by midnight of the second day following the midnight deadline, the regulation requires that it arrive by 4:00 p.m. of the second day following the day of presentment. Thus, if the check is presented on Monday, the notice must be given by 4:00 p.m. on Wednesday, as opposed to midnight on Thursday, which was the Regulation J rule.

In addition to these provisions for notice of dishonor, Regulation CC also contains a number of provisions gov-

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135. 52 Fed. Reg. 47119–20 (1987) (proposed regulations). The Act not only authorized the Fed to adopt regulations on this subject, see § 609(c), but explicitly urges it to do so. See § 609(b)(3) (incentives for direct return); § 609(b)(4) (automation of the return process); § 609(b)(5) (standardized indorsements); § 609(b)(6) (notice of dishonor); § 609(b)(7) (return of all checks through the Fed); § 609(b)(9) (authorization of direct return). Nonetheless, there is no explicit requirement that the Fed enact such measures.

136. See supra text accompanying note 25.

erning return of the physical item. The most crucial and far-reaching is that the payor bank must return a dishonored check as expeditiously as a similarly situated bank would collect that check, that is, as expeditiously as if the check had been deposited at the payor bank and drawn on the depositary. Thus, if similar banks in the payor bank's area generally send deposited checks to the Federal Reserve Bank in their district by courier, the payor bank must send dishonored checks by courier as well. Banks to which return items are sent, called "returning banks" in the Regulation, are held essentially to the same standard. In response to comments from banks, the Fed also provides an alternative rule, which functions as a "safe harbor;" if the bank returns the check by a means that would normally enable that check to reach a local depositary bank by 4:00 p.m. on the second day following the day of presentment, or reach a non-local depositary bank by 4:00 p.m. on the fourth day, such return is deemed to be expeditious.

There are a variety of other provisions designed to support or compliment this basic rule for the return of dishonored checks. A payor bank or returning bank can only obtain credit for a dishonored check by a settlement from the bank to which it returns the check; it may not simply charge-back a prior collecting bank's account for the item at the time it dishonors. This provision is intended to give banks a positive incentive to return dishonored checks as quickly as possible, since they will not receive their money back until they do so. In addition, Regulation CC authorizes direct return of dishonored checks to the depositary bank.

138. Id. § 229.30, 53 Fed. Reg. at 19,442. The same rule applies to all other banks that handle a returned check. Id. § 229.31(a), 53 Fed. Reg. at 19,442-43. See 53 Fed. Reg. at 19,478-79.
139. 12 C.F.R. § 229.2(cc). This is a Regulation CC neologism. It is equivalent to the UCC's definition of an "intermediary bank," § 4-105, in that it is a bank which transfers the check between the payor and the depositary. However, the term "intermediary" could not be used; the returning bank need not have been one of the intermediary banks during the forward collection process, because the check may take a different route on the return journey.
141. 12 C.F.R. §§ 229.31(c), 229.32(b), 53 Fed. Reg. at 19,443; see 53 Fed. Reg. at 19,472-83.
142. Id. §§ 229.30-.31, 53 Fed. Reg. at 19,442-43. This preempts UCC § 4-212(2), which makes direct return optional. See 53 Fed. Reg. at 19,478-82; 52 Fed. Reg. 47,139 (1987); see also supra note 59 (describing UCC provision).
It establishes rules for the placement and segregation of the depositary bank's indorsement, so that payor or returning banks can more easily determine where to return the check.\(^{144}\) Finally, the Regulation authorizes the returning bank to retain the check for an additional day in order to encode the routing number of the depositary bank in machine-readable numbers at the bottom.\(^{145}\) The advantage of such a check—called a "qualified returned check"\(^{146}\) in the Regulation—is that it can then be processed the same way as a forward collection item, using the same equipment.

Regulation CC is essentially a set of orders, or commands, and thus follows our traditional model of law. It specifies when funds should be made available (to the extent that this is not already specified in the Act), what should be disclosed, and how such disclosures should be made. It also specifies rules governing notice of dishonor and return, using the same form as standard statutory provisions, but at a level of detail that is generally restricted to administrative regulations. To be sure, many of these rules focus on the sort of operational concerns that the UCC ignores; they deal with mundane matters like the bank's courier services, the placement of its indorsement stamp, and the precise form of the availability disclosures, rather than the contractual obligations of the parties, their required standard of care and other topics more closely allied to common law. While this reflects the administrative authorship of the rules, the form and structure of these rules differ little from age-old provisions like the Statute of Frauds.\(^{147}\)

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\(^{144}\) Id. § 229.35, 53 Fed. Reg. at 19,444 & app. D, 53 Fed. Reg. at 19,462. At present, a check often arrives at the payor bank with a virtually undecipherable mass of indorsements stamped on the back. To facilitate rapid return to the depositary bank, Regulation CC provides that one part of the check be reserved exclusively for the depositary bank indorsement. The Fed has proceeded cautiously here, because indorsements are entered by the bank's automatic machinery, and any change in this machinery will involve significant expense.

\(^{145}\) Id. § 229.31(a), 53 Fed. Reg. at 19,443. The extension applies only to the time permitted under the forward collection test, not under the two or four day safe harbor rule. The extension is not available when the returning bank is sending the check directly to the depositary, since encoding will not expedite such direct return. It is also not available to the payor bank; while the payor bank is fully entitled to encode the check, the Federal Reserve felt that its longer deadline allowed it sufficient time to do so. 52 Fed. Reg. 47142 (1987).

\(^{146}\) 12 C.F.R. § 229.2(bb); 53 Fed. Reg. at 19,435.

\(^{147}\) UCC § 2-201.
The second element of a traditional rule, apart from its formulation as a definitive command, is the sanction specified for noncompliance. Here too, Regulation CC has a familiar look. The Regulation simply reiterates the Act's administrative remedies and damage awards for violations of the availability schedule, disclosure requirements, and interest-payment obligations.\footnote{148} For the notice and return provisions, where Regulation CC is on its own, the sanctions consciously and explicitly parallel those in the UCC. Thus, a bank that fails to give a required notice of dishonor, fails to return dishonored checks in the expeditious manner defined in the Regulation, fails to indicate where returned checks are to be sent, or fails to follow the specified indorsement standards is subject to the same sanction as is established by UCC section 4-103(5).\footnote{149} The standard is "ordinary care," the primary means of enforcement is private litigation, and the measure of damages is the "amount of the loss incurred, up to the amount of the check, reduced by the amount of the loss [the injured] party would have incurred even if the bank had exercised ordinary care."\footnote{150}

Using the adventitious event of loss to impose sanctions for a failure to follow standard collection requirements is problematic, for reasons discussed above.\footnote{151} The difficulty is only compounded by the operational quality of the Fed's regulations. Now a person who has suffered a large loss as a result of an insolvency, stop order, or fraud can not only litigate any bank's collection schedule, but also its arrangements for correspondent services, its internal procedures for dishonor, the quality of its indorsement machinery, and the

\begin{footnotes}
\item[149] Id. § 229.38, 53 Fed. Reg. at 19,445; see Fed. Reg. at 19,486–87. Similarly, Reg. CC specifically provides that notifying the customer that a check has been dishonored is not a condition precedent to charging back the check against the customer's account, although the failure to do so may subject the bank to damages for any loss resulting from the delay. \textit{Id}. This codifies the holding of Appliance Buyers Credit Corp. v. Prospect Nat'l Bank, 708 F.2d 290 (7th Cir. 1983), the leading judicial interpretation of UCC § 4-212.
\item[150] The proposed regulation stated that a depositary bank's failure to pay a returned check subjected it to accountability for the face amount of the item. 52 Fed. Reg. 47,157 (1987). This, of course, paralleled the payor bank's face value liability under UCC § 4-302. The provision was deleted from the final regulation "in light of the bank's duty to pay." 53 Fed. Reg. at 19,422.
\item[151] See supra text accompanying notes 64-67.
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courier services of similarly-situated banks. The increased cost of litigating such complex issues can only discourage victims of check loss from bringing suit; few consumers, for example, are likely to endure the expense of proving that a payor bank used a slower courier service for returning a particular check than other banks in its area employ for forward collection. Victims of check losses who persist in asserting their rights will be rewarded by paying the entire proceeds from successful suits to their attorneys. Consequently, private litigation is likely to prove ineffective as a mechanism of enforcing the check return provisions of Regulation CC.

There are, however, two aspects of the Regulation CC rules that point toward a strategy that differs from traditional law. The first is the tendency of these rules to expand the Fed's direct operational control of the payment system. It is the Fed, through its electronic communication network, that will probably transmit the notice of dishonor in the majority of cases. It is the Fed that will acquire the encoding machinery necessary to produce qualified returned checks, and that will benefit from the extra day allowed for doing so. It is the Fed that will be many payor banks' choice as a returning bank, since the one bank that will definitely satisfy Regulation CC's requirement for expeditious return is the bank that is defining "expeditious." All this can certainly be seen as a typical effort by a bureaucratic agency to maximize its own power. But power over the return process will also enable the Fed to go beyond traditional orders and introduce novel enforcement techniques, if it chooses, including various devices associated with direct management rather than governmental supervision.

The second nontraditional aspect of Regulation CC is the provision that dishonored checks can only be credited to the account of the payor bank, or returning bank, by settle-

152. Regulation CC is accompanied by a notice that the Federal Reserve Bank will "offer several new returned check services to depository institutions." 53 Fed. Reg. 19,490-96 (1988). The Federal Reserve Bank can now accept any check for return, even if it was not initially collected through the Fed's system. 12 C.F.R. § 210.12(b) (amending Regulation J).

153. See 53 Fed. Reg. at 19,479 ("All Federal Reserve Banks agree to handle returned check expeditiously.").

154. This theory of bureaucratic behavior is advanced in W. NISKANEN, BUREAUCRACY AND REPRESENTATIVE GOVERNMENT (1971).
Rather than simply ordering the payor or returning bank to be expeditious, this provision gives them a positive incentive for such behavior. Thus, this provision uses incentives, rather than orders, to speed returns. The ultimate aim of the statute, however, is to speed funds availability, not returns, and for that task Regulation CC does not rely upon incentives but upon a rather luxuriant set of traditional, sanction-backed orders.

III. AN INCENTIVE-BASED SOLUTION—PRICING

As the Federal Reserve’s single effort at incentive-based provisions suggests, traditional orders are not the only way to solve the funds availability problem. To explore possible alternatives more fully, it is best to begin from a policy determination. Of course, many traditional rules begin from a similar position, but their internal requirements often possess an autonomous force. They lead policymakers to seek the best sanction-backed orders, rather than seeking the best way to achieve the identified policy. The alternative approach allows in contrast, a regulatory the policy to be implemented by any mechanism that promises to achieve results. While this may sometimes be a traditional law, it is more likely to involve direct operations, examples, guidelines, and strategic regulations.

The policy behind the Expedited Funds Availability Act is to resolve a failure in the market for rapid availability of deposited funds. Economic analysis is a natural way to approach this policy goal, especially in such a heavily commercial area as the check collection system. The first part of this Section applies this analysis and concludes that pricing, not orders backed by sanctions, is the best solution to the funds availability problem. The second part then indicates how a

155. The Fed requested comments on whether a penalty should be imposed on depositary banks that did not make the timely payment for returned checks. The comments were generally negative, and the Fed chose not to adopt such a provision. 53 Fed. Reg. at 19,422. In fact, it deleted a provision in the proposed regulation that made the depositary bank liable for the face amount of any returned check for which it failed to make a timely payment. See supra note 150. Its rationale, in part, was that “[a] bank that does not make same-day payment without making a good faith effort to do so may be liable for damages suffered as a proximate consequence under § 229.38(a).” Id. Here again, the Fed is relying on the liability that may arise when the underlying funds are lost.
pricing solution could be used to implement the Act, and why this approach is superior to traditional rules.

A. Economic Theory of Funds Availability

Banks incur three different types of costs by making funds available on deposited checks. The first involves the possible loss when funds are advanced against a check that is ultimately dishonored. This expected loss will be reduced by delay, although the data needed to assign exact dollar values to the saving is currently unavailable. The second is the loss of float, which is essentially an involuntary loan from the depositor to the bank. The value of such a loan is determined by the marginal cost of funds to the bank. As stated above, a good measure of the bank’s marginal cost of funds is the Federal Funds rate. Finally, there is a processing cost involved in collecting the check. Slower processing presumably reduces costs, by reducing the need for night hours, expensive equipment and the like. The sum of these three variables—expected losses, float, and processing costs—gives the total value that the depositary bank obtains by delaying the availability of funds.

While a depositary bank benefits from delay, the customer is harmed by it. The components of this harm are the reduced access to funds, and, in some cases, monetary costs and personal frustration resulting from accidentally-bounced checks. If customers were wholly rational and had no liquidity problems, they would adjust to delays by holding more money in their accounts. The cost of delayed availability to customers under these conditions would be the value of the cushion that they keep in their accounts to protect against possible overdrafts. The size of this cushion

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156. We know of no systematic data on the relationship between losses from returned checks and delay in paying checks. A sense of the magnitude of the risk is suggested by the Investment Company Institute studies, supra note 26.

157. Check collection costs have been studied extensively. See generally 1983 Joint Hearings, supra note 33. The average processing cost seems to be about five cents per check. See supra note 19; see also Allison, Check Volumes and Costs, 7 J. BANK RESEARCH 320 (1977); Humphrey, Resource Use in Federal Research Check and ACH Operations After Pricing, 16 J. BANK RESEARCH 45 (1986); Humphrey, Are There Economies of Scale in Check Processing at the Federal Reserve?, 10 J. BANK RESEARCH 8 (1980); Humphrey, Costs, Scale Economies, Competition, and Product Mix in the U.S. Payments Mechanism, 68 FED. RES. BULL. 215 (1982). The efficiency of the check collection system continued to improve in the late 1970s. See Lewin, The Check Collection System: Present and Future Status, 8 J. BANK RESEARCH 78 (1978).
would be determined by two considerations: predictable delay and uncertainty. Predictable delay in processing a check would cause customers to increase their account balances by the instrument's face value for the duration of the delay (e.g., a delay of two days in processing a $10 check causes account holders to keep an extra $10 in their accounts for two days). Uncertainty would extend the length of time for keeping a cushion in the account. If processing a $10 check will be delayed for at least two days and perhaps by as long as five days, the account holder would keep an extra $10 in the account for longer than two days, but probably fewer than five days.158

The customers’ valuation of the cushion in their accounts would depend upon the marginal cost of funds to them. For customers who are net lenders, the marginal cost of funds is measured by the interest they currently enjoy from low risk investments. For customers who are net borrowers, the marginal cost of funds is measured by the interest rate they are paying on short term loans. Thus, if delayed availability on a $1,000 check causes the customer to increase balances by $1,000 for three days, and if these balances are valued by the customer at 9 percent annual interest, the cost of the delay to the customer would equal three days of interest on $1,000 at an annual rate of 9%, or $.75.

This cost, which is based upon the assumption that customers are wholly rational and suffer no liquidity problems, represents the minimum cost that delays will impose. In addition, some proportion of customers will not behave in a wholly rational manner; they will maintain balances that are too low, and thus bounce checks because they have incorrectly predicted or understood the bank’s hold period. This will be particularly likely to occur in special situations, such as large, irregular deposits (bonuses, proceeds from a sale), interbank fund transfers (moving, changing accounts), or transitions in income flow (starting a new job, going on welfare or unemployment insurance). Other customers, while wholly rational, will not have convenient access to the funds

158. The length of time that the account holders will keep additional funds in their account will depend upon their individual risk preferences. Since most people are risk averse, but not infinitely so, the average time for all account holders is likely to fall somewhere between total exposure to the risk and total avoidance of it, but somewhat closer to total avoidance.
required to create an adequate cushion in their checking account. Lacking such access, they will bounce checks or defer some of their payments, incurring costs in either case.

These costs are difficult to measure, of course. An extremely rough estimate can be obtained from a study by the Consumer Federation of America which concluded that bounced check charges due to hold policies amount to $125 million in 1985. By a very rough calculation, this represents .0053% of the dollar amount of all consumer checks, or five cents on a one thousand dollar check. Since merchant payees also charge for bounced checks, since any payee who is irritated at not being paid can impose non-monetized costs, and since consumers suffer additional inconvenience sorting out their affairs, we can assume that the total ancillary cost is large relative to the direct monetary charges, say, twenty cents per one thousand dollars. Again, the number is purely illustrative. The important point is that the cost of delayed availability to consumers is not so large as to warrant instantaneous availability and not so small as to warrant interminable delay.

An efficient solution must balance the loss to banks from reducing the delay against the gain to customers from doing so. The efficient delay is the delay at which the marginal loss to banks from reducing the delay exactly equals the marginal gain to customers. Under perfectly competitive conditions, this delay would be the actual delay spontaneously chosen by unregulated banks. As explained above, there is reason to believe that the efficient level of delay is in fact the delay imposed on business accounts. For consumers, however, a market failure causes the delay to be excessive, or inefficient. This market failure occurs because

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159. See 1985 House Hearings, supra note 2, at 261 (statement of Franci Livingston).
160. According to a Federal Reserve study in 1984, American families (including individuals living alone) issued an average of 16 checks per month, with an average value of $151. Changes in the Use of Transaction Accounts and Cash from 1984 to 1986, 73 Fed. Res. Bull. 179, 182 table 3 (1987). Since there were 87.5 million households in the United States in 1985, see Statistical Abstract of the United States 46 (1987), the total value of consumer checks for that year can be estimated at 2.54 trillion dollars. Thus the estimated 125 million dollars in losses, is equivalent to 4.9 cents per thousand dollars of consumer checks.
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consumers tend to be ignorant about funds availability policies; consequently, the costs of the delays they suffer are not translated into competitive pressures upon banks. Instead, the customer's dissatisfaction with delay builds slowly, more slowly than it would if there were perfect information. It is only as hold periods get longer that the customer may begin to complain or to make inquiries concerning the policies of other banks. Given this market failure, a profit maximizing bank which balances the customer's dissatisfaction against the advantage of delaying availability will hold checks for longer than the efficient period.

This inefficiency can be overcome by an administered pricing mechanism. Assume that, although customer dissatisfaction does not translate into effective market pressures, regulation imposes a price on banks for delaying the availability of funds beyond a certain time. As long as the value of delay to the bank exceeds this price, the banks will continue to delay availability and pay the price. Once the price exceeds the value of delay, however, the bank will make the funds available.

The higher the official price, the sooner such availability will come. To achieve efficiency, the price should be set at a level comparable to the cost of delay to the bank's customers. Since the opportunity cost of delay is different for each customer, as are the ancillary costs, computing the best funds utilization charge by reference to those costs is difficult. In practice, however, it is unnecessary to do so. An adequate approximation can be made by setting the price at the Federal Funds rate plus several percentage points. Since the Federal Funds rate approximates the cost of funds to the bank, a price of this magnitude will eliminate the incentive of banks to extract loans by extending float. This price may be referred to as a funds utilization charge because it compels the bank to pay for its use of the customer's funds. The logical person to receive this payment is the customer whose access to funds has been delayed, but the payment could also go to the government; what is important, in terms of bank incentives, is to extract that payment from the bank.

162. This may be legally required where business customers are convinced. See infra notes 174-76 and accompanying text.
The precise funds utilization charge for these purposes could be computed by setting the charge equal to the federal funds rate plus 3%. Three percent may be unnecessarily high because that charge would produce disproportionate benefits for large depositors when delays occur. What is important is that the charge be higher than the bank’s cost of funds by a non-negligible amount. Thus, the exact formula for computing the charge would be as follows:

\[(\text{days late} \times (\text{federal funds rate} + .03) \times \text{check's amount in } \$) / 365.\]

This funds utilization charge should apply from the day the bank receives funds for a deposited check—that is, from the day it receives provisional credit. As of that day, after all, the bank is holding the customer’s money; were customers able to collect their own checks, that is the day on which they would have received usable funds. Thus, if a check is deposited in the bank on Monday, the bank will typically receive a provisional credit for the check on Tuesday, when that check is presented to the next bank in the collection chain. The bank could choose to make funds available to its customer as of that day. If instead, it chose to delay availability until Wednesday, it would be required to pay the customer a charge for one day’s use of the funds. Once the funds became available to the customer, the charge would cease and the bank would be required to pay only the contractual rate of interest on the account balance. This might be zero for a noninterest bearing account, or it might be some higher amount. However, the interest rate would almost always be lower than the funds utilization charge because no bank can make interest payments that exceed its cost of funds (at least, not for very long).

Imposing the funds utilization charge on banks in cases when they will have no chance to learn whether the check has been dishonored may seem counterintuitive. However, the purpose of the charge is not to compel the bank to make funds available from the moment that the payment is required. Its purpose, rather, is to force the bank to internalize the cost of the delay, a cost now borne by consumers. If

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163. The denominator could be reduced to 360 by banks which, like the ancient Maya, eliminate those last, arithmetically-awkward five days for computational purposes.
fraud and insolvency losses are high, the bank will choose to delay availability, at least for certain checks, and pay the charge. If these losses are low, as they seem to be at present, the bank will make funds available, minimize the remaining losses as best it can, and then spread those losses to its entire customer base. Since the bank is in the best position to minimize total social cost, it should be given the incentive for doing so.

In principle, banks could generate fees by delaying funds availability, since erratic delays may result in more bounced checks. Empirical investigations indicate a wide range of fees for checks returned for “Not Sufficient Funds.” Furthermore, these fees have been the subject of major litigation in California based on the theory that banks are obtaining excessive profits from their bounced check fees. If a pattern develops in which a bank delays funds availability in order to cause checks to bounce, the bank could be forbidden from assessing the bounced check fees against a depositor to whom a funds utilization charge is due for delayed availability.

B. The Advantages of Pricing as an Implementation Mechanism

The pricing mechanism described above represents the most efficient general solution to the funds availability problem. However, it bears very little resemblance to a traditional legal rule. It does not state an order, and while it does impose certain charges upon banks, the charges are not punitive in nature. Banks would be free to delay availability for however long they wished, but they would be required to pay the funds utilization charge for each day’s delay. Thus, the pricing mechanism represents a legal alteration of the bank’s incentive structure. While it does not compel the bank to increase availability, the pricing mechanism constitutes a strategic intervention that would induce the bank to do so. The Fed has already adopted a version of this approach in its provision that payor and returning banks can only be credited for returned checks by the bank to which

they transfer the check. This has the same effect on the return process that the funds utilization charge has upon check holds; it compels the bank to bear the opportunity cost of delays in the return process, just as the charge compels them to pay the opportunity cost of delayed availability. The advantage of the funds utilization charge, in this context, is that it generalizes the incentive approach to the availability problem as a whole, rather than using it for the limited purpose of accelerating return.

This approach could be used by the Federal Reserve Board to enforce the Expedited Funds Availability Act. In essence, the Federal Reserve could simply provide, by regulation, that a funds utilization charge must be paid every day that the bank delays availability of funds it has received. Initially, these interest payments could take effect any time the bank exceeded the time limits mandated in the Act. They would thus serve as additional means of obtaining compliance with the mandated availability schedule. As technology improves and banks have time to respond to the Act's provisions, the onset of the charge could be moved back to the time when the depositary bank receives provisional credit for the check. This shift might occur at the same time that the permanent availability schedule takes effect, that is, September 1, 1990.

The use of a pricing mechanism would serve two regulatory purposes. First, it would provide a means of policing the specified deadlines under either the temporary or the permanent schedule. Few banks are likely to openly disobey the schedule's requirements, but some enforcement mechanism must nonetheless be found. More significantly, the Act contains a sufficient number of exceptions to demand some supervision over the banks' interpretation of the requirements imposed on them. Two of the principal means of enforcement specified in the Act, cancellation of deposit insurance and exclusion from the payment system, involve obliteration of the offending institution, and experience reveals a certain impracticality to this kind of legal nuclear weaponry. The third enforcement mechanism, cease and desist orders, requires elaborate procedural safeguards, as

does cancellation of deposit insurance. While these may be appropriate for the imposition of serious sanctions, they only underscore the unnecessary ferocity of the statutory enforcement mechanism. Faced with such unwieldy options, regulators will probably rely on informal sanctions, using the ultimate sanction only as a background threat and a source of legality. In contrast, pricing would itself provide an intermediate sanction; in most cases, the continued accumulation of funds utilization charges would be a sufficient incentive to modify bank behavior. It could thus serve as the dominant means of enforcing the availability schedule specified in the Act.

Second, and more importantly, the pricing mechanism could be used to shorten availability times below the time limits specified in the Act. Under the Act, the Fed is instructed to tighten the time limits if it can increase collection speed and reduce notification times. Whether this actually leads to a tighter schedule remains to be seen. The Fed is quite unlikely to use this authority if a tighter schedule seems likely to produce substantially increased fraud losses. Pricing would provide an alternative, a means of shortening availability times without adopting definitive requirements that funds be made available in less than two or five days.

The advantages of pricing as a means of enforcing the existing time limits under the Act, and of tightening those time limits, lie in four areas: incentives for compliance and innovation, increased flexibility, consumer compensation, and administrative cost.

1. Incentives for Compliance and Innovation

To begin with, pricing creates a stronger incentive for banks to accelerate the check collection process. Mandatory schedules produce incentives that are discontinuous, in the sense that they extend only to the point where the schedule is met. Once that happens, there is no incentive for further improvements. In contrast, the imposition of a charge from the time of provisional credit exerts a continuous pressure upon banks to collect checks more quickly, because every day's delay imposes additional expenses on the bank. To avoid paying these expenses, banks are likely to become

167. Id.
more aggressive about developing and adopting technological improvements such as check truncation or electronic notice of dishonor.

In many cases, innovations will be introduced by the Federal Reserve, rather than by private banks. Federal Reserve leadership in this area might become less crucial under a pricing system because banks would have a greater economic incentive to develop innovations on their own. The Fed will almost certainly continue to play a major role, particularly with the authorizations and exhortations that are addressed to it in the Expedited Funds Availability Act. For the Fed's innovations to affect funds availability, however, banks must respond by changing their practices. With a mandated availability schedule, this response can be engendered only by passing regulations that alter the schedule and thus compel banks to respond. Such regulations take time to promulgate, and the Fed may be reluctant to do so until the effect of the innovation has been fully determined. With a pricing mechanism, however, banks will respond to Federal Reserve innovations as soon as they are implemented, because they will have a continuing economic incentive to do so. The nature of their response will be based upon an assessment of the innovation's effect, of course, but that is socially desirable; the operation of the pricing mechanism assures that this assessment will generally be a realistic one.

One area in which such innovations might be welcome is cashier's checks. The Act's requirement that funds represented by a cashier's check be made available on the day after deposit has probably drawn more criticism from bankers than has any other provision. In effect, bankers contest the propriety of placing these checks in the low risk category. While the credit risk is negligible, the risk of fraud is quite substantial, because there is no way for banks to confirm the validity of the check before they must make the funds available. Banks have therefore asked Congress to revise the Act, and lengthen the availability period for cashier's checks. The difficulty is that consumers often use these checks precisely because they want rapid availability; for many consumers, there is no other way to transfer funds

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from one account to another. A better solution would be pricing. This would allow banks to protect themselves fairly readily if they suspected fraud, without removing their incentive to innovate. One can readily imagine that they would develop new methods of communication and verification if their incentive to do so is maintained.

2. Increased Flexibility

Apart from the continual pressure for innovation, another advantage of the pricing solution is its flexibility. There will always be some checks that create a real risk of nonpayment, either because of the time necessary for collection, or the amount of money involved, or the circumstances under which they were deposited, or some other factor.169 With a mandated schedule, these differential risks can be dealt with only by the creation of fixed categories, with varying availability periods. Thus, the current legislation imposes or authorizes different deadlines for government checks, checks drawn on banks within the same Federal Reserve region, checks drawn on banks outside the Federal Reserve region, checks on accounts opened less than 30 days before, checks over $5,000, checks that have been returned unpaid and redeposited, checks on accounts that have been repeatedly overdrawn, checks drawn on banks in foreign countries, and checks that the bank has “reasonable cause to believe” are uncollectible.170

Rules that divide checks into all these categories will not induce banks to balance the social costs and benefits of delaying the availability of funds. There will inevitably be an imperfect fit between the categories recognized by law and the categories that are economically appropriate. This will cause banks to impose hold periods that are too long for some types of checks, while compelling them to release other checks too quickly. The pricing solution eliminates the need for reliance on these legal categories. Banks will be free to set up whatever categories they find most useful, at least until the statutory time limit is reached, but for checks they choose to hold, they will be required to pay the funds

169. As Professor Jordan argues, it is this sort of flexibility that banks need to implement their fraud detection program, not the power to impose blanket holds. Jordan, supra note 4, at 542-45.
170. See supra text accompanying notes 107-10.
utilization charge. They will thus have an economic incentive to develop accurate methods of distinguishing various classes of checks according to their true differences in risk and to balance the true cost of delay to the consumer against the potential savings to the banking system. No bank can make such determinations with perfect accuracy, but they are probably in the best position to do so with reasonable accuracy.

Flexibility is particularly important in the check collection system because of the nature of the risk that one is trying to diminish. Thieves, unlike rivers, microbes, and other nonhuman subjects of government regulation, are conscious entities, capable of engaging in strategic behavior. If the exception to rapid availability only applies to checks over $5,000, the thief will respond by writing a bad check for $4,999. If it applies to checks on accounts opened less than thirty days before, the thief will wait thirty-one days before perpetrating the fraud. Fixed categories hamper the bank’s ability to respond to these fairly predictable maneuvers. With a pricing mechanism, a bank could change the programming of its system to kick out every check between $4,999 and $5,000 or every check written thirty-one days after the account was opened for visual examination. It could then hold any check that looked suspicious, without running the risk of having its federal insurance cancelled. Of course, the bank would be required to pay for the delay; if the savings in loss avoidance did not exceed the funds utilization charges, it would quickly eliminate the program in question.

Presumably, the "reasonable cause" exception in the Act\textsuperscript{171} was designed to achieve the same flexible, anti-fraud approach as the pricing mechanism would. This exception allows the bank to delay a check for an unlimited time when it has "reasonable cause to believe" that the check is uncollectible. If Congress had felt confident of this provision, it would presumably have eliminated all the other exceptions from the Act, since the only legitimate reason to delay availability even a single day past the time of provisional credit is uncollectibility. As a matter of legislative history, the provision was a last-minute emendation, added after the other ex-

\textsuperscript{171} § 604 (c) (codified at 12 U.S.C. § 4003).
ceptions were already in place.\textsuperscript{172} From the public policy perspective, however, the question is whether the Federal Reserve could rely on this single exception as the basis of its enforcement strategy.

The difficulty with the reasonable cause exception is that it is inherently inaccurate; whether this inaccuracy results in excessive delays or excessive risk depends upon the interpretation of its rather open-ended language. If given a broad interpretation, the provision only requires the bank to make a "reasonable" guess about the check's uncollectibility, a standard that would presumably be satisfied by any colorable explanation. Pricing, on the other hand, allows the bank to avoid losing money only by making the correct guess. It is certainly heartening to see banks being reasonable, but delays and losses will be minimized only if banks meet the more demanding standard of accuracy. Secondly, the reasonable cause exception permits banks to delay availability for an unlimited time once they have entered the realm of reasonable behavior. Pricing imposes continuous pressure to make funds available; since every day's delay costs the bank more money, it will continue its hold only while it remains sufficiently suspicious of the check to perceive a net gain by so doing. Of course, the first problem could be lessened by interpreting the term "reasonable" rather narrowly. This would increase the risk, however, and would not solve the problem of unlimited holds.

3. Consumer Compensation

Pricing will also compensate consumers for part of their economic loss from delayed availability. Rational customers, without the liquidity problems likely for businesses and some consumers, will be almost fully compensated. The bank's payment to them for those funds to which they are denied access because of the delay will be higher than the interest rate that they will generally be able to earn from any other source. Thus, they will be compensated for additional funds that they must keep in the account to cover checks drawn upon delayed funds. Consumers who are unable to

\textsuperscript{172} It did not appear until 1987. \textit{See} H.R. 2443, 99th Cong., 1st Sess. § 5 (1986) (no reasonable cause provision in safeguard exceptions). Apparently, the inclusion of this provision represented a last-minute compromise between consumer and banking groups.
maintain or compute such a cushion may still bounce checks or suffer other ancillary costs, however. These losses would be imperfectly compensated through the pricing mechanism since a bounced check imposes losses that are significantly higher than the interest payment. If they resulted from delays that exceeded the statutory limits, the consumer could sue under the civil liability provisions of the Act. If they resulted from delays within those limits, no compensation would be provided by any source, and the consumer would bear the loss.

The value of consumer suits is open to some question. Claims of consequential losses due to delayed availability are likely to require evidentiary hearings, and the bank's defense will often raise complex questions about the collection process. The Act provides for attorneys' fees and liquidated damages, but since the case will turn on testimony, rather than on documentary evidence as Truth-in-Lending cases do, the consumer will be taking a substantial economic risk in bringing suit. Moreover, these lawsuits do not provide any compensation for losses suffered by consumers as a result of delays that occur within the deadline period, or that occur on checks that fall under one of the exceptions to the deadline. Pricing compensates consumers for the interest losses that result from all delays beyond the time of provisional credit, and it compensates the rational, fully liquid consumer for virtually all losses from delayed availability. It even provides some compensation for the liquid consumer whose checks bounce as a result of delayed availability, although this compensation is admittedly a small proportion of the loss. More importantly, the pricing mechanism operates automatically. Very few consumers subject to delay are likely to sue, but all will receive the payments for delayed availability. In realistic terms, therefore, a pricing mechanism provides compensation for some and often all the cost of delayed availability, while mandated schedules and civil liability provide very little compensation at all.

There may be some question whether banks could legally pay the funds availability charge to business customers. Paying interest on demand deposit accounts is currently ille-

173. See Petit, supra note 93, at 258–63.
This prohibition is generally inapplicable to consumer checking accounts because most of these are technically NOW accounts rather than demand deposit accounts, but it continues to apply to businesses as a relic of prior regulation. In fact, the funds utilization charge should not be regarded as an interest payment. Although this charge is computed as a percentage of the deposited funds, the way interest is computed, it represents compensation for delayed access rather than payment for the voluntary deposit of funds. If it is treated as interest; however, the charges for delayed availability in business accounts could be paid to the Federal Reserve rather than to the account holder. The incentive effect on the bank would be exactly the same, and the compensation element is of minor importance for most business customers.

4. Decreased Administrative Cost

The final advantage of a pricing mechanism is minimization of the expense of government enforcement. With a mandated availability schedule, the enforcement process imposes direct costs on government, financial institutions, and consumers. Government agencies, mainly the Federal Reserve Board, must develop monitoring procedures to determine whether the time limits are being exceeded, and then,

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175. A NOW (Negotiable Instrument of Withdrawal) account is a demand deposit account for all practical purposes. The reason for the separate designation is historical; the NOW account was a device by which banks, and ultimately government regulators, could avoid the prohibition against paying interest on demand deposit balances. See G. Kaufman, The U.S. Financial System 261-66 (2d ed. 1983). The widespread use of NOW accounts, which largely obliterates the distinction between demand deposit accounts and savings accounts, has destabilized the Fed's monetary aggregates. See T. Mayer, J. Dushenberry & R. Aliber, supra note 42, at 220-21.
176. NOW accounts are restricted to individuals, non-profit corporations, and public agencies. Since these were the only accounts that were deregulated by the Depository Institutions Deregulation and Monetary Control Act of 1980, Pub. L. No. 96-221, 94 Stat. 145 (1980), the restriction still applies to business accounts. This has little effect on most businesses of significant size, which use cash management techniques to minimize their demand deposit balances.
177. See generally B. Mitnick, supra note 15, at 364-89. A number of the disadvantages that Mitnick points out about charges would be minimized in the check collection context, because reductions in availability times, unlike levels of pollution, are relatively easy to measure. Also, if most or all of the charges are paid directly to customers, the agency administering the charge is unlikely to become "revenue-oriented." See id. at 581.
carry out fairly extensive adjudications before imposing a sanction. If the sanction is a financial death sentence, or even a cease and desist order, these adjudications will probably be hotly contested by the financial institution. Furthermore, if the regulators ever did impose the ultimate legal sanction, the resulting disruption in financial markets would produce additional costs, which all bank customers would absorb. Of course, the regulators are much more likely to make use of informal sanctions, ranging from "jawboning," to "administrative guidance," to outright threats.  These too are administrative proceedings, however, and they have their own costs. In addition, the more informal the sanction, the more likely the regulator will be sued in federal court, an expensive proposition.

The expense of litigation also affects the social value of private enforcement. Assuming that some customers actually do sue under the civil liability provisions, the cost of these proceedings will tend to be extremely high and, once again, will be absorbed by all bank customers. To be sure, the Act provides for attorneys' fees to plaintiffs, but since these attorneys' fees will be paid to attorneys, they may be fairly described as a pure efficiency or deadweight loss, at least as far as the payment system is concerned. In both public and private enforcement, the multiplicity of categories inherent in any scheme of mandated schedules and the open-ended language required to avoid breeding even more categories render all these tasks more complex, and thus more expensive.

In contrast, pricing is largely a self-enforcing mechanism. The mandated availability schedule would remain, of course, if pricing were used to implement the Act, and violations of the schedule would still be punishable by the means specified in the legislation. But the price itself would serve as an additional enforcement mechanism and might well be sufficiently effective to obviate the need for other enforce-

178. See supra note 122.
179. The legal expenses can be regarded as transaction costs, that is, costs imposed upon an underlying transaction. If one can carry out the same transaction with lower costs, the additional expenses are a deadweight loss. Here, the underlying transaction is the payment (itself a transaction cost relative to the exchange of goods and services); any expenses required to allocate losses are extraneous burdens.
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As a primary method of enforcement, pricing would replace all the categories, and all the terms describing them, with one simple rule requiring a specified charge for any check held beyond a specified period of time. Of course, the charge must itself be enforced, but that is a minimum cost that all laws and regulations necessarily incur. In this case, the cost would be fairly modest. The formula for calculating and crediting the interest payments on check holds must appear in the bank’s computer program. This can be checked fairly easily by bank examiners while they are performing their general reviews of the bank’s operations. In any case, direct violation of a regulatory statutory or requirement will be relatively rare. Banks may interpret vague regulations to their own benefit, but they are unlikely to engage in outright civil disobedience.

IV. THE OPTIMALITY AND OBSCURITY OF PRICING

As argued in the previous section, a pricing mechanism is the best solution to the funds availability problem and the best way to implement the Expedited Funds Availability Act. A further issue is whether there is any systematic argument in favor of this solution: is there any reason to expect, as a general matter, that these results would obtain at both the level of general policy or specific implementation? This is difficult to answer for a technical and complex issue like funds availability. We have no formal proof of the optimality of pricing, but several significant considerations point to that conclusion. Ironically, the same considerations that suggest the generality of the pricing solution also suggest the reasons why the approach did not occur to Congress. In fact, the increased use of solutions such as pricing will re-

180. One question is whether consumers should be relied upon to enforce the payment of punitive interest. Under the Act, consumers can bring suit for any violation. See Pub. L. No. 100-86, 101 Stat. 552, § 611 (1987) (codified at 12 U.S.C. § 4010 (West 1980 & Supp. 1988)). However, this remedy is unlikely to be effective without fairly extensive disclosure provisions for the interest payments. We believe that such provisions would not be worth the expense. The regulators can effectively enforce punitive interest payments without consumer suits. Although the interest payments will provide some compensation to consumers, that is not their main function, and occasional lapses would not cause consumers any serious damage. Since there can be no consequential damages from failure to pay punitive interest, moreover, the amounts at issue would be too small to justify litigation or disclosure expenses.
quire a reorientation of the way our legislatures and regulatory institutions think about the law.

A. The Optimality of Pricing

Any statute dealing with the funds availability problem necessarily represents a public intervention in the market for check collection services. The usual basis for such intervention is that the market has failed in some manner. Assuming that the goal is economic efficiency, that the economic transactions involved do not pose any moral problems, and that there has been no market failure, a rebuttable, but fairly strong presumption exists that the private market should be left undisturbed.181

Yet, when a market failure exists, a public response can yield increased efficiency. The responses to market failure can be comprehensively described as market perfecting, market displacing, and market simulating. A market perfecting statute deals with market failure by leaving the operation of the market intact, and supplying the particular element that the failure has eliminated. Antitrust legislation is an example of a market perfecting law. If a competitive market would require at least four firms, but only three exist, antitrust law might demand that the largest firm be split in two, thus providing the additional competition needed to perfect the market.182 In contrast, a market displacing statute concludes that the operation of the market cannot be restored, and that its failure can only be remedied by replacing it with governmental rules. Thus, the theory of utility rate regulation is that industries like electric power are natural monopolies that cannot be subjected to price competition and whose prices must therefore be set by fiat.183 A market simulating statute is based on the premise that the market’s operation can be restored, but only by imposing governmental rules. For such rules to restore, rather than displace,

181. The “rebuttable presumption” in favor of unregulated markets is developed into a systematic theory in C. Schultze, supra note 16. See also S. Breyer, supra note 15; Breyer, supra note 16. For a lively exchange on the intellectual and practical foundations of regulation, see Samuelson, The Economic Role of Private Activity in Issues in Economics (R. Crandall and R. Eckaus, eds., 1972).
the market they must mimic some aspect of the market's operation that has been eliminated by the market failure.\textsuperscript{184}

In response to the perceived market failure involving funds availability, all three types of legislation have been contemplated. Disclosure, which the Senate originally championed and which still appears as one component of the Expedited Funds Availability Act, is a classic form of market perfecting legislation: it attempts to solve the market failure by supplying consumers with the particular information that the market has failed to provide.\textsuperscript{185} A mandated availability schedule is market displacing: it concludes that the consumers' ability to shop cannot be restored, that competition among banks for efficient availability schedules is likewise unachievable, and that availability schedules must therefore be prescribed by governmental regulations. The Act employs this approach as its primary solution. The UCC also embodies a market displacing approach,\textsuperscript{186} but its requirements are so lenient and, in the case of checks drawn on banks other than the depositary bank, so open-ended, that they do not displace very much of the market's operations.

Pricing, the solution recommended here, is market simulating. This solution shares the premise that information will not be sufficient to produce significant shopping behavior. It concludes, however, that the effect that shopping would produce can be simulated by imposing a price on the bank's retention of funds. In response to such a price, banks will minimize their hold periods, just as they would if they were competing with respect to availability schedules. They will generally strive to make funds available as quickly as possible, but they will hold suspicious checks when they believe that the potential loss from that check is greater than

\begin{itemize}
  \item \textsuperscript{184} See generally C. Schultze, supra note 16.
  \item \textsuperscript{185} This is the theory of the Truth-in-Lending Act, 15 U.S.C. §§ 1601-1700 et seq. (1982), as well as numerous other statutes. For a general analysis in the context of consumer law, see Jordan & Warren, Disclosure of Finance Charges: A Rationale, 64 Mich. L. Rev. 1285 (1966); Whitford, The Functions of Disclosure Regulation in Consumer Transactions, 1973 Wis. L. Rev. 400. For a critique of disclosure legislation, on the ground that a competitive market will generally provide adequate information, see Schwartz and Wilde, Intervening in Markets on the Basis of Imperfect Information: A Legal and Economic Analysis, 127 U. Pa. L. Rev. 630 (1979).
  \item \textsuperscript{186} U.C.C. § 4-213(4) (1977).
\end{itemize}
the loss imposed by either the competitive market or the funds utilization charge.

The Federal Reserve regulations are rather different in character because they proceed from a different premise: that the market failure leading to the funds availability issue is not a failure of consumers to shop but a failure among banks to develop efficient check return methods. Depositary banks, according to the Fed's theory, would compete with respect to funds availability policies if they could reduce the risk of unpaid items. However, payor banks do not benefit from such competition and thus have no incentive to return unpaid items by more rapid and expensive channels. Rather than setting up some mechanism to facilitate this negotiation or creating a financial incentive for it, the Federal Reserve simply imposed its own rules on the depositary banks. This seems to be an effective means of accelerating returns and reducing losses under conditions of more rapid availability. Yet, it is not an adequate solution to the funds availability problem because it ignores the major market failure: the failure of consumers to shop for availability schedules.

Of the three solutions that acknowledge this market failure, the preferability of pricing has been argued above. Market perfecting solutions, like disclosure, are likely to fail here because the same phenomena that made the market fail in the first place will prevent consumers from responding to the attempted solution. It is highly unlikely that a sufficient number of bank customers will read and understand an availability schedule. The schedules are complex, and the problem is economically significant to the customer only in the particular and often unexpected circumstances when the consumer changes accounts or experiences cash flow difficulties.

The major difficulty with market displacement is that it requires a high level of intervention. Markets are self-regulating phenomena—perhaps because they rely on individual self-interest, perhaps because they rely on deeply embedded

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...cultural behavior patterns. In any case, the displacement of the market requires public authorities to mandate and control a large range of behaviors, and to maintain that control against the pressure of self-interest and cultural responses.

The less intrusive mechanism of pricing seems desirable whenever it can be implemented in a socially acceptable manner. Funds availability is such a case. The pricing mechanism can be implemented here because the external cost of delayed availability can be priced by officials using an easily observable index—the federal funds rate. Imposition of the price can be administered at low cost by using a regulatory apparatus that is already in place. The technique seems socially acceptable because it is intended to combat a purely economic harm. Under a pricing regime, to be sure, unjustified but innocent delays in making funds available will be punished only by a relatively minor economic loss, not by social opprobrium, significant fines, or other serious sanctions. Such treatment may seem too lenient for parties that cause physical injuries, irreversible environmental damages, breaches of the public order, or offenses against human dignity. However, the costs that one party suffers when funds are delayed are generally economic; they are not qualitatively distinct from the gains another party enjoys from a more efficient check collection system, at least in the absence of significant distributional issues. The social goal is to decrease the total cost of checking services for consumers, including, but not limited to, the cost imposed by delayed availability. This is the goal that a market simulation mechanism would achieve.

B. The Obscurity of Pricing

If pricing is an optimal solution to the funds availability issue, as argued here, one might ask why it was not consid-

188. It can be argued that having one's checks dishonored imposes a certain amount of dignitary injury. In at least one case, the further claim was made that the dishonor had produced emotional and somatic distress. Loucks v. Albuquerque Nat'l Bank, 76 N.M. 735, 418 P.2d 191 (1966). However, in the absence of the ancient institutions of debtors' prison, and execution upon the body, see C. Dickens, Little Dorrit (1856), the collateral effects of mistaken dishonor do not seem significantly different from those that attend other commercial mishaps. Taking these effects into account is tempting, in individual cases, but it tends to efface the distinction between commercial and personal injury, and thereby undermines the seriousness with which we treat the latter category.
erved by Congress. The issue had been actively debated at the national level for at least five years, and a wide range of legislative proposals have been introduced, but all these proposals involved either market perfection (disclosure) or market displacement (availability schedules). The Expedited Funds Availability Act neither recommends nor precludes the use of market simulation (pricing) as an administrative enforcement mechanism. Market simulation was simply not considered at either the policy or the enforcement level.

The explanation for this omission probably lies in the divergence between market simulating legislation and traditional legal rules. As stated above, a pricing mechanism does not fit into the familiar pattern of an order backed by a sanction. This conclusion can now be generalized, through the characterization of pricing as a market simulating approach. A legislative or regulatory effort that simulates market operations does not prohibit any activity, nor does it impose a sanction for disobedience. Rather, it adjusts incentives instrumentally, and thus adopts a strategic, or managerial, stance that is not comfortable or familiar to American legislators.

The instrumental character of market simulating legislation is connected with a more general vision of society. The three alternative approaches to the regulation of markets that have been identified reflect different hypotheses about the world, and different assessments of how markets, government regulators, and consumers function. Although these assessments are usually stated in empirical terms, they are strongly linked to existing political ideologies. As a result, these ideologies operate to reinforce the appeal of certain legislative strategies while obscuring others.

A market perfecting solution like disclosure tends to be derived from the more general view that the market is a stable, healthy institution that produces socially optimal results. Market failures are viewed as minor lapses, readily corrected by restoring the market's natural operation. This vision of the market is complemented by a vision that economic regulation will be mismanaged and counterproductive because regulators lack the information and incentives to make efficient decisions. Consumers, on the other hand, are viewed as essentially competent and rational. The acknowledged market failure has led to one gap in the infor-
mation available to them. Once this gap is filled however, consumers can be expected to protect their own interests. The statutory remedy that flows naturally from this approach is the private right of action. Like the market itself, a private right of action relies for its effectiveness on people's ability to protect their interests. Thus, a remedy of this sort seems like the logical mechanism to enforce the disclosure obligations that restore the market's efficiency.

Market displacing solutions such as the mandated availability schedule of the final legislation rest on the assumption that the market has malfunctioned in some basic way and that its efficient operation cannot be restored. According to this view, the market is neither optimal nor irresistible; rather, it is an unreliable mechanism whose externalities pollute our air, whose oligopolistic structures destroy competition, and whose information failures lead to the widespread abuse of consumer interests. Specific evidence of market failure, therefore, is not seen as a minor lapse, but as a symptom of a basic, underlying disorder. Given this belief in the systematic failure of the market, regulation is often regarded as a preferable alternative. Government officials, while obviously subject to a range of personal motivations, are at least responsible to the citizenry at large and are seen as being more likely to be devoted to the public interest than a profit-maximizing business.

Thus, both market perfecting and market displacing legislation represent conceptual frameworks that are regularly found among American legislators, and that can be readily linked to more general systems of political opinion, such as liberalism and conservatism. This is less true of market simulating legislation, such as a pricing statute for delayed availability. Like market-displacing legislation, it acknowledges the systematic nature of market failure. At the same time, market-stimulating legislation rests on the view that market forces operate in a complex, powerful way, and that their displacement frequently leads to greater inefficiencies than the failures that the displacement was intended to correct. Consistent with this view, the market simulation approach shares with market perfection a certain distrust of governmental regulators, a belief that their lack of information, and conflicting incentives, make it difficult for them to produce desirable results.
Thus, market simulation is not aligned with the somewhat Manichean structure of contemporary attitudes about markets, government, and consumers. Instead, it rests on the idea that the market is neither a marvel nor a mess, but an imperfect social mechanism whose undeniable failures must be measured against the limitations of alternatives. An amoral approach of this sort is unlikely to emerge from prevailing political ideologies.

A further problem with market simulating legislation is that it necessarily represents a strategic use of law. Our familiar image of law, particularly statutory law, is that it consists of orders, stating in explicit terms the conduct that the legislature wants to produce and imposing a sanction for disobedience of the command. While market-perfecting and market-displacing laws do not necessarily consist of commands, they usually do. This was true for the disclosure and mandated availability schedule provisions of the Expedited Funds Availability Act. Strategic law, in contrast, proceeds by indirection. Instead of commanding the desired result, it attempts to alter the incentive structure of the persons it addresses and to produce the desired conduct by the operation of intervening forces. Market-simulating legislation can only be strategic because it attempts to mimic a process that itself operates in an indirect manner. Markets do not issue commands; instead, they create incentive structures that induce people to behave in certain ways by operating through individual self-interest. This indirect operation, which can now be described in mathematical terms, is the basis of Adam Smith's classic image of the invisible hand,\textsuperscript{189} and of Bernard de Mandeville's even older observation that private vices equal public virtues.\textsuperscript{190} Pricing is the characteristic form of market-simulating legislation because it constitutes the market's basic means of regulating behavior. With a correctly designed pricing system, people automatically respond in the desired pattern; they thus become instrumentalities in achieving the desired result.

Strategic legislation, as all market-simulating laws must be, is less likely to occur to lawmakers who still think of law

\footnotesize{\textsuperscript{189} A. SMITH, AN INQUIRY INTO THE NATURE AND CAUSE OF THE WEALTH OF NATIONS (1776).} \\
\footnotesize{\textsuperscript{190} B. DE MANDEVILLE, THE FABLE OF THE BEES OR PRIVATE VICES, PUBLIC BENEFITS (1723). The modern version of this idea is C. SCHULTZE, supra note 16.}
as the promulgation of commands or rules. The advent of
the administrative state and the comprehensive regulatory
scheme that characterizes it have required lawmakers to con-
front the enormous complexity of modern social systems
and the frequent inadequacy of simple commands as a
method of control. We recognize that more varied, and
often more strategic, techniques are necessary to achieve
our purposes. However, we are still in the process of devel-
oping these techniques and the vocabulary for their articula-
tion. This unfamiliarity is amplified by vaguely-felt moral
qualms about treating the subjects of regulation as instru-
mentalities. No one really believes that this is improper, at
least in the context of the funds availability debate. How-
ever, the approach is unfamiliar; it is simply one that does
not occur to American decisionmakers.

MATHEMATICAL APPENDIX

The argument in the paper is restated here with the
help of graphs and simple mathematics. (Notation is sum-
marized in Table 1.) The total expected cost $C$ to the depos-
itary bank of paying a check of specified value, say $1,000,$
after interval $x$ is the sum of three cost elements: the cost of
funds to the bank $f$, the expected loss for returned checks $e$,
and the processing cost of handling the check $p$:

$$C = -fx + e(x) + p(x).$$

**Table 1: Notation**

- $x$ = time interval between deposit of check and availa-
  bility of funds to payee.
- $C$ = total expected cost to depositary bank of paying a
  check.
- $f$ = marginal cost of funds to the depositary bank (ap-
  proximately equal to federal funds rate).
- $e$ = expected loss to depositary bank from returned
  checks, where $e = e(x)$ and $e' \leq 0$.
- $p$ = processing cost of handling the check, including
  correspondent banking fees, where $p = p(x)$ and $p' \leq 0$.
- $g$ = marginal cost of funds to customer.
- $SC$ = social cost of delay.
The sign \( f x \) is negative to indicate that delaying availability increases the bank's funds, which is a benefit to the bank (negative cost). The expected loss \( e(x) \) is a decreasing function of delay, as is the processing cost \( p(x) \).

These relationships are graphed in Figure 1 where the length of delay between deposit of a check and the availability of funds to the depositor is measured on the horizontal axis. The three different types of costs that banks incur by making funds available on deposited checks are measured on the vertical axis. Notice that as delay increases the expected losses fall towards a negligible value, processing costs fall towards a minimum value, and the cost of funds increases at a constant rate. (The actual numbers used in the graph are purely illustrative.)

**FIG 1: VALUE TO BANK OF DELAYING AVAILABILITY OF $1,000 CHECK**

![Graph showing the three curves for cost of funds, expected loss, and processing cost over delay of funds availability in days.]

The three curves in Figure 1 represent the total cost for each of the three elements—expected loss \( e(x) \), float \( f x \), and processing costs \( p(x) \). A rational bank is concerned with minimizing these costs. The easiest way to represent the cost-minimizing delay in funds availability is not by the total cost curves of Figure 1, but by the corresponding marginal cost curves. These marginal curves, all expressed as positive values in Figure 2, indicate the amount by which each element of total costs changes as delay increases. To illustrate, after five days of delay, an additional day's delay saves the bank a few cents in processing costs, saves about seventeen cents in expected losses, and extending the loan from the depositor for an additional day is worth about twenty cents to the bank.
The value to the bank of delaying the availability of funds can be found by summing the three marginal cost curves, which yields the aggregate marginal cost curve depicted in Figure 3. In mathematical notation, the curve in Figure 3 is given by the equation

$$\frac{dC}{dx} = -f + e' + p'.$$

The aggregate value of delay as represented in Figure 3 is high at first but falls until it reaches an asymptote after fifteen days. This is depicted again for purposes of illustration, as twenty cents, which is the marginal cost of funds to the bank.

Turning from the bank to the consumer, delay causes the consumer to hold extra funds in his or her account, and possibly to undergo inconveniences or to bounce checks.
Let \( g \) represent the cost of delay to the consumer per time unit of delay. Thus, the total cost of delay to the consumer from delayed availability of interval \( x \) equals \( gx \).

Combining the value of delay to the bank and the cost of delay to the customer yields the total social cost \( SC \) of delayed availability of interval \( x \):

\[
SC = C + gx
= -fx + e(x) + p(x) + gx.
\]

Public policy must balance the loss to banks from reducing delay against the gain to customers. To make such a comparison, the marginal value of delay to the bank and the marginal cost of delay to the customer are depicted together in Figure 4. The curve representing the marginal value to the bank begins higher than the marginal cost of delay to the customer. In this range, whatever its extent, the benefit of further delay to the bank exceeds the customer's cost. Eventually the two curves cross at a level of delay denoted \( x^* \). To the right of \( x^* \), the cost of further delay to the customer exceeds the benefit to the bank. The point where the lines intersect, \( x^* \), represents the economically efficient delay in the availability of funds.

In mathematical notation, the minimum for social costs occurs at time \( x^* \) that satisfies

\[
g = f - e'(x^*) - p'(x^*).
\]

The right-hand side of the equation is the sum of the marginal values of the three bank costs, and the left-hand side of the equation is the marginal cost of funds to the consumer. The equality of the left and right sides at \( x^* \) is represented in Figure 4 by the intersection of the two lines.
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FIG 4: EFFICIENT DELAY IN FUNDS AVAILABILITY

Some, but not all, of the customer’s costs from delay get translated into dissatisfaction and market pressure. A profit maximizing bank will balance the customer’s dissatisfaction against the value of delay to the bank. In Figure 5, the profit maximizing bank will delay availability until $x_\sim$, at which point customer dissatisfaction has risen to a level where it equals the bank’s marginal value of delay. But $x_\sim$ is greater than the point of efficient delay $x^*$, a reflection of the fact that the unregulated market produces an inefficient level of delay.

FIG 5: ACTUAL AVAILABILITY OF FUNDS

The inefficiency can be overcome by an administered pricing mechanism, as illustrated in Figure 6. The vertical line, labelled “price’s onset,” indicates the length of delay that triggers the price, which is set at one day in Figure 6.
The price, which must be paid if delay exceeds the trigger, is indicated by the horizontal line. As long as the marginal value of delay exceeds the price (and assuming consumer dissatisfaction remains ineffectual), the bank will continue to delay making the funds available. Once the price equals or exceeds the value of delay, however, the bank will make the funds available. To achieve efficiency, the price should be set at a level such that the point of intersection between the price line and the line representing the value of delay to the bank occurs at the point of efficient delay $x^*$. In Figure 6, such a price has been chosen which corresponds to a 9.7% interest rate.

**FIG 6: ACTUAL AVAILABILITY OF FUNDS**

![Diagram of actual availability of funds](image-url)