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Regulatory Failures in the Design of Securities Settlement Infrastructure

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Abstract

Nearly all transactions in listed securities on the US capital markets are settled through a securities settlement infrastructure that generates extensive negative externalities for issuers and securityholders. This model is still advocated by regulators and market structure experts; it is an intermediated structure originally designed for depositing paper certificates in the accounts of a depository to allow book entry transfers of claims on the deposited certificates. The structure dates back at least to 1873. It accelerates transfer by short circuiting “endorsement”, “delivery” and “cancellation” of certificates, as all securities are and remain registered in the name of a single entity or a few intermediaries. The depository in effect issues uncertificated claims on the pool of assets (the underlying securities) kept in its accounts, creating an effect like “dematerializing” the securities, i.e., issuing securities in electronic rather than in paper form. This shortcut severs owners from issuers, inserts intermediaries as new owners, disrupts communication, and can lead to erroneous exercise of securityholder rights. It can also lead the creation of securities that were never issued, as account bookings multiply and exceed the number of securities existing on the primary account of the issuer’s list of securityholders.

While directly damaging to issuers and securityholders, it creates significant advantages for intermediaries, as they become the owners of the economy’s outstanding securities as well as of all the information about securityholders. They use this information to bind their clients to them and profit from value-added services that issuers cannot perform because they have transferred the information regarding their securityholders to the intermediaries. This structure generates high costs but there is no movement to replace it with a viable alternative based on electronic transfer displayed directly in a securities register available to issuers. The situation can be described as strong-form path dependence, given that a costly model adopted for past historical reasons has not been superseded because of a lack of good information, influential voices set against change, and the failure of regulators to grasp the problem and correct it. This article offers the analysis of the situation that regulators currently lack: it explains the genesis of the current infrastructure, presents the various changes that law and the markets have suffered in adapting to it, exposes its negative effects on issuers and securities holders, and analyzes how its owners and operators have successfully resisted change. By tying together the reasons for the system’s creation as derived from commercial law, the negative effects it has on the optimal operation of the corporate and securities laws, and the organizational and informational impediments that have and continue to hold regulators back from recommending a fundamental improvement of the securities settlement infrastructure, the article would fill the current deficit of information.

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Contents

Introduction .................................................................................................................................... 3

I. Securities Settlement Infrastructure .......................................................................................... 6
   A. The basic design of the currently dominant, depository model ........................................ 6
   B. The legal reasons for the depository model ........................................................................ 8
   C. The historical origin of the US depository model ............................................................. 11
   D. Why the depository model is no longer desirable ............................................................. 17

II. Bending the Legal System around the Depository Model ..................................................... 21
   A. Adapting the commercial law to trading claims on depository accounts ....................... 21
      1. Making claims on accounts negotiable ............................................................................. 21
      2. “Transfers” of claims within the DTCC System ............................................................. 24
   B. Adapting shareholder rights to the depository-based system ............................................. 28
      1. A serious conflict with corporate law ................................................................................... 28
      2. Distributing proxies to the clients of intermediary shareholders ...................................... 29
      (a) Weaving inquiries, information, and instructions through the depository pyramid ..... 33
      (b) Votes and voting instructions given by the clients of intermediaries (beneficial shareholders) .................................................................................................................................. 35
      4. The costs of communicating through intermediaries ..................................................... 37
      5. The SEC’s neo-bearer share model is no solution ............................................................. 42
   C. Imbedding the depository-based system in international law ............................................. 44

III. The Interests Behind the System and the Failure of Regulatory Supervision .......................... 47
   A. Regulators adopted a second-best model, which was then set in stone ............................. 47
      1. A central depository on the way to a “certificateless society” ....................................... 47
      2. Co-opting an attempt to escape from the depository model .......................................... 51
   B. The problem of regulatory focus and regulatory organization .......................................... 56
      1. Regulatory focus: losing track of the original purpose of the process ........................... 56
      2. Regulatory organization: market structure versus corporate governance ....................... 58
   C. The interests of the intermediaries ....................................................................................... 60
      1. What conflict of interests? ............................................................................................... 60
      2. How intermediaries benefit from the indirect holding system ....................................... 62

Conclusions .................................................................................................................................. 65
Introduction

At the heart of every financial market lies a securities exchange, and at the heart of that exchange lies a system to settle exchange trades. This process is called “securities settlement” or “post-trade”.\(^1\) It begins when orders to buy and to sell on the exchange are matched, and ends when all cash has been delivered to the seller and securities have been delivered to the buyer. It takes place through systems of computers linked to a securities exchange on one side, a custody entity holding a network of securities accounts on another, and a network of banks holding cash accounts on another. This infrastructure channels and completes the settlement of all but a few trades on the market, and is owned by the same market participants that hold majority positions in the exchanges themselves: major banks and brokers. Despite the fact that securities settlement infrastructure is an essential prerequisite to any working securities market, it remains even for most people working in the area of securities regulation an archetypical “black box”, impenetrable to the scrutiny of outsiders. Neither scholars nor regulators have cast any meaningful light on this dark heart of the financial markets. Investors and issuers, indeed the economy as a whole, must trust the black box blindly. Securities settlement infrastructure presents a classic case of strong-form path dependence: the returns of a change would be great, but even speaking meaningfully of the problem and its possible solutions is currently difficult, as they fall into the disparate disciplines of commercial law, corporate governance, broker-dealer regulation and financial system management.

The area begs for regulatory oversight and intervention for a number of good reasons: it is central to the markets and the economy; it has market power approaching monopoly status; it is complex and opaque, and it creates significant, negative externalities. As will be explained in this article, the current model for securities settlement severs owners from issuers, inserts intermediaries as new owners of securities, disrupts communication, and can lead to erroneous exercise of securityholder rights. It can also lead to the creation of securities that were never issued, as account bookings multiply and exceed the number of securities existing on the primary account of the issuer’s list of securityholders. While directly damaging issuers and securityholders, it creates significant advantages for intermediaries, as they become the owners of the economy’s outstanding securities as well as of all the information about “beneficial” securityholders. They use this information to bind their clients to them and profit from value-added services that issuers cannot perform because they have transferred the information regarding their securityholders to the intermediaries. When permitted by their brokerage or depository contracts, they also earn fees by lending their client’s securities to third

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\(^1\) The structure and operation of securities settlement is explained in detail in Part I of this article. The remainder of the discussion of securities settlement in this introductory section relies on arguments made and authorities cited in the body of this article.
parties. It is therefore easy enough to understand why the market participants in control of this infrastructure have taken no meaningful steps toward correcting it: they have strong incentives not to.

Rather than taking steps to address the conflicts of interests in the securities settlement industry, market regulators place significant trust in the current structure of settlement and its operators. A recent example makes that quite clear. A regulatory response to the global financial crisis in 2008 has been a call to move over-the-counter derivatives trading into existing securities settlement systems. This is motivated primarily by a desire to reduce counter-party risk.\textsuperscript{2} Risk is reduced first from the loss-sharing agreements that are built into these systems through use of a closely held corporation referred to as a “central counterparty” (CCP), which mutualizes risk among the CCP’s participants.\textsuperscript{3} A CCP, like its name suggests, becomes a buyer to all sellers and a seller to all buyers on a market, thereby assuming all settlement risk. It will likely be owned by major market participants, who will also likely agree to cover its losses should a buyer or seller fail to cover a short position on the market. CCPs thus spread risk throughout the market and provide a plan for coordinated response to the failure of a market participant. Moreover, because CCPs are at the center of all the market’s transactions, they can net the short and long positions between market participants, thus reducing their transactional exposures outstanding at any one time. Although CCPs make data on market volume available to regulators,\textsuperscript{4} they operate as a component of the larger, otherwise highly opaque, structure of securities settlement. The push to offload a market problem onto the securities settlement infrastructure is one example of the regulatory confidence in the structure and operation of settlement systems.

Yet the problems with these systems themselves are clear even upon casual observation. A key feature of the current model of securities settlement was designed to facilitate the trade of paper securities certificates. This feature is the deposit of most securities in circulation in a central depository and their registration in the name of that depository’s nominee. Once this has been done, paper does not need to circulate, legal requirements such as endorsement, delivery, cancellation and issuance of certificates for each trade can be circumvented, and claims on the depository’s accounts can be traded electronically. However, this technique has made the market blind. Because securities are registered in the name of the depository, its nominee or one of its broker participants, issuers no longer have information about the holders of their securities and these securityholders, as they are not registered with the issuers, are not legally owners of the securities at all under commercial and corporate law. Only the

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\textsuperscript{3} See Cecchetti, Gyntelberg & Hollanders, \textit{supra} note 2, at 50.

\textsuperscript{4} See Id. at 51.
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depository or its participants now have legal rights as registered owners and know who beneficially owns what. This creates moral hazard for brokers to abuse their positions of power. It gives the depository, now in possession of all the market’s information on ownership, an opportunity to sell information-based services (“proxy” and “corporate action” services) to the issuers and the securityholders, in effect selling them back their own information. These costs might well have been reasonable when most securities were certificated, but today most securities are purely electronic, making “deposit” impossible and registration in the name of an intermediary unnecessary. Yet attempts to open up and dis-intermediate this system have failed. Experts, often limited to personnel of the black box, defend institutional interest and resist real change. As the recent solution for trading in (previously over-the-counter) derivatives shows, regulators trust the structure and advocate its growth, only occasionally and hesitantly considering its renovation.

This article explains the genesis of the current infrastructure, presents the various changes that law and the markets have suffered in adapting to it, exposes its negative effects on issuers and securities holders, and analyzes how its owners and operators have successfully resisted change. Part I explains why a securities settlement structure based on immobilization and intermediation came into being and why it is no longer needed or advisable. “Immobilization” of securities in the hands of a single owner allowed circumvention of time-consuming legal requirements for transferring certificated securities. When securities are uncertificated, existing only in an electronic register, as they increasingly are, registering the securities in the name of a depository or other intermediary not only fails to offer savings, but creates legal risks in the transfer process. Part II shows the peculiar and circuitous paths that law has been forced to take to accommodate the depository model. This Part assembles and presents the significant changes that have been made to commercial and corporate law, both nationally and internationally, to adapt them to the intermediated depository structure of securities settlement. US commercial law was changed to facilitate transfer of claims to accounts and de-emphasize transfer of securities, and this US development was followed by a major international convention to achieve the same purpose. Another convention was adopted to provide conflict of laws rules for the transfer of securities held in depository accounts. The proxy rules in the securities laws were significantly changed in an attempt to counteract the disruptive impact of the new system on the basic structure of corporate law, particularly on the exercise of rights deriving from securities and the governance of issuers. Part III analyzes the regulatory failure that led to the creation and endurance of the current path-induced model of securities settlement. It offers historical evidence of two moments – at the system’s creation and at a major attempt to decentralize it – when the US Securities and Exchange Commission (SEC) failed to include the model’s negative effects and the interests of the intermediaries in the calculus of its decisions. This arose in part from the trans-disciplinary nature of the various, key issues, and in part from of the division of labor within the SEC.
into market structure decision-makers on the one side, and corporate finance decision-makers on the other. The model presents clear advantages to brokers and the clearing and settlement entity they own. It presents clear disadvantages to issuers and securityholders, parties not usually privy to financial infrastructure planning. This article therefore offers conclusions which address not only the problems of securities settlement, but also highlights the broader problems of regulating a highly specialized field, the members of which are the primary source of information about their activity, and in which the externalities fall on persons outside of the area of the regulators’ main institutional focus. The need for this article to discuss each of commercial law, corporate governance, broker-dealer regulation and financial system management itself evidences the difficulty of rerouting even a costly and inefficient path that is strongly imbedded in the financial system’s infrastructure.

I. Securities Settlement Infrastructure

A. The basic design of the currently dominant, depository model

Securities settlement is the process of delivering to the buyer the security bought and to the seller the purchase price. It is a “critical component” of the securities markets. Without a properly functioning securities settlement infrastructure, the securities markets could not exist. The world’s standard settlement system model, recommended by both US and international regulators, includes a central securities depository (CSD) or international central securities depository (ICSD), which should directly or indirectly hold a large portion of the securities traded on the respective market in “securities accounts” for market participants. Debits and credits to these securities accounts are made directly or indirectly by a central counterparty (CCP), which assumes counterparty risk for trades in those securities, and nets out crossing obligations between system participants. The third main component is a link to a network of cash accounts, preferably supported by central bank funds. The basic structure of the system is thus quite simple, and follows its purpose of bringing securities (held with the depository) to the buyer and cash (held in accounts linked to the system) to the seller, by mediation of an entity (the CCP), which not only assumes and distributes default risk, but also nets down the total amount of securities and cash that must exchange hands within the settlement system.

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7 “ICSD” stands for International Central Securities Depository.

8 CPSS & IOSCO, supra note 5, Recommendation 4; The Group of Thirty, Global Clearing and Settlement: A Plan of Action Recommendation 6 (2003); ECB & CESR, supra note 6, Standard 4.
In a market with a CCP, the contract of each seller will run to the CCP as will the contract of each buyer. If the CCP performs the market’s trade matching function, it is possible for the sales contract first to come into existence directly with the CCP; alternatively, it would be possible to form a contract between the buyer and the seller and subsequently novate the relationship into two contracts with the CCP. The CCP will be a corporation owned by the main market participants, who will have provided for loss allocation in the case that a counterparty of the CCP fails to deliver the promised securities or cash. Because the CCP stands at the center of all transactions, it is in a position to net the short and long positions of all trading participant during the relevant settlement “cycle” (which could be a matter of days or hours, depending on the jurisdiction). Although in the case of retail and other downstream trades, such netting does not reduce the number of transactions that ultimately must be completed (the seller must receive cash and the buyer must receive securities), at the level of the direct participants of the CCP, the reduction of transaction costs can be significant. For example, if participant A should deliver 200 shares of XYZ Inc. and should receive 100 shares of the same company, the CCP can calculate a net delivery obligation of 100. The same will be done on the cash leg of the transaction, so that if A should receive $2000 for its XYZ shares and should pay $1000 for the shares, A’s net credit will be only $1000. On the cash leg of the transaction, the CCP can further net down the already net figures. For example, if A has a net credit of $1000 for the XYZ shares, and a debt of $2000 for 200 EFG Inc. shares it is buying, the CCP can then calculate a net debt of $1000 for A during the settlement cycle. Thus the CCP would instruct the CSD to debit A’s securities account by 100 XYZ shares and credit it with 200 EFG shares, while debiting A’s cash account by $1000. The CSD and the network of banks make the shares and the cash available for the rapid credit/debit processing of the CCP. Best practice requires that the securities be delivered at the same time as the cash (delivery versus payment).9 Having a CCP designed and backed by all major system participants, and operated under their supervision, as the settlement counterparty for each trade, greatly reduces counterparty, systemic and operational risks. That is why regulators have pushed to include derivatives transactions under its umbrella.

The reason that securities settlement revolves around a CSD or ICSD, is that when modern settlement systems were being established experts believed that having paper securities “immobilized” in custody accounts of such an entity was the best way to facilitate securities transfer (claims to CSD accounts are electronically transferred between account holding participants).10 Placing securities in the name and custody of a depository accelerates the transaction because, as will be explained in the next section, legally required acts such as the endorsement and delivery of certificates, the

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9 Bank for International Settlements, Delivery Versus Payment in Securities Settlement Systems (1992); CPSS & IOSCO, supra note 5, Recommendation 7; The Group of Thirty, supra note 2, Recommendation 8; ECB & CESR, supra note 6, Standard 7.

issuance of a new certificate and the cancellation of the old one are labor intensive and time consuming operations. In a market where tens of millions of transactions are settled daily, moving the resulting mountains of paper from the seller to the buyer also presents significant logistical difficulties and security risks. The technique of centrally "immobilizing" security certificates in the name of a trustee entity eliminates the actual transfer of the securities, allowing cumbersome processing and risky shipments of paper certificates to be replaced by neat debits and credits to accounts. However, it must be remembered that this technique simplifies "transfers" by in practice avoiding them – the security remains in the name and in the possession of the central depository or its nominee at all times, and only the beneficiary clamant on that account changes. This method is ingenious, and represented a breakthrough of inestimable value when first used in 1873 by the Vienna Gyro and Depository Association. The simple medium of the depository works to, in effect, transform paper certificates (subject to a number of cumbersome transfer requirements) into book-entry claims. Although the certificates continue to exist in the vaults of the depository, the buyers and sellers interact as if they did not, as if only the claims entered in the register held by the depository were relevant. This process might be referred to as a faux dematerialization of the securities, because although they continue to exist in material form of certificates, everyone but the depository can ignore their existence. The depository becomes a kind of issuer of claims to a pool of assets held in its accounts, such assets being the securities of the listed companies traded on the market.

B. The legal reasons for the depository model

Securities exist in both "bearer" and registered" form. Equity and debt securities in each of these forms have in common that they are negotiable instruments, whose certificated rights and face value are not affected by the claims of third parties. This aspect of "negotiability" makes a market for securities possible in a way that, say, a market for commercial or mortgage loan contracts is not. Buyers need not perform any kind of investigation into the history of the securities they purchase, provided that they

14 This distinction can be found, for example, in the US Uniform Commercial Code (UCC) at § 8-102(a)(2) and (13) (2005), in German law, see ALFRED HUECK & CLAUS-WILHELM CANARIS, RECHT DER WERTPAPIERE 22 et seq. (12th ed. 1986) and in UK law, where the same distinction is referred to as "unregistered/registered," see Roy Goode, The Nature and Transfer of Rights in Dematerialized and Immobilized Securities, in The Future for the Global Securities Market 107, 109 (Fidelis Obitah ed., 1996).
take the securities in good faith without knowledge of any claim against the seller's title to the security. In order for securities to enjoy such facilitating negotiability, the law requires that they have certain characteristics and be transferred in accordance with certain rules. Some of these requirements have been briefly mentioned above.

In many jurisdictions, bearer securities merely require a 'voluntary transfer of possession', and thus are relatively simple to transfer; the bulk of paper and risk of its loss pose the main obstacles to efficient settlement. As the certificate itself is the only proof that the bearer may exercise the various rights embodied in the security, presentment of the certificate is both necessary and sufficient to exercise such rights. Registered securities, particularly shares of stock, have more legal requirements for the effective transfer of all certificated rights. At the most basic level of property law, ownership of a registered security may also be transferred by a simple, voluntary delivery of possession, and such delivery need not always be direct, but may take place through an escrow arrangement or other intermediating party, such as a custodian bank. However, a buyer who receives delivery of an unendorsed registered share has neither the right to demand entry on the securityholders list nor good title as a bona fide purchaser in the face of competing claims to the security, which, as explained above, is the main reason for using the security form, i.e., to have "negotiability". Such negotiability is achieved only if certain requirements are met. In order to qualify as a 'protected purchaser' under US law, the buyer must (1) give value, (2) not have notice of any adverse claim to the security, and (3) obtain control of it. This notion of a 'protected purchaser' receiving a negotiable instrument (rather than the more traditional figure of the bona fide buyer) was substantially borrowed from the Convention on International Bills and Notes prepared by the United Nations Commission on International Trade Law (UNCITRAL). As is evidenced by the use of these requirements in the UNCITRAL Convention, delivery (control) and the absence of notice of an adverse claim are generally accepted requirements for good faith acquisition of

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16 See id. § 6:2, 6-4; Mark S. Rhodes, Transfer of Stock §7:4, 145 (6th ed. 2005).
17 Guttman, supra note 15, § 6:2. It should be noted, however, that under the UCC as amended in 1994, if a securities intermediary were to act on behalf of the purchaser in acquiring possession of the security certificate, the purchaser would receive only a "security entitlement", a pro rata claim against the intermediary's inventory, rather than ownership of the security itself, unless the certificate were in registered form and registered in the name of the purchaser or specially indorsed to the purchaser. UCC, § 8-301(a)(3) (2005).
18 See, e.g., UCC, § 8-301(a) (2005); Guttman, supra note 15, § 6:3; Rhodes, supra note 16, §7:4, 145.
19 See, e.g., UCC, § 8-401 (2005), and Guttman, supra note 15, § 7:1, 7-3.
21 UCC § 8-303 (2005).
a negotiable instrument. A "protected" purchaser acquires the transferred interest in the security free of any adverse claims. Thus best practice advises registered securities be transferred by both endorsement and delivery. The concept of "good delivery" on a securities market may include assistance as necessary to effect the registration in the relevant register. To this end, the purchaser may demand that the seller provide proof of authority to transfer and other documents requisite to obtain registration of transfer. Such other requisite documents could include a signature guarantee, letters of administration and tax documentation. Buyers demand signature guarantees and proof of powers because issuers will demand these documents before effecting the registration of transfer, especially in light of the fact that an issuer that registers a transfer pursuant to an ineffective endorsement or instruction can be held strictly liable for wrongful registration. If a signature guarantee is provided, the guarantor will bear any costs of such liability.

From the above, it is obvious that even in a direct transaction between seller and buyer, the transfer of a certificated registered share entails a significant amount of paperwork: either the certificate or a stock power must be endorsed, the signature guaranteed, authority to transfer title documented, and the stock certificate and the other documentation delivered, not to mention the registration of transfer on the stockholders' list, the destruction of the old certificate and the issue of a new one. Because a transaction on a securities exchange will involve more parties, the necessary paperwork increases, as each party demands the basic documentation plus any others considered necessary to decrease its risk or increase its rating vis-à-vis the next party in the transactional chain. On a market using manual securities settlement, the transaction could entail the following: If a seller is not a broker or specialist, he will instruct a broker to sell, the broker will transfer the order to the exchange floor/trading system or a market maker, where it will be matched wholly or partially with one or more buy orders. Once the order is executed, the seller will have to deliver the executed certificate(s) to his

23 On German law, see § 932(2); on UK law, see The Law of Property Act, 1925, 15 & 16 Geo. 5, c. 20, § 157(2) (U.K.) and Joanna Benjamin et al., The Law of Global Custody § 2.13 (2nd ed. 2002).
24 UCC § 8-303(b) (2005).
25 Rhodes, supra note 16, at 146.
26 See GUTMAN, supra note 15, § 9:5.
27 See id., § 7:1, 7-2, 7-3. This is particularly true in the case of uncertificated securities because both delivery and control of a security are achieved through this registration, as will be discussed below.
28 See id.; also see UCC § 8-307 (2005).
29 UCC § 8-402 (2005); also see GUTMAN, supra note 15, §§ 14:1, 14:2 and 9:5.
30 UCC § 8-404 (2005); also see GUTMAN, supra note 15, §§ 14:1, 14:2.
31 See GUTMAN, supra note 15, § 14:3.
broker so that the selling broker can deliver it to the buying broker, market maker, specialist, or central counterparty. Once the buying broker receives delivery, she will have to deliver to the issuer’s transfer agent with a request for registration of transfer on the stockholder list. The latter, after inspecting all necessary documentation, will register the transfer, cancel the old certificate, and issue a new certificate to the buyer. Beyond endorsement of the certificate and its delivery, each stage of the transaction will demand the documents, guarantees and assurances that constitute “good delivery” on the respective exchange. The amount of manual paperwork for the sale of a single share can therefore be significant, and in a high volume environment, the backlog caused by such paperwork can cripple a market, as the next section explains.

C. The historical origin of the US depository model

The currently dominant model of securities settlement was designed following a major market failure in the United States in 1970, a disaster referred to with names like the “paper crunch” or “paper blizzard”. Up until the 1970’s, most securities firms took care of their securities transfer paperwork through the manual work of clerks. A study performed by North American Rockwell Information Systems at that time found that brokers might use an average of 33 different forms for a single security transfer. As trading volume steadily increased in the late 1960’s, brokers fell behind in this “back office” processing of transaction settlements. Although the volume was slight by today’s standards, the unforeseen growth had dramatic effects. Daily volume on the NYSE more than quadrupled from about three million shares per day in 1960 to approximately 13 million shares per day in 1968, without the industry taking any serious steps to increase the efficiency of their settlement activity. The increase was loaded mostly into the end of the period, and from 1966 to 1967 annual trading volume increased by 33%.

See GUTTMAN, supra note 15, at § 9:9 and Donald T. Regan, A View from the Street 100 (1972).

The NYSE has developed a program referred to as “Exchange Medallion Program” to standardize and rationalize the guarantee process for exchange transactions. See Rules of the New York Stock Exchange (hereinafter NYSE Rules), Rule 200.

For example, the “good delivery” rules used on U.S. exchanges may well limit the number of people who can provide an endorsement to market participants or persons who do not act in a fiduciary capacity, so as to reduce the risk of forged or unauthorized endorsements. See GUTTMAN, supra note 15, at § 9:19, 9-40.

U.S. SECURITIES AND EXCHANGE COMMISSION, STUDY OF UNSAFE AND UNSOUND PRACTICES OF BROKERS AND DEALERS 28 (December 1971) (hereinafter “UNSAFE PRACTICES STUDY”), at 28. Also see Chris Welles, The Last Days of the Club 172 et seq. (1975) and Regan, supra note 33, at 104 et seq.


SEC, UNSAFE PRACTICES STUDY, supra note 36, at 28, and Baruch, supra note 38, at 85 et seq.

SEC, UNSAFE PRACTICES STUDY, supra note 36, at 28, §6.
reaching 2.53 billion shares.41 During 1969, the inability of some brokerage firms to settle transactions created enormous backups in deliveries, so that unperformed obligations could range from 70% to 200% of a firm's total assets.42 Firms were forced to cover short positions caused by missing securities through open market purchases. This worked as long as cash flow was strong, but as the market turned downward in 1970, brokers found their working capital diminished, which forced them into default on outstanding delivery obligations for which the securities had been lost or misplaced.43 As a result, over 100 brokerage firms either entered bankruptcy or were acquired by stronger competitors.44 Although this is not remembered as one of the more important market crises of U.S. financial history, it was the largest challenge to the securities exchanges since the crash of 1929, and led directly to the Securities Acts Amendments of 1975.45

Both the SEC46 and a number of authors writing in the 1970's, including Chris Welles,47 Hurd Baruch,48 and Donald Regan,49 documented in some detail the circumstances that led to this improbable crisis. During the "go-go" years of the 1960's, a number of brokerage firms greatly expanded their sales forces without similarly investing to increase their capacity to settle the transactions they entered into.50 Welles speculates that the monopolistic position of the New York brokers, who at this time enjoyed both fixed commissions and rules against outside competition, dissuaded them from tying up funds to improve their internal systems by installing the type of automated data processing that had been offered to them since the 1950's.51 Yet as the number of orders and transactions grew, so did the volume of unfulfilled deliveries. One relatively large brokerage firm that had been a member of the NYSE since 1941, Dempsey-Tegeler & Company, Inc.,52 saw its unfulfilled deliveries climb from about $2.6 million in 1968 to approximately $12 million in 1969, a sum which was twice the firm's total assets.53

During the last six months of 1968 and part of 1969, the volume of failed deliveries forced the NYSE to close one day per week and then hold abbreviated trading hours in

41 Id. at 13.
42 Id. at 102. Losses from fails and related unperformed obligations climbed nearly 300% between 1961 and 1969. See Id. at 100.
43 Id. at 96.
44 See S. REP. No. 94-75, at 183 (1975); BARUCH, supra note 38, at 189 et seq.; WELLES, supra note 36, at 134.
45 S. REP. No. 94-75, at 183 (1975).
46 SEC, UNSAFE PRACTICES STUDY, supra note 36.
47 WELLES, supra note 36.
48 BARUCH, supra note 38.
49 REGAN, supra note 33.
50 SEC, UNSAFE PRACTICES STUDY, supra note 36, at 11 et seq.
51 WELLES, supra note 36, at 125 et seq.
52 WELLES, supra note 36, at 212.
53 SEC, UNSAFE PRACTICES STUDY, supra note 36, at 101 et seq.
order to give members time to catch up on their paperwork.\textsuperscript{54} Even after taking such measures, however, in December 1968 the NYSE still showed more than $4 billion in outstanding delivery failures.\textsuperscript{55} Because securities often carry rights to distributions such as dividend or interest payments, the backlog of paperwork meant that such distributions were not paid on time. For example, in 1969 Dempsey-Tegeler failed to pay out approximately 80% of the dividends due its clients although it had actually received the funds from the respective issuers.\textsuperscript{56} During the same year, even Merrill Lynch, Pierce, Fenner & Smith Inc., at the time one of the strongest brokerage houses, did not pay about $21 million in dividends to its clients on time.\textsuperscript{57} In order to cover such outstanding obligations, some brokers illegally resorted to a ponzi-scheme like behavior, using the free balances of some clients to cover obligations due to others.\textsuperscript{58}

Some firms tried to shift to automated systems on the run during the bull market – occasionally with disastrous results.\textsuperscript{59} These failed attempts to automate may well have colored the decision-making at a later date, when the SEC and market participants chose between high- and low-tech solutions to the securities settlement problem. One example that Welles describes in detail is the ill-fated attempt of McDonnell & Company, a prosperous brokerage firm of the 1960's, to make the transition to automated settlement. When the booming market approached its apex in 1968, McDonnell paid a computer firm named Data Architects about $3 million to design and install a computerized settlement system to take over the settlement burden from the firm's flagging team of back-office clerks.\textsuperscript{60} Because during the installation period McDonnell continued to engage in high volume trading, it was forced to outsource much of its paperwork to another firm at significant cost.\textsuperscript{61} Unfortunately for both McDonnell and Data Architects, the latter's "innovative" system design had some bugs and the contractors failed to formulate a feasible transition plan or train McDonnell employees on the new system; in addition, these same employees also apparently sabotaged the new system out of fear that they would lose their jobs to a computer.\textsuperscript{62} As a result, the transition never occurred, and in December of 1968 McDonnell had about $9.3 million in securities that it could not place to specific owner-customers and unfulfilled deliveries of approximately $1.3 million for which it simply could not find the relevant securities to be delivered.\textsuperscript{63} Pinched between the cost of outsourcing its

\textsuperscript{54}\textsc{Regan}, supra note 33, at 104, and SEC, \textsc{Unsafe Practices Study}, supra note 36, at 219-20.
\textsuperscript{55}SEC, \textsc{Unsafe Practices Study}, supra note 36, at 19; also see \textsc{Regan}, supra note 33, at 104.
\textsuperscript{56}SEC, \textsc{Unsafe Practices Study}, supra note 36, at 109 et seq.
\textsuperscript{57}Id. at 109.
\textsuperscript{58}Id. at 123 et seq.; also see \textsc{Baruch}, supra note 38, at 21 et seq. and 33 et seq.
\textsuperscript{59}SEC, \textsc{Unsafe Practices Study}, supra note 36, at 13 et seq.
\textsuperscript{60}Welles, supra note 36, at 196.
\textsuperscript{61}Id. at 195.
\textsuperscript{62}Id. at 187 et seq.
\textsuperscript{63}Id. at 196.
settlement activities and the funds it needed to cover its own back-office shortfalls, McDonnell apparently turned to securities fraud. It purchased 200,000 shares of the inept Data Architects for a penny a share, offered the shares to the public in an IPO that it arranged for the company without disclosing its own disastrous experience with the issuer's work, and pocketed about $2 million from the transaction.64 However, as the market turned downward in late 1969, McDonnell's cash flow was still not sufficient to fund both the open market purchases necessary to replace lost and misplaced securities and the cost of its outsourced settlement work, so it was forced into bankruptcy.65 At the same time, the SEC took action against the broker for the misleading omission in the prospectus it used to sell the Data Architect shares.66 Although McDonnell was liquidated in the spring of 1970, it took clerical employees until 1974 to straighten out the firm's securities settlement records.67

As mentioned above, about 100 other brokerage firms met comparable fates.68 Congress first reacted by creating deposit guarantee insurance for retail securities holders through the Securities Investor Protection Act of 1970 (SIPA)69. It also instructed the SEC to investigate the causes of the crisis, which resulted in a very detailed account of broker activity in the 1960's.70 On the basis of this Report and other considerations, Congress passed the Securities Acts Amendments of 1975.71 The provision of this Act that imposed immobilization and created the "indirect holding system" is, like the "back office" itself, not the most memorable of the 1975 Amendments. The Act is primarily remembered for eliminating the system of fixed commissions that had protected brokers' income since 179272 and introducing the national market system program, which is designed to allow trades and information to flow freely between all national and regional exchanges,73 a project that is still incomplete and actively pursued today.74 The national market system was mainly designed to open up isolated,
uncompetitive pockets of trading and price information to all market participants,\textsuperscript{75} thereby promoting competition between the NYSE and regional exchanges and segments,\textsuperscript{76} but it was also intended to create a national system for clearing and settlement.\textsuperscript{77}

As will be discussed in more detail in Part III, the SEC convened a conference of experts in 1971 to consider solutions for the securities settlement crisis. A decentralized, electronic and a centralized depository solution for securities settlement were discussed. The depository model was chosen. A Central Certificate Service (CCS), which was operated by the New York Stock Exchange (NYSE) was in 1973 transformed into The Depository Trust Company (DTC). Deposited securities were registered in the name of "Cede & Company", DTC’s nominee. During the same period, the National Securities Clearing Corporation (NSCC) was created to act as the clearing agent of the National Association of Securities Dealers (NASD). In 1999, DTC and NSCC became subsidiaries of a newly created holding company, the Depository Trust and Clearing Corporation (DTCC), which is a stock corporation staffed primarily by seconded officers of its customer-shareholders,\textsuperscript{78} major US banks and brokers. NSCC currently serves as the central counterparty for the U.S. securities market.\textsuperscript{79}

For the depository model to be truly effective, it must contain enough securities to enable a liquid market in claims on its accounts. As the SEC explained when backing the centralized, depository-based system for the US market, “for maximum effectiveness, the depositories would have to encompass close to the maximum number of transactions effected in the marketplace in which it is designed to serve.”\textsuperscript{80} In 1980, the SEC repeated this opinion as a criterion for registering clearing agencies.\textsuperscript{81} Placing 100% of a market’s securities in the hands of one entity and entering them all in its name obviates both the physical movement of securities and the need to change the stockholders list in connection with a transfer. With respect to paperwork, total

\textsuperscript{75} 15 U.S.C. § 78k-1(a)(1)(D); S. Rep. No. 94-75, at 187 et seq. (1975); Loss & Seligman, supra note 72, at §7-A.1


\textsuperscript{77} 15 U.S.C. § 78q-1; S. Rep. No. 94-75, at 183 et seq. (1975); Loss & Seligman, supra note 72, at §6-C-6.

\textsuperscript{78} DEPOSITORY TRUST & CLEARING CORPORATION, ANNUAL REPORT 2008, 52 et seq. (2009).


\textsuperscript{80} See SEC, UNSAFE PRACTICES STUDY, supra note 36, at 187.

\textsuperscript{81} Regulation of Clearing Agencies, SEC Release No. 16900, (June 17, 1980), published in Vol. 20 SEC Docket p. 434 (July 1, 1980) (“The clearing agencies registered with the Commission are essential to Congressional policy which includes a national clearance and settlement system for securities and the encouragement of broad scale participant (sic.) therein by securities professionals so as to reduce the physical movement of securities certificates. Such broad scale participation will result in the concentration of securities in a limited number of entities”).

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Immobilization has the same effect as dematerializing the entire market. Today this end has been achieved by DTCC. It has been estimated that the DTCC system includes more than 99% of the depository-eligible securities in circulation on the U.S. capital markets. Since securities are now issued with the intention of introducing them into the DTCC system, they are certificated as "jumbo" or "global" certificates that evidence millions of dollars of securities on one certificate, and whose size is limited only by the amount for which DTC can obtain insurance on a single piece of paper. According to its 2008 annual report, DTCC and its subsidiaries held $27.6 trillion in securities in custody at year end, down from $40.1 trillion in 2007, the decrease being attributed to the market drop at the close of 2008, not to any downsizing. During 2008, the DTCC group processed an average of $86.5 million transactions each business day and on one record volume day in October 2008, DTCC reports it processed 209.4 million transactions. Overall, for 2008, DTCC settled transactions with a total value of about $1.88 quadrillion (i.e., 1.88 x 10\(^{15}\))\(^8\). NSCC serves as the central counterparty for trades settled on U.S. markets. NSCC has roughly 4,000 clearing participants whose short and long positions against each other NSCC nets multilaterally, so that it must actually make deliveries only on the remaining, net positions through settlement accounts the participants hold with DTC and in the Federal Reserve System. In 2008, while processing an average of 400 million transactions daily, NSCC succeeded in netting out 99% of the delivery value, from a total of $315 trillion in settlement obligations to $2.9 trillion, among the participants of the DTCC settlement network. If the transactions are in certificated

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82 In 2004 DTCC's General Counsel Richard B. Nesson estimated that "somewhere North of 99%" of the depository-eligible securities in the United States were included within the DTCC system. SEC Historical Society, Fireside Chat: "Business Recovery Requirements for Clearance and Settlement in Light of September 11th" (Nov. 11, 2004), available at www.sechistorical.org. In 2000, the Securities Industry Association reported that approximately 83% of the securities traded on the NYSE were processed in the DTC system. SEcurities IndUstry Association, SEcurities DEMATERIALIZATION White Paper 17 (June 2000).

83 UCC, Article 8 Prefatory Note, at Sec. 1.D.

84 DTCC 2008 ANNUAL REPORT, supra note 78, at 36.

85 Id. at 29.

86 Id.

87 Id. at 4.

88 NSCC Rules, Rule 11, Sec. 1 (b). The transactions processed in the DTCC system include not only those of the NYSE and the Nasdaq Stock Market, but also those executed on the regional exchanges. DTCC 2008 ANNUAL REPORT, supra note 78, at 36. See also Guttman, supra note 15, at §9:15, 9-31.

89 See the NSCC Membership Directory (version of December 2009), available at www.dtcc.com.

90 NSCC Rules, Rule 11. See also Guttman, supra note 15, at §9:14, 9-28 et seq.

91 DTCC 2008 ANNUAL REPORT, supra note 78, at 31
securities “deposited” with DTC, its nominee Cede & Co. remains the registered shareholder of all securities transferred.92

The currently dominant model for securities settlement is therefore capable of processing immense transaction volumes. However, it must nevertheless be understood as a measure taken in reaction to a crisis situation in an era when state corporate law required stock to be certificated. As the next section of this article will explain, this model – while a stroke of genius when invented in the mid-nineteenth century – is no longer advisable. Yet it remains. The reasons why it was selected over alternative models in the 1970’s and why it continues to exist today in spite of the significant negative externalities it generates and its inappropriateness for a market in which electronic book-entry securities dominate the market, will be addressed in detail in Part III.

D. Why the depository model is no longer desirable

Placing paper securities certificates into the accounts and in the name of a central depository allows claims on such securities to be traded in lieu of the securities certificates themselves, which greatly increases efficiency at the center of a securities market. During the 100 years from its introduction in 19th Century Vienna to the creation of the DTC in 1973, this technique remained essentially unchanged. Through this model, the depository becomes an “issuer” of book-entry claims to the securities held in its accounts; dematerialized claims are created from deposited securities. As will be explained in Part II.B, this cuts off securityholders from the issuers, and significantly disrupts the governance structure of the issuing corporations. This has traditionally been seen as the high but necessary price of efficient settlement. What would happen, however, if paper certificates were to fall into disuse? What if corporations were to issue their debt and equity as book-entry securities in uncertificated form in the first place? If the register of shareholders or bondholders on which securities originally come into existence were to be an electronic databank capable of supporting book entry transfers, would it still be necessary for the custodian to hold duplicate or shadow copies of such uncertificated securities?

Would the disappearance of paper securities make CSDs and other depository intermediaries that currently take custody of securities to allow efficient delivery obsolete? If securities were to become just another form of (very valuable) information stored in databanks, would market participants – like the telecommunications companies before them – be willing to become invisible facilitators of information transmission rather than high-profile, highly intrusive middlemen? Would CSDs and global depository banks still provide the market with a valuable service? As the markets steadily evolved toward electronic, paperless securities during the last decades of the 20th

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century, and the early years of the 21st these questions became less and less hypothetical. The consequence of the current trend is inescapable: When paper certificates are gone, the depository-based model of securities settlement will have lost its reason to exist. At present, the issuance of paper certificates is becoming a rare and undesired exception. Government debt led this trend in a number of major markets. Germany dematerialized part of its debt issues as early as 1910, and then all of them in 1972. In 1981, France began dematerializing its entire market by legislative decree, the United States government followed in 1986, by completely dematerializing its government securities, although US securities exchanges still had paper certificates for listed companies until 2008.

The depository model is therefore becoming unnecessary; however, it is also dangerous. Each time another entity issues claims to its securities accounts supposedly backed by deposited securities, this creates entitlements to securities, whether or not they have actually been issued by the listed company. Thus when securities are dematerialized, multiple bookings in various intermediary accounts create not only confusing shadow copies of the underlying shares or bonds, but actual “securities” whose holders expect to exercise real rights. France, which began eliminating all paper securities nearly 30 years ago, has faced this problem for some time. As Martin explains in analyzing the 2004 Hague Convention, the situs of a dematerialized security is quite certain: it is the register or account (usually held by or for the issuer) in which the security is originated, as all rights embodied in a security can be enforced only against the issuer. By contrast, any entries in the accounts of an intermediary have the sole purpose of documenting the bookkeeping for the intermediary, and give the holder no rights whatsoever against the issuer. Thus, as Martin explains, “the intermediary does nothing.

The trend to dematerialization is expanding geometrically. Between September 2001 and December 2006, the number of dematerialized issues on the US market grew from 298 (Charles V. Rossi, Direct Registration System (DRS) Continues to Grow, 2 Sec. Transfer Ass’n News. 4, 4 (2001)) to 1,404 (Each of DTCC’s annual reports over the last decade have referred to this trend, most recently see DTCC, 2008 Annual Report 36). An extensive analysis of the early trend to dematerialization is presented in Securities Industry Association, supra note 82, at 7 et seq.

94 See Heinsius et al., supra note 12, § 42 margin no. 6.
96 See Guttman, supra note 15, § 1:13, 1-53; 31 CFR §§ 357.0 – 357.45.
97 See the discussion of mandatory dematerialization in the United States, later in this subsection.
99 This Convention is discussed in more detail in Part II.C.
100 Didier R. Martin, La théorie de la scripturalisation, in de Vauplane, ed., supra note 96, at 55, 69.
101 Id. S. 70.
nothing more than keep its own books with respect to securities that exist in the issuer’s register,”103 and since “these book-entries are not an unrestricted game of displacing the securities to the extent of one’s imagination: it is advisable to restrict entries to the primary account in which the securities originate.”104 At the latest, when it comes time to pay dividends or interest, or when voting rights are exercised at an annual meeting, discrepancies between the number of securities actually issued than those “created” by intermediaries’ credits to accounts will lead to problems. Thus with paper gone, the insertion of securities accounts is both unnecessary and disruptive. Moreover, as will be discussed in Part II.C, choosing the law governing a transfer of securities by reference to a depository account will unnecessarily split the law applicable to a security: the law governing the valid issue of the security will be that governing the creation of the corporation, but the law governing the transfer will be the place of the account creating the bookings. If the originating account remains the transaction account, there is no need for this multiplication of applicable laws.

This is not the place to offer concrete proposals for an alternative system design, especially as neither the leading market participants, nor the regulators, nor US academic scholarship, seems to have even grasped and articulated the problem. However, indications of the alternative model of securities settlement can be clearly discerned: uncertificated securities would be traded on an account that also serves as an master list of securityholders.

If intervening, extra bookings on the accounts of intermediaries are eliminated, we are left with transfers of uncertificated securities on the register in which they are originally created. No shadow copies are made of shares or bonds. This is the model the UCC Drafting Committee supported in the 1978 amendments of Article 8, UCC, which would have allowed “changes in ownership … to be reflected by changes in the records of the issuer.”105 Uncertificated securities are transferred simply by registering the transfer on the books of the issuer.106 Thus the “delivery” of uncertificated securities, which is an essential element of the transfer, takes place either by registering the name of the transferee on the securityholders’ list or by a third party (who, under the current UCC may not be a securities intermediary because it would create a “security entitlement”)107 declaring to hold the share on behalf of the transferee.108 Just as for a

103 "L’intermédiaire ne fait que «comptabiliser» les valeurs mobilières «inscrites chez émetteur»” See id. S. 69 (author’s translation).
104 "La scripturalisation n’est pas un jeu d’écritures ouvert à toutes les fantaisies de délocalisation des valeurs mobilières: elle vaut, aussi avis de leur domiciliation dans les comptes primaires où elles éclosent!” See id. S. 70. (author’s translation).
105 UCC, Article 8 Prefatory Note, Sec. I.B. “The Uncertificated Securities System Envisioned by the 1978 Amendments.”
107 As will be explained in Part II.A, if a securities intermediary were to act on behalf of the purchaser in acquiring a security, the purchaser would receive only a “security entitlement”
certificated security, in order to be protected against possible claims of third parties to the uncertificated security, the buyer would have to “give value”, not have notice of any “adverse claim”, and obtain “control” of the security. A transferee obtains “control” over an uncertificated security by having his name entered on the stockholders’ list. Because parties to the transfer would still likely require a signature guarantee on the stock power or transfer instruction used to transfer the uncertificated securities, the transfer would simply require payment of value, a transfer instruction or power with guaranteed signature, and registration of the transfer. Thus registration by a transfer agent would fulfill the requirements both of “delivery” and “control”. Moreover, it would mean that every owner of the security simultaneously became the registered owner, holding all rights to vote and receive dividends or interest from the issuer. With this one change, the distinction between “beneficial” and “registered” owners would disappear (except in cases where the securityholder chose to remain anonymous); at the end of each trading day, when the dust of settled, every issuer would have an exact and complete list of its securityholders.

This type of transfer could be executed at high speed on a securities exchange if the CCP or clearing entity of a securities settlement system were authorized to effect debits and credits on the master securityholder lists kept by the transfer agents of issuers. It is also conceivable that the individual registers could be maintained within a CSD, although having the registers dispersed throughout the country would increase security against a physical (as opposed to cyber) attack on the system. As said, a direct relationship between issuer and each respective investor would remain unless the investor chose to insert a trust or some other intermediary to protect her identity, and it would also be possible for investors to be identified by encrypted codes linked to delivery addresses or taxpayer numbers within a confidential system. No advantage is gained by replicating the uncertificated securities in the accounts of intermediaries, and indeed, as discussed above, such replication would lead to the risk of creating securities that were never issued. Market infrastructure and market institutions would offer secure information management, but the information regarding the holders of an issuer’s securities would remain with the latter and the relevant holders unless they voluntarily chose to cede it to brokers or banks.

against the intermediary rather than ownership of the security itself. See UCC, § 8-301(a)(3) (2005).
108 UCC § 8-301(b) (2005).
109 UCC § 8-106(c) (2005).
110 UCC § 8-402 (2005).
113 See Part II.B.1.
Instead of such a model, however, the United States is currently betting on a hybrid system in which the holding of traded securities remains intermediated, but direct holding off the trading grid is possible. This is the direct registration system (DRS), which is discussed in some detail in Part II.B of this article. A “direct” registration settlement modified to be part of the depository structure has been chosen because even though paper was losing its importance during the last decades of the 20th Century, the United States still rushed full speed to redesign much of its securities market around the 19th Century depository solution. As will be explained in Part II.B, requirements under applicable commercial law for the secure and valid transfer of securities were amended to allow claims against securities accounts to be transferred with the same legal certainty as the certificates themselves. Thus the trail of the current circuitous path around the depository was cut, and beyond those changes, securities laws also attempted to compensate for the fact that the depository model struck at the heart of corporate law by severing the link between issuers and shareholders. These adjustments to indirect communication took the form of a complex set of rules for distributing proxy information within the custodial system, which gave birth to an industry of proxy services providers that feed on the inefficiencies created by immobilization.

II. Bending the Legal System around the Depository Model

A. Adapting the commercial law to trading claims on depository accounts

As discussed in Part I, to qualify as a protected (bona fide) purchaser of a certificated registered share, the certificate must be indorsed to the purchaser. To receive rights as a shareholder under corporate law, a shareholding must be entered on the stockholders list. These paper-intensive activities brought the process of securities settlement to a standstill, and the solution the regulator chose was to both place the market’s securities in the vaults of a central depository and register them in the name of its nominee. In order to allow negotiability of securities under these new circumstances, the commercial law, Article 8 of the Uniform Commercial Code (UCC), was amended in 1978 and again in 1994.

1. Making claims on accounts negotiable

In 1978, at the time of the first amendments, the Article 8 Drafting Committee still hoped that “changes in ownership would continue to be reflected by changes in the

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114 In the United States, the necessity of this project was officially discussed as early as 1971. See U.S. Securities and Exchange Commission (SEC), Study of Unsafe and Unsound Practices of Brokers and Dealers 188 (1971). Switzerland recently went through the process of amending their Civil Code to permit fully dematerialized transfers. See Hans Kuhn, Das neue Bucheffektenmodell des schweizerischen Rechts, in Die Zukunft des Clearing und Settlement 29 (Theodor Baums & Andreas Cahn eds., 2006).

115 See Part II.B.1, infra.

116 See GUTTMAN, supra note 15, at § 1:14, 1-56 et seq.; UCC, Article 8 Prefatory Note, at “C. Indirect Holding System”.
As discussed above, the transfer of uncertificated securities on the books of issuers allows efficient, high volume settlement without sacrificing the direct relationship between issuers and shareholders. However, as the Drafting Committee noted in 1994, "(a)lthough a system of the sort contemplated by the 1978 amendments may well develop in the coming decades, this has not yet happened for most categories of securities. Mutual funds shares have long been issued in uncertificated form, but virtually all other forms of publicly traded corporate securities are still issued in certificated form."

By 1994 DTC was rapidly expanding the menu of services, and as will be discussed in Part III, was even able to absorb an incipient direct registration system, which had originally been conceived as an issuer driven network, into its own system. Thus the Drafting Committee took the step of cementing the "indirect holding system" – originally conceived as a second-best option – through a redesigned Article 8 UCC that places account holding intermediaries at the center of the transfer process.

Under the 1994 amendments of Article 8, the problem of negotiability is solved by raising claims on accounts held by intermediaries to the status of a property right in the relevant securities. The Drafting Committee sketched out how claims against custody accounts with securities intermediaries would come to be the key to creating property interests in securities:

The basic rule is very simple. A person acquires a security entitlement when the securities intermediary credits the financial asset to the person's account. . . . Thus, a security entitlement is itself a form of property interest not merely an in personam claim against the intermediary. The concept of a security entitlement does, however, include a package of in personam rights against the intermediary.

Securities intermediaries, through their book entries, control all transfers of ownership in respect of securities within the depository system, and such transfers receive the same protected status as bona fide purchases have traditionally received pursuant to the law of negotiable instruments. Amended Article 8 created a revised system of book-entry transfers in a wholly new Part 5 of that Article, primarily through the coining of four, custom made concepts.

The first concept is "securities intermediary," the entity that is authorized to create these new property interests, and includes either an SEC authorized "clearing corporation" or any person that is in the business of maintaining securities accounts for

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117 UCC, Article 8 Prefatory Note, at Sec. I.B. "The Uncertificated Securities System Envisioned by the 1978 Amendments."

118 Id.

119 See the discussion in Part III.A, below.

120 UCC, Article 8 Prefatory Note, at Sec. II.C. "Indirect Holding System."

121 UCC, Article 8 Prefatory Note, at Sec. I.D. "Need for Different Legal Rules for the Direct and Indirect Holding Systems"; GUTTMAN, supra note 15, § 1:13, 1-51 et seq.; § 1:14, 1-58 et seq.
The "securities account" referred to in this definition is the second concept, and is an account to which a financial asset may be credited under an account agreement giving the accountholder the right to dispose over the financial assets in the account.\textsuperscript{122} The term "financial assets" used in this second definition is the third concept, and specifies a very broad category of items, including all forms of securities, and ultimately "any property" held in a securities account if the securities intermediary expressly agrees to treat it as a financial asset.\textsuperscript{123} The claim that an accountholder has against the securities intermediary to the financial assets in his securities account is the fourth term, the "security entitlement" referred to in the quotation above, and is a "is a pro rata property interest" in all interests in a specific financial asset that a securities intermediary holds in its accounts.\textsuperscript{124} Thus, rather than saying that a selling customer transfers to the buyer her claim against her broker for 10 shares of ABC stock in her brokerage account, the conceptual framework of revised Article 8 would have us say that the securities intermediary extinguishes the seller's security entitlement to financial assets (10 shares of ABC stock) in her securities account and establishes a new security entitlement with like content in favor of the buyer. The Drafting Committee explains that this "transaction . . . is not a ‘transfer’ of the same entitlement from one person to another."\textsuperscript{125}

The concept of a "security entitlement" allows transactions to take place at all levels of the indirect holding system: under Article 8 a clearing participant would have security entitlements for the contents of its account with DTC, a broker using the participant as a depository would have security entitlements for the contents of its account, and a retail investor would have security entitlements for the contents of her account with the broker. The "security entitlement" construct is a fascinating exercise in legislative fiat because it has almost exclusively the characteristics of an in personem contract right, but by express legislative dictate is given the status of a property right.\textsuperscript{126} An "entitlement holder" may take action against a third party who has unjustly received the holder's security entitlement only if:

1. the securities intermediary holding the account has entered insolvency proceedings;
2. it doesn't have sufficient interests in the relevant asset to satisfy all its outstanding security entitlements
3. because it violated a duty under § 8-504 UCC to maintain such amounts;

\textsuperscript{122} UCC § 8-102(a)(14) (2005).
\textsuperscript{123} UCC § 8-501(a) (2005); GUTTMAN, supra note 15, § 1:15, § 9:7.
\textsuperscript{124} UCC § 8-102(a)(9) and Off. Comm. (2005).
\textsuperscript{125} UCC § 8-503(b) and Off. Comm. (2005); UCC, Article 8 Prefatory Note, Sec. II.C. "Indirect Holding System."
\textsuperscript{127} UCC § 8-503(b) (2005) ("An entitlement holder's property interest with respect to a particular financial asset under subsection (a) is a pro rata property interest in all interests in that financial asset held by the securities intermediary . . .").
4. the transferee of the security entitlement did not give value for or obtain control of the entitlement, or acted in collusion with the securities intermediary; and

5. the trustee or liquidator fails to take action to recover the asset.\textsuperscript{128}

This right, which is exercisable only against the intermediary except in the extremely unlikely event of the above conditions being met, has been designated as a “property” right because a prime interest of securities settlement is to insure that the beneficial owner can recover deposited securities in the event that the intermediary becomes insolvent,\textsuperscript{129} and a property interest is the surest route to that end, as the property will not be part of the bankruptcy assets. It says much about the pragmatic flexibility of the United States, which, while other countries hesitated to amend their law and carefully evaluated whether this type of relationship may really be classified under the category “property”,\textsuperscript{130} the UCC simply created the property right by legislative fiat without any real concern for doctrinal consistency. This haste has speed also left the United States with a commercial law quickly built in part around a system designed to deal with paper certificates – which have all but disappeared from sophisticated capital markets.

2. “Transfers” of claims within the DTCC System

Part 5 of Article 8, UCC, was written for the DTC - NSCC system, and is best explained in that context. Once shares of stock have been deposited with DTC – probably in the form of one or two global certificates for an entire issue – or entered in the direct registration system\textsuperscript{131} and registered in the name of Cede & Co., exchange trading will bring about “transfers” of security entitlements, not shares. Although § 8-504 UCC requires intermediaries to maintain sufficient interests in financial assets to cover all of their outstanding security entitlements,\textsuperscript{132} entitlements themselves are created by either a book entry or a legal duty to make a book entry, even when sufficient numbers of entitlements against a higher level account or of securities do not exist.\textsuperscript{133} As discussed above, this can lead to having “securities” in circulation on the market that were never validly issued by the listed company; such “securities” would exist only as the imaginary underlying of claims against an account with an intermediary.

\textsuperscript{128} UCC § 8-503(d), (e) (2005).
\textsuperscript{130} See e.g. DOROTHEE EINSELE, WERTPAPIERRECHT ALS SCHULDRECHT: FUNKTIONSVERLUST VON EFFEKTENURKUNDEN IM INTERNATIONALEN RECHTSVERKEHR (1995), a 500 page study of the nature of property rights in the custody account framework under German law.
\textsuperscript{131} See Part III.B, below.
\textsuperscript{132} UCC § 8-504(a) (2005). The peculiar nature of this duty in a statute on securities transfers evidences the pressure the Drafting Committee was under to bend law to the needs of a particular model of settlement.
\textsuperscript{133} UCC § 8-501(c) (2005).
The UCC’s term for an instruction to an intermediary to extinguish or procure a security entitlement is “entitlement order”. If, for example, an investor were to instruct his broker to sell “securities” in his account, the broker after placing the corresponding market or limit order would debit the customer’s securities account so as to extinguish specific security entitlements and credit his cash account. Similarly to an indorsement, an entitlement order must be given by an appropriate person or such person’s legal representative. Entitlement orders are usually given electronically or by phone, but can also be given in writing. As with an indorsement, the intermediary has a right to reasonably assure itself that the entitlement order is genuine and authorized. A system of automatic “medallion” guarantees has been created to facilitate and accelerate this process of guaranteeing the signature on an entitlement order. For electronic orders, market participants use digital signatures or specific identification protocols.

As said, the principal task of the 1994 amendments of Article 8 was to replicate the various protections of the law of (certificated) negotiable instruments for “transfers” of entitlements to financial assets held in securities accounts. Under amended Article 8, for the recipient of a security entitlement to be protected against an adverse claim to the entitlement, he must acquire it for value and without notice of the adverse claim. In order to protect transaction flow, Article 8 raises the bar for finding an intermediary liable if it makes book entries despite receiving notice of an adverse claim: a securities intermediary that acts on an effective entitlement order is not liable to a person with an adverse claim unless the intermediary acts contrary to an injunction or restraining order, or in collusion with the wrongdoer. In this way a court, not an intermediary immersed in the bustle of market trading, will have to evaluate the validity of an alleged adverse claim. Intermediaries can protect themselves against taking action on ineffective entitlement orders by requiring signature guarantees for entitlement orders.

Seen from the perspective of the securities exchange where a trade is executed and moving into the settlement system and down the pyramid of custody accounts towards the retail investor, the settlement process within the DTCC system is governed by the rules of NSCC and DTC – which do not conflict with Article 8, but would take

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134 UCC §§ 8-102(a)(8) and 8-507 (2005); see also GUITMAN, supra note 15, at § 9:11, p. 9:21 et seq.
135 See UCC §§ 8-507(a) and 8-107(a)(3) (2005).
136 See GUITMAN, supra note 15, at § 8:11.
137 UCC § 8-507(a) (2005).
138 See GUITMAN, supra note 15, at § 9:11.
139 See GUITMAN, supra note 15, at §§ 8:13.
141 UCC § 8-115 (2005). See also GUITMAN, supra note 15, at § 6:12, p. 6:39 et seq., § 7:15, 7-62 et seq. Of course when an intermediary trades on its own account, the rule on notice of an adverse claim applicable to ordinary purchasers will apply.
precedence over it if they did\textsuperscript{142}—and then by contractual agreements and Article 8. First, the relevant trading system delivers matched trade data to NSCC.\textsuperscript{143} Although NSCC can settle various types of trades at different speeds, such as arranging direct delivery and payment for manually processed block trades or trades in foreign securities (referred to as a “special trade”),\textsuperscript{144} normal exchange transactions would be settled as part of NSCC’s “continuous net settlement” (CNS) process.\textsuperscript{145} In this process, NSCC acts as central counterparty and thus assumes the rights and duties of the parties to each matched transaction,\textsuperscript{146} including ownership of the security entitlements involved.\textsuperscript{147} NSCC’s continuous net settlement nets short and long positions in the same securities against each other multilaterally on a continuous basis, and instructs DTC to credit and debit the remaining net amount to the securities accounts of its participants.\textsuperscript{148} Amounts that remain unsettled during a cycle are continuously carried forward and included in the processing of the next cycle of CNS.\textsuperscript{149} On each settlement day, credits or debits are made to participant accounts only for the fractionally small net quantities actually necessary for the netted transactions settled, and the process continues to unfold during a period that is limited to three days by SEC rule for any given trade (T+3).\textsuperscript{150} Participants grant DTC or another “qualified securities depository” authority to make the credits and debits to their accounts as necessary.\textsuperscript{151} Unless they reflect trading solely between clearing participants, the book entries on DTC accounts would be followed by book entries creating and extinguishing security entitlements on the accounts of the downstream firms that are not clearing participants, working their way down the chain of intermediaries until they reach the account a private investor holds with her broker. During the entire process, the transfer agent would make no changes to the stockholders list and the issuer would be completely unaware of changes in ownership unless they triggered a filing with the SEC.

The cash leg of the settlement process follows a similar, but not identical route. The settlement accounts for participants are not held with DTC, but with a bank that they specify to DTC and NSCC as their “settling bank”.\textsuperscript{152} A settling bank must be a bank or

\begin{itemize}
  \item \textsuperscript{142} UCC § 8-111 (2005). DTC expressly removes transactions from the applicability of the New York UCC by specifying that a “settlement account” held by a participant with DTC “is not a “securities account” for purposes of Section 8-501 of the NYUCC.” DTC Rules, Rule 1.
  \item \textsuperscript{143} NSCC Rules, Rule 7; Procedure II.
  \item \textsuperscript{144} See NSCC Rules, Rules 1, 11, Sec. 9.
  \item \textsuperscript{145} See NSCC Rules, Rules 5, 11; Procedures V und VII.
  \item \textsuperscript{146} NSCC Rules, Rule 11, Sec. 1.
  \item \textsuperscript{147} NSCC Rules, Rule 11, Sec. 2.
  \item \textsuperscript{148} NSCC Rules, Rule 11, Procedure VII.
  \item \textsuperscript{149} NSCC Rules, Rule 11, Sec. 1(a), Procedure VII.
  \item \textsuperscript{150} NSCC Rules, Rule 11, Sec. 3. Trades on national securities exchanges must settle by the third day following the trade (referred to as T+3). 17 CFR § 240.15c6-1(a).
  \item \textsuperscript{151} NSCC Rules, Rules 1, 11, Sec. 3; DTC Rules, Rule 9(B).
  \item \textsuperscript{152} See NSCC Rules, Rule 55; DTC Rules, Rules 9(B).
\end{itemize}
trust company subject to federal or state supervision or regulation, sign a Settling Bank Agreement, and be connected to the National Settlement Service (NSS) of the Federal Reserve System, through which the short and long positions of participants arising out of the CNS process are debited and credited. Because cash, unlike securities, is fungible between all transactions regardless of the security bought or sold, NSCC can net the net credits and debits due to or from various accounts held with a given settling bank in order to create a "net-net position" that will be credited to or debited from the bank. In contrast to the credits and debits of securities, the system rules give banks the option of initiating their own transfers to cover net-net short positions, or granting DTC and NSCC authority to pull funds from their clearing accounts to cover net-net short positions.

From this we can see that the activity of the CCP could exist separately from the depository. It is the depository system that required creation of a new kind of right, a "security entitlement" that looks like a contractual claim against a financial intermediary but is treated as property so that it enjoys the negotiability of a security. If uncertificated securities were to be traded on the register in which they originate, the longstanding principles of commercial law would not need to be changed. Although such changes have been made in the United States, they have not yet been made in a number of other leading jurisdictions. Nevertheless, as will be discussed in section C of this Part, the international influence of the United States has meant that conventions have been drafted following the US model, which will mean that soon smaller countries will begin to change their commercial law in adaptation to this outdated structure. The extensive adaption of commercial law principles to depository accounts was made on the assumption that such accounts were the best way to trade securities on a high volume market. However, in a market with dematerialized securities, we have seen that the depository model should be discarded. A further reason for progressing beyond the "indirect holding system" is the severe damage it inflicts on shareholder communications, which is discussed in the next section.

153 DTC Rules, Rules 9(B), 9(D). Before 2007, debits ran on NSS and credits on Fedwire. A concentration of payments made on Fedwire at the close of each business day from various payment and settlement systems caused congestion, and thus all settlement cash traffic was shifted to NSS. See Self-Regulatory Organizations; The Depository Trust Company; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change Relating to Use of the National Settlement Service, Exchange Act Release No. 34-56126, 72 Fed. Reg. 42160 (Aug. 1, 2007).

154 DTC Rules, Rule 9(D).

155 DTC Rules, Rules 9(B), 9(D); NSCC Rules, Rules 12, 55.

156 See NSCC Rules, Rule 12, Sec. 1 ("The Corporation shall debit or credit ... Settling Members ... with the amounts payable and receivable").
B. Adapting shareholder rights to the depository-based system

1. A serious conflict with corporate law

Stock corporations exist and their internal affairs are operated pursuant to state law. Under state corporation law, a shareholder is defined as someone who is registered on the stockholders list, not a person who has title to shares. The same principle holds true for state commercial law, where the UCC gives an issuer the right to deal solely with the registered shareholder in respect to rights arising out of a share of stock. As explained in Part I, Congress ordered that shares traded on exchanges be immobilized, which obviates both physical delivery of certificates and registration of transfer because the shares usually remain registered in the name of a depository or its nominee. This process creates a discrepancy between ownership of the share itself (economic or beneficial ownership) and the legal status as shareholder (registered stockholder). The more of a market’s securities that are registered in the name of a central depository, the greater the number of transactions that can be carried out on its books. The ultimate goal in this model is for all issuers and shareholders to cede control over their shares and their registration data to a single entity, which would then conduct all of the market’s transactions on its books, just as if all securities in circulation on the market had been dematerialized. Today, in fact, as mentioned above, it is likely that a listed company will have only one registered shareholder, appropriately named “Cede & Company” (actually, “Cede” stands for “certificate depository,” not “cede your company to us”). The rules of DTCC require that Cede be registered as holder for all deposited securities.

Although this drastically reduces paperwork and makes it possible for DTCC to settle enormous numbers of transactions with great efficiency, it also effectively eliminates the stockholders list, which is supposed to play an important role under corporate law in

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159 UCC §8-207(a) (2005). It should be noted, however, that this rule does not place formal registration above a reasonable analysis of the circumstances. If a buyer demonstrates to the company that she has purchased the a share from the registered owner, this will be sufficient to rebut the presumption in favor of the registered owner. See UCC §8-207(a), Off. Comm. No. 2 (2005).


161 DTC Rules, Rule 6.

communication with and between shareholders. The names, addresses and holding positions of shareholders are supposed to be used to send shareholders invitations to annual meetings and determine who may vote and receive dividends. They should also be available to shareholders to enable them to contact their fellow shareholders directly. Because under § 14(d) Exchange Act the SEC is charged with regulating the proxy process, the imposition of immobilization also challenged it to find ways that issuers could communicate with shareholders despite the fact that stockholder lists no longer provided the requisite information. The result was a web of complex rules weaving proxy communication and voting through the chain of brokers, banks and depositories comprising the “indirect holding system,” a system so inefficient that it spawned its own industry – proxy service companies – which feed off the difficulties issuers and shareholders experience under the SEC regime.

2. Distributing proxies to the clients of intermediary shareholders

All concerned parties knew that immobilization would seriously disrupt shareholder communications. Indeed, before Congress adopted the 1975 Securities Acts Amendments, the SEC had drafted a rule that would have required intermediaries to disclose shareholder information to issuers. Following approval of the Act, the SEC then discussed broadening the applicability of the disclosure rules adopted under § 13(d) Exchange Act in order to provide information regarding shareholders other than those with large holdings who intended to influence management. Neither of these paths was ultimately followed. Rather, beginning in 1974, the SEC began to build on the common law principles expressed in such cases as Walsh and Levine v. Peoria and Eastern Railway Company, which required issuers, when sending out proxy materials, to inquire beyond the wall of intermediaries they found in the stockholders list and request that those intermediaries forward the documents along to their clients.

The first rule that was adopted, Rule 14a3-(d) (now Rule 14a-13), requires issuers whose stockholders list contains the name of a clearing agency to ask the latter for a list of the agency participant entities that hold the issuer’s shares. The issuer must then ask the entities named by the clearing agency, together with any intermediaries directly entered in the shareholders register, whether they hold stock for clients, and if so, to

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166 SEC, Final Report of SEC on the Practice of Recording the Ownership of Securities in the Records of the Issuers in Other Than the Name of the Beneficial Owner of Such Securities 6, 52 (1976)
169 17 CFR § 240.14a-13, Note 1.
specify the number of proxy material packages required for such clients.\textsuperscript{170} The issuer must then provide the specified quantity of materials to the intermediaries or their agents and reimburse them for the distribution.\textsuperscript{171} This issuer duty originally piggybacked on existing duties of exchange members to provide information regarding required quantities of proxy materials and to forward such materials to their clients, but left a gap where no such duty existed, such as for issues traded on the OTC markets.\textsuperscript{172} After about three years, the Commission filled this gap by adopting Rule 14b-1,\textsuperscript{173} This rule requires brokers to inform issuers of the number of proxy material packages necessary for their clients and – upon receiving assurance of reimbursement – to forward the packages to such clients.\textsuperscript{174}

Another, perhaps more well known provision of this rule appears to create the disclosure that would enable direct communications, but really does not. In 1983 the SEC amended Rules 14a-13 and 14b-1 to give issuers a right to ask brokers to provide them with a list of those client-shareholders who did not objected to their identities being disclosed to the issuer ("Non-Objecting Beneficial Owners," or "NOBOS").\textsuperscript{175} This would seem to have solved much of the communications problem except for the significant catch that the NOBO list may be used solely for the limited purpose of sending the annual report or "voluntary" communications,\textsuperscript{176} but not the proxy materials, which still must be distributed indirectly through the intermediaries, although nothing but cost would prevent an issuer from sending an identical second copy of proxy materials directly to the names on the list.\textsuperscript{177} The late Professor Louis Loss and Dean Joel Seligman rightly criticize this limitation as a missed opportunity to support direct communications.\textsuperscript{178} Perhaps what holds the SEC back from allowing direct dispatch of proxy cards is that the recipients (beneficial shareholders) would in any case not be shareholders under corporate law, and thus could not cast votes without receiving a proxy from the registered shareholder – the intermediary.\textsuperscript{179} The same difficulty

\textsuperscript{170} 17 CFR § 240.14a-13(a)(1).
\textsuperscript{171} 17 CFR § 240.14a-13(a)(4)-(5).
\textsuperscript{172} THOMAS & DIXON, supra note 165, at §8.02(B), footnote 78.
\textsuperscript{174} 17 CFR § 240.14b-1(b).
\textsuperscript{176} 17 CFR § 240.14a-13(c).
\textsuperscript{177} See GUTTMAN, supra note 15, at § 2:2.
\textsuperscript{178} LOSS & SELIGMAN, supra note 72, at §6-C-6.
\textsuperscript{179} Some might object to the weight that is here placed on registered shareholders by pointing to § 7.23 Revised Model Business Corporation Act, which allows corporations to "establish a procedure by which the beneficial owner of shares that are registered in the name of a nominee is recognized by the corporation as the shareholder." However, the only way that
reappears in the 2007 Rule on the Internet Availability of Proxy Materials,\(^{180}\) pursuant to which the proxy materials themselves may be posted on a website, but a Notice of Internet Availability of Proxy Materials must be sent indirectly through the record holding intermediaries.\(^{181}\) As long as state corporation law provides for registered shares, and shares are registered in the name of an intermediary, communication will remain disrupted and at best indirect.

Another problem with the distribution of proxy materials pursuant to Rule 14b-1 is of course that not only brokers, but also banks, hold shares in custody for clients. Because the SEC does not have primary jurisdiction over banks, they were not covered by Rule 14b-1. To fill this gap in the communications chain, Congress enacted the Shareholder Communications Act of 1985, which gave the SEC authority to adopt a rule like 14b-1 that would apply to banks.\(^{182}\) As a consequence, the Commission in 1986 adopted Rule 14b-2, which is closely modeled on the twin rule for brokers, with a single exception.\(^{183}\) Rule 14b-2 not only requires information on numbers of necessary packages, the forwarding of such packages, and the generation and delivery of NOBO lists, but it also requires banks to reveal any respondent banks for which they hold shares and imposes similar duties on such respondent banks.\(^{184}\) This allows issuers to follow the chain of intermediaries from a large international bank that belongs to DTC to the regional banks with which the beneficial shareholder has her direct account relationship. Oddly, a like duty was never added to Rule 14b-1 to allow issuers to look for further intermediaries beyond the large clearing brokers.\(^{185}\)

Issuers, brokers and banks can and do unload most of their complex inquiry and dispatch activity under these rules on companies like Automatic Data Processing (ADP) that entered the shareholder communications business in the 1980's to profit from issuers and intermediaries that did not wish to perform this extremely cumbersome process this could be done would be through the registered shareholder. Thus, (1) the nominee would have to prove it was the registered holder and (2) the beneficiary would have to prove that he enjoyed a contractual or property right to benefit from the nominee’s holding. Such provisions do not eliminate the necessity of registration, but actually add to it the necessity of being registered in the account of the intermediary.

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\(^{181}\) 17 CFR §240.14a-16(a)(2); §240.14b-1(d); §240.14b-2(d).


\(^{184}\) 17 CFR § 240.14b-2(b)(1)(i). Another difference that is perhaps still worthy of note is that for trust accounts opened on or before December 28, 1986, clients must give affirmative consent (as opposed to not objecting) in order that their names be disclosed to the issuer. See 17 CFR §240.14b-2(b)(1)(ii)(B)(1).

themselves. ADP spun off its shareholder communication activities to Broadridge Financial Solutions, Inc. on March 30, 2007. It should be stressed that the quick move of the private sector to fill gaps and take up slack created by less than optimal regulation is no argument for the acceptability of this process, which is regularly singled out as overly complex and expensive.

The process of shareholder communications foreseen by the corporation laws of the 50 states is quite clear: First, look in the stockholders list for names and addresses, and second, send the materials to those persons at those addresses. After the proxy rules were bent around the indirect holding system, the process turned into a complex parlor game of pin the proxy on the beneficiary. There are three important rules in this game: First, the issuer plays blindfolded, and cannot know what lies beyond the next wall in the intermediary pyramid before making an inquiry – inquiry always precedes communication. Second, the registered shareholder’s right to cast votes under corporate law is directly contradicted by the beneficial owner’s right to cast votes under the Exchange Act, and probably also under the provisions of custody and brokerage agreements on voting. This last rule means that during an annual meeting a basket of votes and instructions received from various levels of the pyramid will have to be sifted and matched with the actual number of votes that the registered owner (perhaps solely Cede & Co.) may cast. Third, the shareholders’ meeting has a real purpose for corporations and the time span between fixing the shareholders of record entitled to vote and the actual meeting, must be between 10 and 60 days in most jurisdictions. This framework was designed for direct communication from issuer to shareholder and any time remaining after distribution of the materials is meant to allow

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186 For a description of ADP’s activities, see HAROLD S. BLOOMENTHAL & SAMUEL WOLFF, GOING PUBLIC AND THE PUBLIC CORPORATION §18:13 (updated to 2005). In its annual report for 2006, the last year before ADP spun off its proxy services to Broadridge, ADP announced that it: “Served the investor communications needs of approximately 13,000 U.S. publicly traded corporations and 450 mutual funds and annuity companies, on behalf of more than 850 brokerage firms and banks. > Distributed nearly 1.1 billion pieces of investor communications materials. . . . , including proxy ballots covering more than 565 billion shares (and) > Delivered nearly 50 million investor communications via the Internet . . . .” Automatic Data Processing, Focus on Growth: 2006 Summary Annual Report (2007), available at http://www.investquest.com/ia/a/adp/fin/annual/index.htm.


189 See e.g., Del. Code Ann. tit. 8, §222(b) and Model Business Corporation Act §7.05(a).
the shareholder to think over her decision, not to accommodate multiple levels of processing, inquiry, distribution and redistribution.

For illustrative purposes, the following list briefly sets out the steps to be taken in the current inquiry and forwarding process under Rules 14a-13, 14a-16, 14b-1 and 14b-2. 3.

(a) Weaving inquiries, information, and instructions through the depository pyramid

One: The stockholders list may well contain one name, "Cede & Co.", so Rule 14a-13 requires that the issuer contact DTC at least 20 business days prior to the record date of the shareholders' meeting to request a securities position listing specifying the names of its participant firms that hold the issuer's stock for beneficiaries (often referred to as a "Cede breakdown").

Two: DTC must promptly furnish the securities position listing to the requesting issuer and collect a fee designed to recover the reasonable costs of providing the listing.

Three: Still within the timeframe of 20 business days before the record date, ask the banks and brokers on the position listing whether they hold for beneficial owners and if so, the number of copies of the proxy materials necessary for supplying such beneficial owners, as well as whether any banks on the listing hold for respondent a bank.

Four: Banks must within one business day provide the name and addresses of each respondent bank that holds the issuer's securities for beneficial owners. Both banks and brokers must within seven business days provide the number of their customers who need proxy materials and, if requested, a NOBO list for the issuer to distribute the annual report.

Five: Within one business day of receiving the name and address of a respondent bank, the issuer must ask such bank for information as in step Three. Respondent banks must then follow step Four, providing further respondent banks and numbers of beneficial owner customers. Upon receiving information from brokers, banks and respondent banks on the number of proxy materials necessary, the issuer must supply, in a timely manner, each of them with copies of the proxy materials in the quantities and at the

190 17 CFR § 240.14a–13(a)(3)(i) and Note 1.
191 17 CFR § 240.17Ad–8(b).
194 17 CFR § 240.14b–1(b)(1) applies to brokers and 17 CFR § 240.14b–2(b)(1)(ii) applies to banks. See Brown, supra note 188, at 740 et seq.
196 The SEC has defined "timely manner" in this case to mean: "mailed sufficiently in advance of the meeting date to allow five business days for processing by the banks and brokers and an additional time to provide ample time for delivery of the material, consideration of the material by the beneficial owners, return of their voting instructions, and transmittal of the vote from the bank or broker to the tabulator." Securities and Exchange Commission, Timely
place(s) named.\textsuperscript{197} If the issuer intends to make the proxy materials available by internet, it must also provide the brokers and banks with the information necessary to prepare and send out a "Notice of Internet Availability of Proxy Materials" at least 40 calendar days before the shareholders’ meeting.\textsuperscript{198}

Six: Because only registered shareholders are entitled to vote shares, registered holders must execute proxies in favor of the next entity or person in the chain or collect instructions from them for their own vote. Rule 14b-2 expressly requires that banks provide their respondent banks with "omnibus proxies" so that they can exercise the voting rights of the shares in question.\textsuperscript{199} Although Rule 14b-1 does not contain a corresponding provision for brokers, stock exchange rules would normally require a broker to issue a proxy or request voting instructions when forwarding the proxy materials to a customer,\textsuperscript{200} and unless they do so, they would not have been able to exercise "broker votes"\textsuperscript{201} in the absence of receiving an answer from their customers where allowed by exchange rules.\textsuperscript{202} The depository contract with DTC would provide that it issue its participants a proxy covering all shares held in a custody account with DTC at any given time (referred to as an "omnibus proxy").\textsuperscript{203}

Seven: Provided they are paid a fee to cover reasonable costs,\textsuperscript{204} the intermediaries must now distribute the materials within five days of receipt to their beneficial owner customers.\textsuperscript{205}

Eight: the customers of a clearing brokerage may very likely be retail brokers who in turn hold shares for customers. Even though Rule 14b-1 does not require inquiry down the entire chain to the retail customer, contractual duties would likely require further distribution of the proxy materials to the beneficial owner of the stock. In the case of a bank, this step would be required by Rule 14b-2.

\textsuperscript{197} 17 CFR § 240.14a–13(a)(4).

\textsuperscript{198} 17 CFR § 240.14a–16(a).

\textsuperscript{199} See 17 CFR §240.14b-2(b)(2)(i).

\textsuperscript{200} See e.g., NYSE Rules, Rule 451(b)(2).


\textsuperscript{202} See e.g., NYSE Rules, Rule 450; NASD Manual, Sec. 2260, as well as THOMAS & DIXON, supra note 165, at § 8.03(D); Brown, supra note 188, at 704, and Klein, supra note 185, at 162.

\textsuperscript{203} THOMAS & DIXON, supra note 165, at §8.02(A); Brown supra note 188, at 753.

\textsuperscript{204} 17 CFR § 240.14b–1(c)(2)(i) applies to brokers, and 17 CFR § 240.14b–2(c)(2)(i) applies to banks.

\textsuperscript{205} 17 CFR § 240.14b–1(b)(2) applies to brokers, and 17 CFR § 240.14b–2(b)(3) applies to banks.
(b) Votes and voting instructions given by the clients of intermediaries (beneficial shareholders)

Since only shareholders of record can vote, and in our example Cede & Co. is the only shareholder of record, it is necessary for Cede & Co. to give its participants an "omnibus proxy", and that they issue further proxies to their customers or request voting instructions from them. In our example, a retail investor is casting a vote, but in the case of a mutual fund, the fund manager would likely have power to vote under the investment adviser contract, which as there would be a further split between beneficial ownership in the fund and voting discretion in the manager would add another level of complexity to the process. If a broker provides its customer with the proxy materials and a signed proxy or a request for voting instructions within 15 days before the shareholders' meeting, and the customer fails to respond within 10 days before the meeting, current rules still allow a broker itself to vote the shares on all matters that are not "contested", although the NYSE has amended the supplementary instruction letter to customers to deny the possibility of such votes. Former NYSE Rule 252 contained a list of the matters that are contested, which included proxy contests and such actions as mergers, extraordinary transactions, and changes to the capital structure, but not the election of directors or the approval of a shareholder proposal. When voting with free discretion on uncontested matters, usually the election of directors, brokers have in the past tended to support management. Repeated efforts by institutional investors to eliminate "broker votes" have not yet led to a formal rule amendment, but as noted above an instruction letter in the NYSE rules now disavows the possibility of such voting.

The final steps in the indirect communication game are thus as follows:

Nine: Together with the proxy statement and the annual report (if not sent directly through a NOBO list), the beneficial owner will receive a signed proxy card to be filled out or a request for voting instructions. She will then cast her vote and return the completed forms either to the proxy service acting for the broker, her broker, or the company. If the issuer is listed on the NYSE, she may also refrain from responding, which

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206 See e.g., Del. Code Ann. tit. 8, § 213(a) and §219(c).
208 NYSE Rules, Rule 452.
209 NYSE Rules, Rule 452, Supplementary Material, .11.
210 Bethel & Gillan, supra note 201, at 9.
211 Id. at 30.
until recent amendment of the instructions accompanying the NYSE Rules, would have triggered a broker vote in favor of the broker.212

Ten: If the materials are returned to the broker, it must tabulate the voting instructions or gather the proxies and return them to the proxy service acting for the broker, the clearing broker, or the company.

Eleven: Either the proxy service handling the voting process or the clearing broker will tabulate any instructions and forward them together with any completed proxy cards not sent directly to the meeting. All costs for each step of this process, including the fees of a proxy service, are borne by the issuer, and thus indirectly by the shareholders.213

As mentioned above, this process will likely be handled from start to finish by a proxy service of the type that has stepped in since the 1970's to help issuers and intermediaries with this extremely cumbersome process.214 They root out the names of beneficial owners,215 build lines of communication between intermediaries,216 and collect proxy cards and tabulate voting instructions.217 When an annual meeting is approaching, they – rather than the issuer itself – may well set the process in motion.218 Without such services, the process outlined above would certainly not function, and they attest to the benefits of a free market for services. Their existence hardly speaks for the efficiency of the regulation. In fact, the indirect holding system clearly depletes issuer resources, for it has spawned an entire industry that feeds off inefficiencies. Section 17A(e) Exchange Act, by mandating the indirect holding system, did provide a solution that would avoid another crisis like that in 1969 and 1970, but it eliminated the governance function of registered shares, and Rules 14a-13, 14a-16, 14b-1 and 14b-2 are costly, cumbersome and ultimately ineffective tools to bring that function back. The problem and its solution lie with the structure itself, not with indirect communications or the privately run services that have made the structure workable (at the issuers’ expense). It is true that a direct

212 NYSE Rules, Rules 451(b) and 452. Although the rules of the Nasdaq Stock Market do not expressly provide for broker votes, brokers report exercising votes for shareholders of Nasdaq listed companies provided the practice is considered customary under like circumstances by the rules of another major exchange. See Bethel & Gillan, supra note 201, at 7.

213 THOMAS & DIXON, supra note 165, at §8.03(C).

214 For a description of Broadridge’s role in this process, see Kahan & Rock, supra note 188 at 1244 et seq.

215 At least in the past, proxy services could compare information on account movements over a number of years with published information on holding levels, deduce the beneficial owners from the correlation and then sell this information to issuers. See JAMES E. HEARD & HOWARD D. SHEARMAN, CONFLICTS OF INTEREST IN THE PROXY VOTING SYSTEM 84 et seq. (1987).


217 Paul Myners reported in 2004 that approximately 90% of U.S. institutional investors cast their vote through ADP. PAUL MYNERS, REVIEW OF THE IMPEDIMENTS TO VOTING UK SHARES, REPORT TO THE SHAREHOLDER VOTING WORKING GROUP 4 (2004).

218 BLOOMENTHAL & WOLFF, supra note 186, at §18:13.
registration system, which will be discussed in Part III, could potentially change this situation, but its tight encasement within the DTCC operational framework and the interests of the brokerage industry in the current model, will likely prevent it from truly disintermediating the relationship.

4. The costs of communicating through intermediaries

Fees sufficient to support an industry of proxy services are not the only costs of communicating around and through the indirect holding system. The negative effects of such communication are much higher: votes are lost and miscounted, information is distorted, and shares can be loaned in such a way as to cut against the very interests of the primary shareholder. Two relatively recent studies of the field offer significant evidence.

In 2004, Paul Myners prepared a study on the exercise of voting rights in the United Kingdom.\textsuperscript{219} It states that in the 2003 annual meeting of Unilever plc, the high number of intermediaries participating in distributing the information on the meeting and casting shareholder votes led to a significant number of the votes not being recorded, i.e., being lost.\textsuperscript{220} Evidence presented to the Department of Trade and Industry showed that in connection with the Unilever annual meeting records indicated that the 10 largest institutional investors had apparently cast less than 50% of their votes. Unilever contacted these investors and inquired why they chose not to vote, but the investors’ records showed that relevant intermediaries never received the voting instructions of three of the investors.\textsuperscript{221} Myners found that the major problem affecting the exercise of voting rights was the "large number of participants through whom information and votes must pass," which is a result of how the securities custody and settlement system is set up.\textsuperscript{222} As he explains:

There is little transparency in the process. Where a custodian is appointed, the registered or legal owner of the shares (and hence the person recognised by the issuer’s registrar as entitled to vote) is normally the custodian’s nominee company. The registrar may well not be aware of the identity of the beneficial owner nor will it necessarily know who is the person responsible for the voting decision (in many cases the investment manager).\textsuperscript{223}

Myners found that the best way to avoid the problems resulting from opaque layers of intermediaries is for the shares to be specifically designated in the name of the person entitled to vote them.\textsuperscript{224} Specifically designating a part of a global account would do

\begin{itemize}
\item \textsuperscript{219} Myners, supra note 217.
\item \textsuperscript{220} Id. at 6.
\item \textsuperscript{221} Id. at 1.
\item \textsuperscript{222} Id. at 6.
\item \textsuperscript{223} Id. at 6. For a recent discussion of the complexities of the U.S. voting system, see Kahan & Rock, supra note 188, at 1249 et seq.
\item \textsuperscript{224} Myners, supra note 217, at 16.
\end{itemize}
much to reinstitute the direct relationship that is broken by immobilization. As the efficiency of immobilization comes from having the shares in one name, and thereby both avoiding physical delivery of certificates and registration of transfer, however, a specific designation in a larger custody account would thus create some additional costs for transfer services. Myners concluded that at least in the case of the largest 200 Pension Funds, designating the fund or its manager as entitled to exercise voting rights would bring “considerable benefits in terms of voting transparency, audit trail and corporate governance for little incremental cost.”

Another 2004 study, by Oxford Economic Research Associates (Oxera) for DTCC focused on “corporate actions”, which in the jargon of the clearing and settlement industry are all actions that require communication between issuers and shareholders, such as rights issues, tender offers, conversions, mergers, early redemptions and dividend payments. Oxera found that corporate actions involve “a range of intermediaries that operate between the issuer and the final investor. The corporate action chain is highly complex, probably because of the way in which it has been formed over time in response to market and institutional challenges.” We have seen that immobilization was introduced as a kind of *faux* dematerialization of paper certificates on the books of intermediaries. At the time that Oxera performed its study, a number of markets had been completely dematerialized, and this structure was no longer a technological necessity, but the remnants of an historical process. As the previous section also made clear, the result of this structure is that issuers are blindfolded: “most issuers will only have information on the custodian nominees... they cannot observe directly through the register/agent who the ultimate beneficiary investor is.” The result is a process in which each member of the chain only sees its next proximate link and only the proxy service companies have an idea of the entire process from start to finish. An issuer or broker at position 3 cannot know if the information from position 1 was altered by passing through position 2. As Oxera observes, this process gives rise to the following operational risks:

- failure in the processing of a voluntary corporate action (or mandatory corporate action with options), such as the exercise of a conversion right;
- late payment of mandatory corporate actions, such as dividend payments;
- sub-optimal trading decisions by the front office, arising from corporate action information failures, such as an instruction to accept a tender offer being lost or changed; and

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225 Id. at 16.
227 Id. at 8.
228 Id. at 10.
failure to exercise shareholder rights, which may have an impact on the
effectiveness of corporate governance.\textsuperscript{229}

Such errors can enter the intermediary chain from upstream (as information flows from issuer to shareholder) or downstream (as information flows from shareholder to issuer).\textsuperscript{230} As the preceding section made clear, in the case of distributing proxy materials through a chain of banks and respondent banks, the more links in the intermediary chain the shorter the period each link will have to perform its required duties for a corporate action.\textsuperscript{231} Moreover, as we saw with the bifurcated request that must be made to banks under Rule 14a-13, asking (i) the number of materials necessary and (ii) information on respondent banks, the very number and multiplication of types of intermediaries increases the amount of inquiries that must be made and the information that must be passed along. The result of having to process more information within shorter deadlines is of course error.\textsuperscript{232} Also, once an error enters the information flow, it tends to be passed on and multiplied both in the downstream and in the returning upstream information flows. Oxera estimated in 2004 that failures in processing corporate actions could cost the European asset management industry between €90 million and €143 million per year.\textsuperscript{233}

The answer from the side of the intermediaries has of course not been to reduce their presence and create a direct relationship between issuers and shareholders, in spite of the introduction of a direct registration option, as will be discussed in Part III. Rather, they have added a “services” like “information scrubbing” to counteract the negative effects of their presence. In this way, they multiply the costs borne by issuers. Oxera reports in 2004 that intermediaries employ up to 40 persons for the sole purpose of “scrubbing” information to reduce errors and increase accuracy.\textsuperscript{234} The more sources and types of information that are forced through an intermediary, however, the greater the challenge for scrubbing. Imagine if the nodes and switches of the internet spine did not simply direct and deliver the emails sent on a given day, but copied them, passed them through a filter that recorded them, and then placed them in a different format before passing them on to the recipient. This image can begin to give us an idea of the herculean task that DTCC seeks to perform. As DTCC stated in its 2006 annual report, its “corporate action experts provide ‘round-the-clock support, in 16 languages” and in 2006 “provided ‘scrubbed’ information on about 900,000 events from 160 countries.”\textsuperscript{235} The industry generally finds that DTCC performs this task as well as anyone could expect.

\begin{itemize}
  \item Id. at 12.
  \item Id. at 12.
  \item Id. at 14.
  \item Id. at 12.
  \item Id. at 29.
  \item Id. at 11, 13 (“These resources represent an inefficiency in the system”).
  \item DEPOSITORY TRUST & CLEARING CORPORATION, ANNUAL REPORT 2006 31 (2007).
\end{itemize}
The question is, however, whether anyone should be performing it at all, given that direct communication would make it unnecessary.

Although studies like the Myner and Oxera reports have not been prepared with respect to the US market, which is the principal focus of this article, the disruption that the intermediary chain causes for the shareholder voting is well documented in judicial opinions. One of the better known examples is found in the Delaware case of Blasius Industries v. Atlas Corporation. As the Court of Chancery noted in that case, "(t)he multilevel system of beneficial ownership of stock and the interposition of other institutional players between investors and corporations . . . renders the process of corporate voting complex." Blasius involved a raiding 9% shareholder (Blasius) with a bad idea – to heavily leverage the company (Atlas) and use the proceeds to pay shareholders as a special distribution – waged a "proxy fight" against management using consents pursuant to §228 Delaware General Corporation Act. Both sides solicited consents and amended solicitations that answered the solicitation of their opponent, constituting two mailings each to shareholders. Thus, if a shareholder answered all the solicitations, he or she could have sent in four different votes: one on the management consent card, another on the challenger card (which had the effect of revoking the first consent), yet another on the amended management card (thus revoking the second consent), and a final one the amended challenger card (revoking the third consent). The problem arose primarily from the fact that the financial intermediary in whose names the shares were registered did not earmark consents to the customer subaccounts for which the shares of Atlas registered in the institution’s name were held. Thus, because less than 100% of the beneficial owners sent in consent cards on the first round, the election inspectors were unable to ascertain whether the second round of consent cards were fresh votes from beneficial shareholders who did not vote on the first round or new votes that revoked consents given on the first round. The arrival of consent cards in the third and fourth rounds of

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237 Blasius, 564 A.2d at 668.
238 See Del. Code Ann. tit. 8, § 228.
239 Blasius, 564 A.2d at 664.
240 See Blasius, 564 A.2d at 665.
241 Id. Perhaps a simple, numerical example is helpful here. Suppose Broker A holds 2000 shares of Company C for its customers. Because it is the registered shareholder, it signs the proxy or consent cards received from Company C or an opposing shareholder and sends them out to its customers. In the first round, customers of Broker A sign and send in to Company C proxy cards for 1000 shares. In the second round, reacting to the opponents’ recommendations, customers of Broker A then send in to Company C proxy cards for 1000 shares. If the shares cannot be linked to specific customers of Broker A, it is impossible to know whether these 1000 proxy cards (i) are new and in addition to the votes on the first round, (ii) refer to the same shares as in the first round and thus revoke the first proxy cards, or (iii) are in part new and in part revoke the original proxy cards. If, in the third round, Company C receives another 1000 proxy cards, any accurate attribution of the newly received votes is impossible.
the voting process complicated the problem even further. If each beneficial owner was also a registered shareholder, calculating the votes would be a simple and accurate process, but with pools of shares in which unknown persons issued voting instructions, even the most thorough calculation of the vote was riddled with guesswork. The reality of this situation makes the great efforts spent debating active investment and the value of engaged voting for good corporate governance look rather empty, as that their exercise is greatly subject to random occurrences.

The anonymity, complexity and uncertainty created by the indirect holding system is aggravated by share lending and the related practice of short selling. The case of abusive “naked” short sales (i.e., selling shares that one neither owns nor has borrowed), in particular, illustrated a direct conflict between the interests of issuers and shareholders on the one hand, and those of the intermediaries on the other, with respect to the depository system. In 2004, a number of listed companies detected irregular share prices swings that they attributed to manipulative short sales of shares held through layers of intermediaries, and they used the only tool they had at their disposal “to protect their shareholders and their share price from ‘naked’ short selling” and restore confidence to the market – transfer restrictions under state corporation law to be applied unless the beneficial shareholder was registered.242 In adopting a rule to prohibit such issuer self-help, the SEC swept aside their apprehension of damage to investor confidence and patiently reiterated the doctrine of beneficent intermediaries:

The use of securities depositories in order to minimize the physical movement in connection with the settlement for securities traded in the public market is essential to the prompt and accurate clearance and settlement of securities transactions. The effort by some issuers to restrict ownership of publicly traded securities by securities intermediaries can result in many of the inefficiencies and risks Congress sought to avoid when promulgating Section 17A of the Exchange Act. Restrictions on intermediary ownership deny investors the ability to use a securities intermediary to hold their securities and to efficiently and safely clear and settle their securities transactions by bookentry movements.243

Of course, after the demise of Bear Stearns and Lehman Brothers, the latter triggering the worst financial crisis in a century, the SEC began to think differently about

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242 Final Rule: Issuer Restrictions or Prohibitions on Ownership by Securities Intermediaries, Release No. 34–50758, 69 Fed. Reg. 70852, 70855 (Dec. 7, 2004). It may offer some perspective to note that a similar remedy is available under UK law, and was specifically retained in 2006 when the UK overhauled its corporate law. See UK Companies Act 2006, secs. 793 et seq.

243 SEC Release No. 34–50758, supra note 142, at 70852. The logic that finds measures designed to protect investors actually rob them of freedom is somewhat reminiscent of a US Supreme Court that found preventing a baker from working more than 80 hours per week robbed him of his freedom of contract. See Lochner v New York, 198 U.S. 45 (1905).
measures restricting “naked” short sales. Mirroring the concerns of the issuers whose efforts the SEC blocked in 2004, it explained that naked short selling can cause “unexplained declines in the prices of equity securities … deterioration in investor confidence in our financial markets … giv(ing) rise to questions about the underlying financial condition of an entity, which in turn can create a crisis of confidence even without a fundamental underlying basis.” 244 At the time, however, the legitimate concerns of issuers about the dangers of the indirect holding system were essentially ignored in light of a strong belief in the depository model. The reasons for such seeming unawareness will be discussed in Part III of this article.

5. The SEC’s neo-bearer share model is no solution

Given the costs of communicating through the intermediary chain in terms of time, errors and fees, it is not surprising that the SEC has tried to address the problem. It is also not surprising that issuer interest groups such as The Business Roundtable have requested rulemaking to address the high costs to issuers.245 However, for reasons that will be explained in Part III, the SEC has not moved toward changing the infrastructure to reintroduce direct issuer-shareholder relationships, but rather attempted to bend corporate law still further around the DTCC system. Since immobilization in effect erases the “registered” aspect of shares by registering all shares in the name of a single fiduciary, it is well complemented by the type of system of anonymous communications used in countries in which shareholders have traditionally been unknown to the companies in which they invest. In Continental Europe, bearer shares are historically common, even if during the last decade of the 20th Century, registered shares became much more popular. The very name of a stock corporation in French – Société Anonyme – highlights the anonymous position of the corporate owners. Just as when the capital of a company is held by an intermediary, an issuer of bearer shares has no record of its shareholders. Because the issuer cannot convene an annual meeting by sending invitations directly to shareholders, it provides notice of the meeting through a publicly accessible medium, which was traditionally a business newspaper or a type of “federal gazette”, and is now more often a website or an electronic forum designed for shareholder communications.246 This type of communication would have been much more efficient than randomly asking custodian banks to send invitations to their clients.

245 See The Business Roundtable, supra note 188.
246 In Germany, where stock corporations traditionally issue bearer shares, § 124(1) of the German Stock Corporation Act requires the call to annual meeting to be published in designated business newspapers, and pursuant to § 25 of this Act, the requirement is satisfied by posting the notice on the electronic version of the Official Gazette, which is a designated, internet bulletin board at https://www.ebundesanzeiger.de/research/banzservlet. Pursuant to § 127a of this same Act, a “shareholders’ forum” (Aktionärsforum) has now been created on the same website for shareholders to post proposals and coordinate strategy online before the annual meeting. It should be noted that § 125(2) of the Act requires the
The SEC moved in this direction in 2007 by introducing a type of proxy communication that allows proxy materials to be posted on a website for general and anonymous access.\textsuperscript{247} The legal transplant of a technique designed for bearer shares into a body of corporate law based on registered shares of course ran the risk of problems. To address these, Rule 14a-16 requires that a "Notice of Internet Availability of Proxy Materials" be sent to beneficial owners through the intermediary chain using the same multistep process discussed above in connection with paper materials.\textsuperscript{248} As the beneficial owners are not shareholders for purposes of corporate law, the intermediary record holders must still provide their customer beneficial owners with proxies or request voting instructions from them.\textsuperscript{249} Further, even after a beneficial owner has received notice that the materials are available on the internet and that he has a right to obtain hard copies of the materials, he may not obtain such copies from the issuer, but only from the intermediary.\textsuperscript{250} Showing just how deep the logic of the indirect holding system dominates communication, the Rule allows respondent banks, whose names are not on the stockholders list but have been provided by other banks pursuant to Rule 14b-2, to request materials directly from the issuer,\textsuperscript{251} but does not grant the same privilege to a beneficial shareholder who has released her name on a NOBO list. She must still communicate with the issuer through her broker or bank. In the same way, not the issuer but the intermediary sends out the Notice of Internet Availability to the beneficial owners.\textsuperscript{252} The issuer and its shareholders may come into immediate contact only through the chaste text of the proxy statement.

In order to make the posting of materials more efficient, the next logical step would be to change over to bearer shares, so the corporate law rights designed with a system of registered shares would no longer collide with the existence of the indirect holding system. That would indeed be difficult. Today, all states provide only for registered shares (as opposed to bearer shares)\textsuperscript{253} and allow the company to treat the registered shareholder as the person entitled to exercise the rights from the shares. Yet it appears that the indirect holding system has become so deeply entrenched that our regulators
corporation to notify registered shareholders (i.e., owners of registered shares entered in the shareholders’ register) directly.

\textsuperscript{247} Internet Publication Rule, supra note 180, at codified at 17 CFR §240.14a-16.
\textsuperscript{248} 17 CFR §240.14a-16(a).
\textsuperscript{249} See 17 CFR §240.14b-1(d)(2); § 240.14b-2(b)(2), (d)(2).
\textsuperscript{250} 17 CFR §240.14a-16(j); §240.14b-1(d)(4); §240.14b-2(d)(4).
\textsuperscript{251} 17 CFR §240.14a-16(d) (‘The registrant must send . . . to the record holder or respondent bank . . . a paper copy of the proxy statement, information statement, annual report . . .’).
\textsuperscript{252} See 17 CFR §240.14a-16(a)(2).
\textsuperscript{253} A search in the library ‘All States’ on WestLaw for the words ‘bearer share’ pulls up only cases referring to foreign companies (usually South or Central American) in U.S. Courts. Also, an examination of the corporate law statutes of the states of Delaware, New York, California, Illinois and Texas, as well as the Model Business Corporation Act confirms that only registered shares are foreseen.
are more willing to suggest changing all types of law and behavior that conflict with it, rather than simply removing this black box impediment from the center of our economy. How is it, that regulators approved an infrastructural form that generates so many negative externalities and continue to accept it, even though its very raison d’être – paper certificates – are rarely used? Part III will offer various explanations for this regulatory failure. The next section will briefly explain how the United States has offered its depository-based system to the world.

C. Imbedding the depository-based system in international law

Given the US position as the world’s major exporter of law at the turn of the 21st Century, particularly in the area of securities regulation, it is unsurprising that the changes discussed above have also been carried out at the level of international conventions, which will in turn affect the laws of countries that look to the United States for guidance. Although after 2000 no doubt existed that paper was disappearing and digital communication was the future medium of the capital markets, two high level conventions were written on the basis of the intermediated, depository-based structure of securities settlement. Both of these conventions track the relevant provisions of Article 8 UCC. Both the 2006 Hague “Convention on the Law Applicable to Certain Rights in Respect of Securities Held with an Intermediary”254 (emphasis added) and the 2009 UNIDROIT “Convention on Substantive Rules for Intermediated Securities”255 (emphasis added) show beyond all doubt that international law is being shaped to accommodate the intermediated model. They cement an intermediated structure in place at a time when immobilization is no longer necessary because there is an ever decreasing amount of paper to immobilize.

The Hague Convention tracks § 110 of Article 8, UCC. The Convention’s preamble announces that signatories recognize “that the ‘Place of the Relevant Intermediary Approach’ (or PRIMA) as determined by account agreements with intermediaries provides the necessary legal certainty and predictability”256 needed in a global financial market. The Convention replaces the traditional rule applicable to paper securities, whereby the transfer is governed by the situs of the security transferred.257 Essentially, if the law applicable to securities transfers is not specified in the account agreement with the intermediary,258 the fallback position is that the law will be that of the particular office dealt with or the jurisdiction where the intermediary is

256 Hague Convention, Preamble, 4th item.
258 Hague Convention, Art. 4(1).
259 Hague Convention, Art. 5(1).
incorporated or (for multi-jurisdiction countries) has its principal place of business. Thus the validity of and rights and duties associated with a security will be determined by the law of the issuer’s place of incorporation, but the rights against third parties in respect of the securities may well be determined by the intermediary’s place of incorporation. With the Convention in place, shareholders are encouraged to seek out an intermediary and place their holdings into an account in order to increase legal certainty. For uncertificated securities, adding a second account to that in which the security was originally created does not increase certainty.

As Martin explains, while the situs of a security certificate passing between vaults in various countries and owned by an investor through an account in another country is quite vague, that of a dematerialized security is certain: it is the register or account (usually held by or for the issuer) in which the security is originated, as all rights embodied in a security can be enforced only against the issuer. By contrast, any entries in the accounts of an intermediary have the sole purpose of documenting the bookkeeping for the intermediary, and give the holder no rights whatsoever against the issuer. Martin therefore argues that “the intermediary does nothing more than keep its own books with respect to securities that exist in the issuer’s register,” and as in a global financial system “these book-entries are not a mere intellectual play of bookings to displace the securities: it is advisable to restrict entries to the primary account in which the securities originate.” From this, Martin finds the PRIMA approach used in the Convention to contain significant risks. If in spite of a dematerialized security having a clear and unambiguous situs in the originating account, the parties can freely choose the law applicable to transfers of such security or, in the absence of such choice, the law of the “relevant intermediary” applies, then various and conflicting laws will govern the transfer of securities whose situs is clear and unchanging in the originating register: a very undesirable state of affairs. Indeed, rather than focusing on the intermediary, if the applicable law were determined on the basis of the originating account/register, then the validity of the issue of the securities, which is determined by the corporate law of the issuer, and the rules governing the securities’ transfer would be governed by the same national, which is not currently the case, and would minimize potential conflicts and inconsistencies.

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260 Hague Convention, Art. 5(2), (3).
261 Martin, supra note 101, at 69.
262 Id. S. 70.
263 “L’intermédiaire ne fait que «comptabiliser» les valeurs mobilières «inscrites chez émetteur»” See id. at 69 (author’s translation).
264 “(L’a scripturalisation n’est pas un jeu d’écritures ouvert à toutes les fantasies de délocalisation des valeurs mobilières: elle vaut, aussi avis de leur domiciliation dans les comptes primaires où elles éclosent!” See id. at 70. (author’s translation).
265 See id. at 69.
266 See, e.g., UCC 8-§ 110 (2005) which greatly influenced the substance of the Hague Convention.
Although the 2009 UNIDROIT Convention does not exclude the possibility of direct transfers of uncertificated securities, it certainly encourages multiplication of accounts, thereby multiplying risk. In its, Preamble, the Convention’s policy is made quite clear: “recognising the benefits of holding securities, or interests in securities, through intermediaries ... (and) desiring to establish a common legal framework for the holding and disposition of intermediated securities ... (as well as) mindful of the importance of the role of intermediaries in the application of this Convention,” the signatories agree.\footnote{UNIDROIT Convention, Preamble.}

The Convention then goes on to largely track Article 8, UCC in bending commercial law around the indirect holding system in order to guarantee negotiability for claims to securities accounts. As in the UCC, intermediaries will have the right to create securities through mere bookings,\footnote{UNIDROIT Convention, Arts. 9(1), 11(1).} even if securities in that number have never been issued. The Convention goes somewhat farther than the UCC, by expressly stating that the rights created by an intermediary’s crediting an account “may be exercised against the ... the issuer of the securities.”\footnote{UNIDROIT Convention, Art. 9(2)(b).} However, the Convention expressly excludes application to an account with the issuer in which the securities originate.\footnote{UNIDROIT Convention, Art. 6.} Rather, its purpose is to strengthen transfers within the depository-based system: a model that was ingenious in 1873, temporarily acceptable in 1973, but clearly outdated in 2003. Nevertheless, this freshly adopted document will be looked to by developing countries in writing their own law. Bangladesh was the first country to ratify the Convention.\footnote{See \url{http://www.unidroit.org/English/implement/i-2009-intermediatedsecurities.pdf}.}

The law of that country will thus encourage holdings indirectly through intermediaries as the safest, most efficient and most modern form of settlement.

The use of paper certificates is disappearing, but the indirect holding system continues to grow. Thus the system not only generates negative externalities in the area of corporate governance, but is internally flawed when applied to a dematerialized market. In an article from 1996, Roe seems to have had exactly this problem in mind when defining “strong-form path dependence”:

There is another kind of inefficient path, one in which . . . the value of the straight road exceeds the cost of tearing down the buildings we would have to condemn, added to the cost of a new road. However, we do not rebuild. . . . Although I can think of only two path-created features that systematically impede change, they are important ones: information and public choice. The new road builders may be uninfluential in the legislature; the incumbent groups – created because of the path taken – may be more influential and block change. Or, the information justifying the change, and defining what the change should be, may be hard to assess, because we do not know enough about the other path and because just thinking about change clashes with our path-induced perception of ‘normal’ mechanisms. The
status quo therefore persists. . . . If a society cannot think effectively about the alternative path because it lacks the vocabulary, concepts, or even belief that the other path could exist, then that society cannot consciously choose either to return to the branch point of the two paths (and then go down the other path) or to jump to the other path.\textsuperscript{272}

These clear flaws of the current system create costs. The system’s shape derives from a choice made during a crisis at the end of the 1960s and is shaped by the political and technical options available at that time. The system’s endurance results from the two elements Roe points out, influence and information. Part III explains how information and influence have worked to preserve this choice that was once arguably sound, but is no longer. It describes a regulatory failure with high resulting costs and provides the reasons why the US financial system does not “return to the branch” in the path and take the better route.

III. The Interests Behind the System and the Failure of Regulatory Supervision

A. Regulators adopted a second-best model, which was then set in stone

1. A central depository on the way to a “certificateless society”

In the Securities Investor Protection Act of 1970,\textsuperscript{273} the US Congress instructed the SEC to investigate the causes of the back office crisis, and the SEC prepared a very detailed report on broker activity in the 1960s.\textsuperscript{274} In connection with this, on June 29, 1971, the SEC convened a conference of major market participants to discuss and evaluate the existing recommendations and possible solutions for the paperwork crisis.\textsuperscript{275} A number of studies were aired and discussed, and most recommendations went to the rationalization and standardization of the settlement process.\textsuperscript{276} For example, a study commissioned by the NASD recommended that individual long and short positions of brokers in specific classes of securities be set off against each other so that only the net amounts of funds and securities would actually have to be delivered.\textsuperscript{277} Such netting had been, like immobilization, successfully used since the 1870’s by the Vienna Giro and Depository Association,\textsuperscript{278} and is still considered an essential technique for securities settlement.\textsuperscript{279} Another study, commissioned by the American Stock Exchange, recommended standardizing documentation by making buy and sell orders machine

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\textsuperscript{274} See SEC, supra note 36, Chs. II, III & IV.

\textsuperscript{275} See id. at 168.

\textsuperscript{276} See id. at 173 et seq.

\textsuperscript{277} See Id. at 175.

\textsuperscript{278} See HEINSIUS ET AL., supra note 12, § 5 margin no. 1.

\textsuperscript{279} CPSS & IOSCO, supra note 5, Recommendation 4; The Group of Thirty, supra note 6, Recommendation 16. In December 1969 NASD established the “National Clearing Corporation”, which still operates under the name “National Securities Clearing Corporation” as a subsidiary and the clearing entity of The Depository Trust and Clearing Company.
\end{flushleft}
readable.\textsuperscript{280} Such machine readable standardization is still recommended as a best practice by expert committees like the Group of Thirty.\textsuperscript{281} It was also recommended that securities certificates themselves be issued in the form of "punch cards,"\textsuperscript{282} an early precursor of the bar code, which led to the creation of the "CUSIP" number used in the United States as the primary means of identifying separate classes of securities.\textsuperscript{283}

The topic that dominated the 1971 Conference was, however, the choice between two competing models of securities settlement. One model, often referred to as a "Transfer Agent Depository," or TAD,\textsuperscript{284} was conceived as decentralized, following the electronic concept employed in the recently introduced NASDAQ system. It would have linked issuers' transfer agents (private registrars who keep the registers of issued securities and must comply with specific SEC rules)\textsuperscript{285} in a computer network so that transfers of uncertificated (dematerialized) securities could be electronically recorded by book entry.\textsuperscript{286} In this model, the "account" on which transfers took place would also be the "register" in which the securities were originally created by the issuer. Exchange trades would immediately remove the seller and add the buyer to the company's register of shareholders. The other model would have created a centralized depository in which paper share certificates would be kept in custody (immobilized), so that interests in such shares could be transferred by book entries on the depository's accounts. Both models would have eliminated the troublesome physical delivery of shares, but use of the first model would have required issuers themselves to actually "dematerialize" share certificates, whilst use of the second model would allow issuers to keep issuing paper, but use intermediaries to create a kind of feigned dematerialization by locking the material certificates away in their vaults and trading claims to the securities on their accounts.

In the 1970's, the electronic network model faced a number of significant obstacles: it required as a prerequisite that all securities traded on exchanges be dematerialized, it required a linked, secure computer network capable of carrying settlement information between the stock exchanges and the transfer agents at high speeds, and it would have (especially following the creation of the NASDAQ system) weakened America's troubled financial center, New York City, which was at the time approaching a default.

\begin{footnotes}
\item[280] SEC, UNSAFE PRACTICES STUDY, supra note 36, at 176 et seq.
\item[281] See The Group of Thirty, supra note 6, Recommendations 1 and 2.
\item[282] SEC, UNSAFE PRACTICES STUDY, supra note 36, at 183.
\item[283] See id. at 34 et seq., 198. CUSIP numbers are assigned by the Committee on Uniform Security Identification Procedures, for which the acronym stands.
\item[284] See id. at 180; SEC STREET NAME STUDY, supra note 166, at 41 et seq.
\item[285] See 17 CFR § 240.17Ad.
\item[286] See SEC, UNSAFE PRACTICES STUDY, supra note 36, at 191 et seq.; Welles, supra note 42, at 320 et seq.
\end{footnotes}
on its municipal debt. The depository model was advocated by the Banking and Securities Industry Committee (BASIC), which was chaired by Morgan Guaranty Chairman John M. Meyer (one of the creators of Euroclear, a depository-based settlement entity located in Brussels). On behalf of the largest US banks, BASIC argued that the Central Certificate Service, which the NYSE had already set up, was the best way to ensure efficient settlement of transactions. Because the most burdensome aspects of transferring shares are endorsing and delivering the old certificates, registering transfers on the stockholders’ list and issuing new certificates, transfer was dramatically simplified by always keeping the shares in one place and in the same name: preferably that of the central depository’s nominee (later “Cede & Co.”) or at least of one of its participating firms (referred to as “street names”). Pursuant to the logic of this model – as explained at length in Part I – the greater the percentage of a market’s securities held in a single depository and registered in a single name, the greater the number of transactions that could be traded as book-entry transfers on the depository’s accounts. Thus the most efficient exploitation of this model would be to place all outstanding securities of an economy in one depository and in the name of one person, so that transfers on that person’s books would resemble a complete dematerialization of the market.

The 1971 SEC Report explained that most market participants backed the model using an electronic network to transfer dematerialized securities, but were concerned that it could not be implemented quickly and safely, given the state of the law and of technology in 1971. Also, a Rand Corporation Study called eliminating stock certificates a “utopian solution”, arguing that shareholders have a psychological

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289 SEC, Unsafe Practices Study, supra note 36, at 184 et seq.
290 See Loss & Seligman, supra note 72, at §6-C-6.
292 When considering BASIC’s 1971 argument to make NYSE’s Central Certificate Service the core of the U.S. clearing and settlement infrastructure, the SEC explained that in the case of a centralized system based on the immobilization of certificates, “for maximum effectiveness, the depositories would have to encompass close to the maximum number of transactions effected in the marketplace in which it is designed to serve.” See id.. In 1980, the SEC repeated this opinion as a criterion for registering clearing agencies. Regulation of Clearing Agencies, SEC Release No. 16900 (June 17, 1980), published in 20 SEC Docket 434 (July 1, 1980) (“The clearing agencies registered with the Commission are essential to Congressional policy which includes a national clearance and settlement system for securities and the encouragement of broad scale participant (sic.) therein by securities professionals so as to reduce the physical movement of securities certificates. Such broad scale participation will result in the concentration of securities in a limited number of entities”).
294 Id. at 194.
aversion to giving up paper. As the NYSE's Central Certificate Service was already in operation, and was based on nothing more high tech than a bank's vault and a banker's fiduciary duties, it was eventually adopted, but as a "temporary" measure on the way to what was then called the "certificateless society". As the SEC Report summarized its findings:

The many points of difficulty in the delivery and transfer process manifestly call for attack on various fronts: the expansion of facilities, the removal of artificial stumbling blocks; the modernization of those processes through the improvement of clearance procedures, the immobilization of the certificate through the advancement of the development of depositories, such as the NYSE Central Certificate Service, the development of machine readable certificates, and, hopefully, the ultimate achievement of a certificateless society.

Given the damage caused by the "paper crunch" and the state of technology, it is not surprising that the depository-based model was initially adopted, especially considering its promotion by the country's leading banks following Morgan Guaranty's experience in creating Euroclear. However, this model was not adopted in a temporary way, subject to "hopefully, the ultimate achievement of a certificateless society," but was imposed in a very unusual way through statute specifying a method rather than a principle or aim: As amended, § 17A Exchange Act requires the SEC to "use its authority . . . to end the physical movement of securities certificates in connection with the settlement among brokers and dealers of transactions in securities . . . .", i.e., to impose the immobilization of securities certificates in a depository, rather than working towards eliminating such certificates. Legislating specific technological models is very unusual given the rapid rate of technological change in the securities markets, and providing the expert details for solutions in that area is exactly the role of the SEC. Nevertheless, §17A(e) Exchange Act made certain that the technique of immobilization was in the market to stay. In this way, what was considered an "interim step" on the way to the "certificateless society" became the permanent basis of U.S. securities settlement.

A number of factors, both technical and political, contributed to this decision. It was certainly decisive at the time that a dematerialized market would have required amending the corporate laws of the states in which listed companies were incorporated so that they could issue uncertificated securities, but this does not explain the imposition of immobilization without provision for future review and adjustment.

See id. at 194 et seq.

Of course, the flow within this basic structure could be sped up dramatically – as it indeed has – through sophisticated technology, something like attaching a high-powered electric motor the basic mechanism of a steam locomotive.

See SEC, U NSAFE PRACTICES STUDY, supra note 36, at 186.

Id. at 168, 203 ("... the ultimate objectives of the certificateless society and the standardization of documents used in the clearing, settlement and delivery process").

Probably the largest contributor to the permanent character given to immobilization was the fact that a depository-based system generates its negative effects in corporate governance, an area distant from the financial architecture. As will be discussed below, this division between the benefits and costs of immobilization tracks the organization in the SEC. Other factors might well have contributed to the selection of the 100 year old technique to amass the nation’s securities in a lower Manhattan vault. Like the often criticized measures of the Sarbanes-Oxley Act of 2002, the “policy entrepreneurs” in BASIC and their affiliated think tanks might well have tried to foist second-best solutions on a panicked Congress. If the United States was in panic in 2002, it was certainly in a state approaching traumatic depression in 1975. Since 1973, the U.S. had been struggling with the OPEC induced oil shock and the inflation that followed, the office of the U.S. presidency had reached its nadir in 1974 when Richard Nixon resigned his office in scandal, U.S. forces made their final withdrawal from the Vietnam disaster in April of 1975, and in November of that year with New York City approaching insolvency, the State of New York declared that it would suspend payments on $1.6 billion of its short-term debt. The mood at this time was very far from the limitless trust in technology of 1969, when Apollo 11 had landed on the moon and the computerized NASDAQ project had been set in motion. Such circumstances could certainly have pushed Congress to select a safe, low-tech solution that shut out any future risk. One could also imagine a certain amount of horse trading in the 1975 bill. The elimination of fixed commissions and the opening of the NYSE to competition with regional exchanges was by far the most important thrust of the amendments. If an obscure provision on “back-office” technicalities set up a central hub of securities settlement in the New York market, this could only have served to demonstrate that Congress was fair, and not out to damage an already suffering New York City. It is therefore difficult to say whether regulatory guidance failed in the 1970’s, but the findings should clearly be different today.

2. Co-opting an attempt to escape from the depository model

In 1994, just as the UCC Drafting Committee was solidifying the indirect holding system in a revised Article 8, the SEC responded positively to an initiative of transfer

304 There is also the bounded rationality often found in legislation that focuses on one problem while creating others, such as the diminution of enforcement actions following enactment of the Private Securities Litigation Reform Act of 1995, Pub. L. 104-67, 109 Stat. 737 (1994). Commentators have pointed out that it increased the difficulty of actions against securities fraud just when such fraud was ready to increase dramatically. See e.g., John C. Coffee, Jr., What Caused Enron? A Capsule Social and Economic History of the 1990's, 89 CORNELL L. REV. 269, 288 et seq. (2004).
agents to develop "an issuer/transfer agent operated book-entry registration system" that "would allow any retail investor who wants his or her securities to be registered directly on the books of the issuer" to do so.\footnote{305}

Although modeled on systems used in dividend reinvestment and stock purchase programs, this project clearly descended from the TAD system so highly praised in 1971 and 1976, when market participants still considered immobilization as a temporary, second-best solution. The model had been proposed in 1991 by a group co-chaired by the Securities Transfer Association (STA) and the American Society of Corporate Secretaries (ASCS) "to offer investors an additional choice of security ownership in the form of an account statement, so that their securities could be registered in their own name on the books of the issuer."\footnote{306} The STA and the ASCS, both of whose members work closely with issuers, discussed their original proposal with the Securities Industry Association (SIA), whose members are broker-dealers, and reached agreement on a structure that would "allow a broker-dealer to deliver electronically to a transfer agent a customer's request that the securities be registered on the books of the issuer in book-entry form . . . (and) the transfer agent to send an electronic acknowledgment to the broker-dealer that the securities have been registered in the customer's name on the books of the issuer in book-entry form."\footnote{307} The main operational function of the direct registration system (DRS) is to allow shares to be shuttled back and forth between the accounts of the transfer agent (for registration and holding) and the broker (for trading purposes).

The two, key prerequisites unfulfilled in the 1970’s – dematerialization of shares and high quality electronic communications networks – had moved toward reality in 1994. However, a transition to a decentralized DRS operated by transfer agents would have meant intermediaries returning to issuers the shareholder data ceded to them in the 1970's, and removing them from their central role between issuers and shareholders, a role in which they control all shareholder information, are indispensable for the exercise of voting rights, and even create "securities" through credits to their custody accounts. Indeed, between the legislative imposition of immobilization in 1975 and the public notice-and-comment period on DRS in 1995, the indirect holding system had considerably solidified. Brokers grew into their roles as indispensable middlemen. An entire industry sprang up to distribute proxy materials and was dominated by ADP (now Broadridge). DTC and NSCC kept expanding their services and capacities and were joined together within the DTCC holding company in 1999, which has continued to create new solutions for the problems that are in part caused by its very intermediation. In addition, Article 8 UCC was being custom-tailored to a system brokered by

\footnote{306} Id.
\footnote{307} DRS Release, supra note 305, at 63654.
intermediaries. In light of how embedded the depository system had become, it should come as no surprise that DTC and its owners, the broker-dealer community, took the position that an “issuer operated” DRS was problematic. Following their rational self interest, the financial intermediaries argued to pull the new DRS concept into the central depository that they owned and controlled – and the SEC accommodated their desire.

On November 11, 1996, DRS became operational. During the years that followed, two camps competed to push through their different visions of the form that DRS should ultimately take. On the one side were issuers and transfer agents, and on the other were broker-dealers and the entities they owned, such as DTC and the stock exchanges. In 1999, brokers and DTC argued that DRS should be integrated into DTC’s “Profile Modification System” for communication purposes, the result of which would be to subject transfer agents to the supervision and approval of DTC because they would have to be DTC participants to take part in DRS. Brokers found that the incoherent system presented “unreasonable delays” in allowing “shareholders to ‘recover’ their shares” out of direct registration and transfer them into the broker’s accounts for trading purposes. The aim of commenters “representing primarily broker-dealers” was, as the SEC explained:

Profile will allow a DTC participant (i.e., a broker-dealer) upon instructions from the participant’s customer to electronically request that a “DRS limited participant” of DTC (i.e., a transfer agent) to move the customer’s DRS positions to the participant’s account at DTC.

On the other hand, as the SEC noted:

Commenters, representing primarily issuers and transfer agents, support continuation of DRS as it is currently operating. . . . These commenters believe that the unrestricted ability to allow issues to be made eligible in DRS is in the public interest. These commenters contend that DRS as it is operating today (i.e., without Profile) benefits the marketplace by providing shareholders with another option on how to hold their securities.

Issuers and transfer agents also expressed concern that the Profile System did not offer adequate security against unauthorized persons extracting securities from direct

310 Id.
311 Id.
312 Id. at 51164.
registration. If connection to Profile were made a prerequisite for participating in DRS, no transfer agent could use DRS without becoming a participant of DTC and no issuer could place their securities in DRS without meeting DTC eligibility requirements. This of course would kill the idea of setting up DRS as an alternative to the centralized DTC model. In the many releases regarding the adoption of DRS, the SEC never indicated awareness of a conflict of interest that brokers may have in advocating a system in which intermediaries take over and control shareholder data. In the end, judging the matter as a pure question of system efficiency, the SEC sided with the position of the brokers, and concluded that excluding transfer agents from DRS unless DTC admitted them to the Profile Modification System created a “more efficient mechanism.” This follows the logic expressed by BASIC in 1971 that maximum efficiency can be reached by approaching a complete monopoly on settlement services. However, BASIC’s point was that the more securities that were immobilized under the name of one entity, the more trades that could take place electronically on the accounts of that entity. Monopoly over communication systems for financial data makes no more sense than monopoly over data transmission in general. After its incorporation into Profile, any transfer agent wishing to take part in DRS would have to become a limited participant of DTC, which as a Self Regulatory Organization would approve the limited participant’s admission and supervise its behavior. To address the concerns of transfer agents that unauthorized persons could use Profile to withdraw securities from DRS, an automatic guarantee backed by a surety was incorporated into the Profile Modification System. In its 2006 annual report, DTCC referred to DRS as “DTCC’s Direct Registration System (DRS).”

Beginning January 1, 2008, all issues listed on the NYSE and the Nasdaq Stock Market had to be eligible for inclusion in the direct registration system (DRS). Essentially, as originally conceived, DRS is a bridge between the two structural alternatives that have been discussed since 1970: uncertificated shares are held in databanks managed by transfer agents for issuers, but such shares can then be pulled by means of an

313 Id.
314 Id. at 51165.
315 Id. at 51164.
318 DTCC 2008 ANNUAL REPORT, supra note 78, at 36.
319 See NYSE Listed Company Manual, § 501.00(B); and NASD Manual, Sec. 4350(L).
instruction on a proprietary communication network into a broker's account where they are re-registered in the name of Cede & Co. Because DRS is a bridge, rather than a direct trading system, direct registration (which makes the beneficial owner a registered owner with all rights under corporate and commercial law) will look a little like a parking lot for shares; if the shareholder wants liquidity, he must place the shares back in the name of Cede & Co. Moreover, the DRS is only an option within the indirect holding system, and in its current form, transfer agents must function as "limited participants" within the DTCC system.321

A retail investor will at the time of making a purchase state on her instruction to the broker whether she wishes to hold her shares in DRS in her own name or through her broker in the name of Cede & Co.322 If she indicates no preference, the shares will automatically be placed in DRS and registered in the buyer's name.323 This would result in an uncertificated security being extracted from the custody of DTC, with the registered owner changing from "Cede & Co." to that of the investor. As explained in Part II, under Article 8, the act of entering a buyer's name on the stockholders list would simultaneously constitute "delivery"324 and place the security in the "control"325 of the buyer, which gives the latter "protected"326 status against any adverse claims, provided that the buyer has given "value"327 for the security. However, because the DTCC system is structured from the ground up to deal in claims on accounts (security entitlements), this smooth process of transferring a security with direct registration cannot be used to sell the DRS shares: that would require another switch out of DRS and back into the indirect holding system, understandably with a fee. As currently structured, the shareholder has a choice between holding liquid securities registered in the name of Cede & Co. and holding illiquid securities registered in his own name.

The regulatory process of the SEC has thus, since the creation of DTC in 1973, perpetuated and strengthened a model which market experts had found to be a temporary, necessary evil when created, and which is currently outdated. The reasons for its creation may well have passed with embossed certificates, but the interests in its

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324 UCC §8-301(b)(1) (2005).
325 UCC §8-106(c)(2) (2005).
326 UCC §8-303(a) (2005).
persistence have multiplied. For a number of reasons, the regulator apparently remains unaware of such interests; this is addressed in the next subsection.

B. The problem of regulatory focus and regulatory organization

1. Regulatory focus: losing track of the original purpose of the process

Even though paper is rapidly disappearing from the securities markets, and there is little left to “immobilize” in depository vaults, CSDs show no sign of diminishing in importance. The opposite is true: CSDs multiply their services, lead the list of recommended structures for securities settlement, and have their functions cemented as part of major international conventions. A primary reason for this is that the management of CSDs write the reports evaluating their own infrastructure and the regulators – both institutionally and as a matter of training and perspective – do not focus on the infrastructure’s negative externalities. Securities settlement infrastructure traditionally falls under the purview of central banking regulators like the Bank for International Settlements’ Committee on Payment and Settlement Systems (CPSS). Such regulators view the settlement infrastructure in the context of systemic risk to the overall financial system, not in relation to issuers or their securityholders. As Scott, one of the most authoritative voices in the area of international financial regulation, observes: “The chief aims of clearing and settlement are efficiency and safety.”

The focus on the relationship with the overall financial system to the exclusion of other important factors is not limited to the United States. The securities settlement systems in the United Kingdom, Germany and France have at least the technical

328 According to DTCC, transactions in certificated securities constitute only about 0.01% of daily trading volume. Because storing large amounts of negotiable paper requires large, acclimatized, secure facilities, DTCC has for years advocated the elimination of paper, and the number of certificates it holds on deposit has steadily decreased. Between 2001 and 2007 the number of certificates DTC held in its vaults decreased by about 60% from approximately 6.7 to 2.7 million certificates. Michael Bellini, Dematerialization Makes Steady Gains, @DTCC News and Information for DTCC Customers 12 (June 2007), available at www.dtcc.com.


330 In the United Kingdom, The Uncertificated Securities Regulation, 2001, S.1. 2001/3755, Sched. 4 provides that the name, address and holding of all shareholders of uncertificated shares be recorded in the settlement system and transferred to the issuer, and that the latter record the information in a “Record of Uncertificated Shares.” See Benjamin et al., supra note 23, §§ 9.16, 9.75. This technical potential for a complete and up-to-date stockholders list has apparently not been sufficient to avoid the problems discussed in the Myners report (see, supra note 318, Part II.C), perhaps because not enough of the market issues uncertificated shares or stockholders chose not to provide their data. However, Companies Act, 2006 c. 46, § 793 (U.K.) provides U.K. companies the power to demand disclosure of beneficial owners.

331 In Germany, Clearstream Banking Frankfurt AG generates sub-accounts in the custody accounts of its clearing participants by assigning an alphanumeric code to the entitlements held for specific investors and replicates this data in the data banks of the share registers attached to the settlement system. See David C. Donald, authors note *, at 145 et seq.

332 In France, all shares are dematerialized but they are also legally bearer shares. Thus the corporation issues the shares by booking them into an originating account with a custodian bank, and the bank then holds accounts for individual shareholders. The wall of banking secrecy creates a wall that turns the “registered” shares into anonymous bearer shares. All
capacity to preserve a direct relationship between issuers and securityholders for the exercise of rights embodied in securities, and together with the United States, this comprises the majority of experts represented in international bodies on such issues. However, neither the relationship between issuers and shareholders nor preserving the rights embodied in securities feature significantly in the reports and recommendations of the various groups of experts on clearing and settlement. On the contrary, two leading expert reports see the heterogeneous, individual content of securities, such as differing rights and diverging ways to exercise these rights, as obstacles to efficient securities settlement and in need of standardization. The same process of rationalization that pushed for elimination of endorsement, delivery and registration in the transfer process sees the various different rights embodied in shares (voting, dividend, option in the case of pre-emptive rights) as an obstacle to their settlement.

The European Giovannini Group has concluded that the differing provisions for the exercise of voting rights, such as variation in the period between the record date and the shareholder meeting, or the exercise of a pre-emptive right to buy new shares present an obstacle to efficient securities settlement. The Group of Thirty, in which the United States plays a leading role, has taken the same position. If the deadlines for the execution of proxies or the acceptance of a rights offering were fixed and standardized nationally and internationally, it would be easier for a central settlement facility to process them quickly without error. Both the Giovannini Group and the Group of Thirty thus suggest that corporate law communications between issuers and shareholders be formulated as ISO 15022 protocol. The International Organization for Standardization (ISO) develops messaging formats for the SWIFT (Society for Worldwide Interbank Financial Telecommunications) system that has been used internationally by banks for decades to send payment instructions. If this Giovannini Group and the Group of Thirty recommendation were to be fully implemented, it would mean that neither individual corporation statutes nor the practices of a single listed company could deviate from the ISO standard in communicating with their securityholders. This would make for safe and

shareholder information is, however, made available to the Republic of France for tax purposes. See Maffei, supra note 96, at 104.


334 The Giovanni Group, supra note 332, Barrier 3; (2003), at 9 et seq.

335 The Group of Thirty, supra note 6, Recommendation 8.

336 The Giovanni Group, supra note 333, at 10.

337 Id. at 10; The Group of Thirty, supra note 6, at 90.

efficient processing by central depositories, but it would mean that all securities would have to be fitted with centrally standardized terms and conditions. The very reason for a securities market – to allow issuers to sell securities and investors to buy them, each adjusting the terms and conditions according to their individual needs – has been institutionally excluded through this concept of securities settlement.

This comes from focusing on the efficiency and security of process to the exclusion of preserving its content. Most processes are made more complex and expensive if the properties of the characteristics of the items processed are heterogeneous or unstable. Take the example of fresh milk, which is more expensive and cumbersome to transport than water. A truck to deliver bottled water need be neither sealed nor refrigerated, while a truck to deliver fresh milk must be both. The physical properties of the material transported necessitate the additional expense. An obvious way to cut costs and increase delivery efficiency would be to eliminate the disruptive physical properties of milk upstream before placing it in the distribution chain. If milk is subjected to ultra-high temperature treatment or dried and pulverized, the resulting substances can be delivered like water, without refrigeration or other extraordinary measures against bacteria. By changing the nature of processed content, the basic process of delivery may be kept at its cheapest and most basic form. The same principle has been applied to securities. The cleanest and most efficient type of settlement system would probably be for single currency cash debts. Within the currency area, cash is universally fungible it requires neither that a relationship with the issuer be preserved nor that its owner be allowed to exercise any right except sale. On the contrary, the legal properties of registered securities create additional burdens. Eliminating these properties would reduce processing costs. Thus, when securities are placed in the vault of a bank (and if in registered form, registered in the bank’s name) and claims against accounts with the bank are traded, then many of the disruptive properties of securities are eliminated. By altering the legal nature of the securities in circulation to make them look like cash, a simpler transfer process resembling that used for cash can be employed. Of course this eliminates the very raison d’être of a securities settlement system: to transfer ownership of securities, which are negotiable instruments certificating a bundle of specific rights. For shares of stock, these rights include the right to receive regular information from a listed company, to be invited to and vote at the general meeting, to receive a takeover offer for one’s shares, and to receive dividends; for debt instruments, these rights include interest payments and notices of an indenture trustee regarding any rescheduling or impending default. A drive for efficiency of the process has repressed the disturbing fact of its original purpose: to allow transfer of securities. It should be no surprise that this regulatory focus has also been institutionalized in the organization of the regulatory bodies supervising securities settlement.

2. Regulatory organization: market structure versus corporate governance

The focus on market structure safety and efficiency to the exclusion of governance rights is clearly visible in the structure of the SEC. At least since the SEC performed its only
major study of the effects of the depository-based system on shareholder communications in 1976 (the “Street Name Study”),[339] it has assigned the supervision of securities settlement structures to one division – Market Regulation[340] – and the task of finding a cure for the shareholder communications problem to another division – Corporate Finance. For over thirty years, the Division of Corporate Finance tried to repair damage to shareholder communications caused by the recommendations of the Division of Market Regulation. An early expression of this bureaucratic schism is displayed in the conclusion of the Street Name Study, which is very informative about what happens when a problem falls between the institutional cracks of a regulator. The governance advantages of a decentralized model that offers direct communication between issuer and shareholders are again noted, but the introduction of that model would not be a matter of proxy regulation, rather one of market structure:

The TAD (Transfer Agent Depository) concept exhibits promise as an important long-term alternative. It is not, however, a system for streamlining communications but rather an approach to a national clearance and settlement system which, as a by-product, would improve issuer-shareholder communications. Development of TAD, therefore, must be integrated with other developments in clearance and settlement (emphasis added).[341]

The Division of Market Regulation could have carried forward work on the TAD, which would have been beneficial for shareholder communications. However, it was extremely unlikely that a division of experts whose terms of reference focus on strengthening safety and efficiency would have diverted resources to consider a simple “by-product” of a given model that improved corporate governance, an area outside of their competence. As will be explained in the next section, when the Division of Market Regulation (now Markets and Trading) did respond to concerns of issuers about 20 years later by allowing the development of the DRS, it underestimated both the importance of the communication issue, and the interests of the brokerage industry, leaving a direct registration “option” imbedded in the depository-based system.

On the other side of the Commission, the staff of the Division of Corporate Finance has made brave but futile efforts for over 20 years (enacting and amending Rules 14a-13, 14a-16, 14b-1 and 14b-2, discussed in Part II.B above) to counteract the problems caused by the market regulation measures ordering immobilization. In this way, one Division tugged toward depository control while the other pulled toward corporate governance, apparently prevented by their divisional mandates from overcoming the boundaries of institutional focus.[342] Recently, however, this barrier seems to have been

339 SEC, STREET NAME STUDY, supra note 166, at 41 et seq.
340 The title of this Division was in 2007 changed to “Division of Trading and Markets: Exchanges, Other Markets, Broker-Dealers, Clearing Agencies, Transfer Agents, and NRSROs.” See www.sec.gov/divisions/marketreg/mrabout.shtml.
341 Id. at 43.
342 Brown, supra note 188, at 715 (“By promoting immobilization, the Commission essentially implemented a policy designed to increase the use of street name accounts. Thus, in the
broken by seating proxy and settlement structure experts together at a recent roundtable discussion session at the SEC.\textsuperscript{343} The question will then become whether the insights of such unified vision can overcome the interests of the intermediaries and the ossified division of the experts internationally.

\textbf{C. The interests of the intermediaries}

\textbf{1. What conflict of interests?}

In spite of its central importance for the financial system and its significant impact on corporate law, the field of securities settlement attracts very little academic attention. Almost all of the generally available information on the settlement process and the expertise in the field is generated by the intermediaries themselves. In this field, there is unfortunately very little hubris when on its website DTCC labels the link to its white papers, newsletters and the speeches of its management "Thought Leadership."\textsuperscript{344} Very few people working in the area of shareholders' or bondholders' rights look to the market structure scholarship for solutions to their problems. Although the registration of Cede & Co. in the United States for settlement purposes is well known, since DTC's creation very few corporate law scholars or market regulators have expressed any opinion except that Cede & Co.'s role is inevitable. Thus for years, the indirect holding of nearly the entire economy in the name of 'Cede & Co.' has appeared a curious oddity for those who noticed it, but was rarely questioned. Brown published an article in 1988\textsuperscript{345} drawing the connection between the indirect holding system and faulty shareholder communications, but the facts Brown offered were not carried forward by others in the field until 2004. At that time, the Business Roundtable (perhaps the strongest, organized lobby group for US corporate management) proposed a rule to shift some costs of distributing proxy materials from issuers to intermediaries, relying heavily on Brown's 1988 article, but gave no indication they were aware the design of the settlement system was connected to their problem of high-cost proxy distribution.\textsuperscript{346} There has been some recent movement, however. When the Roundtable next addressed the proxy system in 2006, they had teamed up with the Securities Transfer Association (the lobby group for transfer agents) and the Society of Corporate Secretaries (Secretaries have traditionally being involved in corporate communication with shareholders), and requested that the settlement system be reviewed for structural change.\textsuperscript{347} Kahan and Rock essentially


\textsuperscript{344} See www.dtcc.com.

\textsuperscript{345} Brown, supra note 188.


presented information of the type found in the Myners and Oxera reports discussed in Part II for the United States, showing how the indirect holding system creates costs and risks for the US voting process.\textsuperscript{348}

An industry which is crucial to the economy and in which the interested parties have a de facto monopoly on both the market and information regarding the industry begs regulation. However, they have apparently been seen historically as neutral, disinterested, and trusted advisors of the regulators. Indeed, the rights in securities and the need for issuers and holders to remain in a direct relationship is given so little attention, that even when expert groups are looking for conflicts of interest in order to find the best governance practices for CSDs,\textsuperscript{349} they do not notice the conflicting interests of intermediaries on the one hand to remain middlemen and issuers and securityholders on the other to disintermediate. Rather, conflicts are seen primarily between "users" of settlement services on the one hand and entities that primarily profit from settlement activities on the other – a conflict primarily between brokers, banks and CSDs.\textsuperscript{350} Costs are assumed to be limited to the price of clearing and settling trades,\textsuperscript{351} and do not include indirect communication. One 2004 paper did approach the issuer/intermediary conflict. ECB staff members Russo, Hart, Malagutti and Papanathanassiu argue that if a single entity were given authority to hold the register for all dematerialized securities issued on a market, that entity would have extraordinary market power vis-à-vis issuers seeking to launch IPOs and would require special supervision.\textsuperscript{352} This is the closest the leading securities settlement regulators have come to finding problems of conflicting interests in connection with the choice of an intermediated structure.

This should end. With the negative effects of the current system falling on issuers and the benefits running to the owners of the system, this area presents significant conflicts of interest. Control of the market participants remains quite complete. As Prof. Robert Schwarz and Dr. Reto Francioni, explain, issuers have little place in decision-making on stock exchange infrastructure:

\begin{quote}
Historically, exchanges have been membership organizations, and for a membership organization the answer is straightforward: The broker-dealer intermediaries, who are their members, are their primary customers. With a
\end{quote}

\textsuperscript{348} See Kahan & Rock, supra note 188, at 1249 et seq.
\textsuperscript{349} The Group of Thirty, supra note 6, S. 49.
\textsuperscript{351} The Group of Thirty, supra note 6, at Recommendation 19, 54 et seq.
\textsuperscript{352} D. Russo, T. Hart, M. C. Malaguti & C. Papanathanassiu, Governance of Securities Clearing and Settlement Systems, European Central Bank Occasional Paper Series No. 21 (October 2004), at 23 et seq.
membership organization, the other two constituents (investors and the listed companies) are important primarily because they are critical for the profitability of the members. Nevertheless, the bottom line is, with a membership organization, the interests of the intermediaries come first.\textsuperscript{353}

The listing of the major stock exchanges that began in the 1990's may shift this balance of power as institutional investors take larger stakes in the market infrastructure and become aware of problems that the indirect holding system causes for shareholder communications and voting. However, issuers currently remain distant from decisions about and the market's trading and settlement systems, and should be able to look to regulators to protect their interests. In the mid-1990s, broker-dealer control of the market infrastructure and an absence of vigorous protection from the SEC was made quite clear in the way the DRS system, which was conceived as an issuer-driven project, was turned into a service option of DTCC, to which brokers regulate access and for which issuers now pay fees.

2. How intermediaries benefit from the indirect holding system

Perhaps first among the benefits obtained by broker-dealers from the indirect holding system is customer loyalty.\textsuperscript{354} Like a garage that stores its customer's winter tires during the warmer seasons, a broker that has its customer's securities registered in its name knows the customer will return, if only to request account closure. This means that the broker always has each customer's current address, and can contact him to offer services and promote potential investments. It also means that the broker will always have a last chance to keep its customer from changing brokers, a last opportunity to make a special offer and win him back. The advantage of this position is certainly obvious when compared to one in which shareholders could contact any broker based on current fees structure, quality of service and convenience to execute a sale of dematerialized shares held in the register/account where they were originated.

A second advantage that brokers enjoy is control of the securities. Depending on the terms of the brokerage agreement with the investor, a broker would then be able to lend the shares to the market (such as to short sellers), earning an additional fee, and increase its fees by swelling assets under management. To avoid the risk that the broker will engage in unnecessary transactions to drive up her commissions ("churning"), some customers contract to compensate their brokers with what is sometimes referred to as a "wrap fee", according to which commissions are calculated in relation to an agreed-upon aggregation of transactions executed, advice rendered and total assets that the broker holds under management for the customer.\textsuperscript{355} The indirect holding system brings

\textsuperscript{353} SCHWARTZ & FRANCIONI, supra note 32, at 93.

\textsuperscript{354} See Welles, supra note 36, at 144.

\textsuperscript{355} For a discussion of "wrap fees" or "wrap accounts", also with particular regard to churning, see NORMAN S. POGER, BROKER-DEALER LAW AND REGULATION § 16.01 (2nd ed. 2001); LOSS & SELIGMAN, supra note 72, §8-C-1; LAURA S. PRUITT, BROKER-DEALER REGULATION, ALI-ABA COURSE OF STUDY 34 (2006).
assets under the broker's control more or less by *force majeure*, thus increasing the wrap fee. Depending upon the applicable law and any contractual agreement, the broker may also be able to employ the same securities as collateral or loan them to third parties, thereby generating additional income.

"Corporate actions" are another business open to intermediaries because of the depository-based system. As long as securities remain registered in the name of an intermediary, the "beneficial" owner of the security remains unknown to and has no property, contract, or corporate law rights against the issuer. Intermediaries bridge this gap that their presence creates by distributing invitations to general meetings, requesting instructions from their customers on accepting or rejecting takeover offers, and distributing dividend and interest payments. One might be tempted to argue that a CSD as large as DTCC could offer economies of scale savings in performing corporate action services for issuers, but as discussed above in Part II.B, the insertion of intermediaries reduces available time for communication, increases the risk that messages will be distorted or lost, and increases costs due to "information scrubbing". If an issuer has electronic addresses for its securityholders, mass communication is no more expensive than sending the original of a given notice to the CSD.

A fourth reason why both intermediaries and the management of issuers might prefer the current system is the "broker vote" allowed under the rules of the NYSE.\(^356\) As discussed in Part II, it is argued that such votes are often used to support management, which would make one more item of value that brokers can use in their business practices. As also pointed out in that Part, the NYSE has made some minor changes that appear intended to stop broker voting. Without a system in which proxy materials pass necessarily through brokers, however, the power to exercise a shareholder's votes arbitrarily would never have existed.

The value of shareholder information to brokers is evidenced by the force with which they defend their possession of it. Customer lists have for brokers a value that is certainly comparable to "leads" for salespeople. In the course of their 1976 Street Name Study, the SEC inquired whether the creation of a NOBO list would violate the privacy of shareholders. The perspective of brokers was evident in the fact that they found the release of contact details for shareholders to endanger their customers' privacy,\(^357\) while on the contrary nearly 88% of the shareholders responded that they were prepared to unconditionally provide the requested information to issuers.\(^358\) That the SEC found it worthy of mention only in a footnote that brokers were concerned the release of such data could cause a loss of customers to competitors would seem to indicate the SEC's ignorance of the brokers' conflicts of interests.\(^359\) Staff counsel for the SEC has told the

\(^{356}\) See e.g., NYSE Rules, Rule 450.
\(^{357}\) SEC, Street Name Study, *supra* note 166, at 40.
\(^{358}\) *Id.* at 41.
\(^{359}\) *Id.* at 40, n. 84.
author of this paper that brokers now consider shareholder data their own property.\textsuperscript{360} This has come a long way from the understanding of immobilization as a “temporary” stop on the way to the “certificateless society”.

The motives of companies like Broadridge to perpetuate the depository-based structure are much stronger. They may look at the creation of a truly functional system of direct registration the same way that London’s famed boatmen looked at the building of more bridges across the Thames – an open threat to their very existence. These service companies draw their livelihood directly from the inefficiencies of the indirect holding system. Although such services are to be praised for allowing the U.S. markets to excel despite a significant disruption of shareholder communications, their services would all but disappear if shareholders or their chosen agents were registered directly with issuers. This makes it difficult to understand how regulators interested in studying the indirect holding system and its problems could turned to service providers like ADP (now Broadridge) for unbiased information on the market.

We often speak of immobilization creating attractive anonymity for securityholders, but the fact is that no one remains anonymous: the intermediaries know what belongs to whom.\textsuperscript{361} Investors should have the right to choose whether this information should be available to issuers, or kept completely confidential. As outlined above, intermediaries know well how to reap considerable direct and indirect benefits from the current structure. They receive custody fees for holding securities (even if only electronically), can use their clients’ securities for loans or collateral if law or contract so allows, and can tie their customers to them in a way that would be impossible if they did not “own” their customers’ property and if they were not the only persons capable of legitimizing their customers’ claims against the issuer of the relevant security. For these intermediaries, a transition from indispensible middlemen to invisible facilitators would be very costly, not least because – as in the telecommunications industry – it would allow customers to change broker or bank for each transaction (as their securities would not be parked in a specific intermediary). This would lower entry barriers and trigger significant price and service competition for brokerage services. However, when the balance of knowledge and expertise is in favor of vested interests that will be damaged by natural structural evolution, such evolution will be blocked unless regulators step in to accelerate the process. It has been the purpose of this article to shed light on the regulatory breakdown that has accompanied the creation and perpetuation of the

\textsuperscript{360} Telephone conversation with member of legal staff from Division of Market Regulation, November 2004.

\textsuperscript{361} As DTCC remarked in 2000: “As the world’s largest securities depository, The Depository Trust Company is a primary source of data on nearly 1.9 million securities and the financial activities associated with these assets. In many cases, it is one of the principal sources of data on actions ranging from tender and merger offers to dividend and redemption announcements.” \textsc{Depository Trust & Clearing Corporation, Annual Report 1999}, at 30 (2000).
indirect holding system, present the reasons for this problem, and point toward a desirable solution.

Conclusions

The model of securities settlement currently advocated by most regulators and market structure experts is an intermediated structure originally based on depositing paper certificates in the accounts of a depository to allow book entry transfers of claims on deposited certificates. This structure dates back at least to 1873. It accelerates transfer by short circuiting "endorsement", "delivery" and "cancellation" of certificates, as all securities are and remain registered in the name of a single entity or a few intermediaries. The depository in effect issues uncertificated claims on the pool of assets (the underlying securities) kept in its accounts, creating an effect like dematerializing the securities. This shortcut severs owners from issuers, inserts intermediaries as new owners, disrupts communication, and can lead to erroneous exercise of securityholder rights. It can also lead the creation of securities that were never issued, as account bookings multiply and exceed the number of securities existing on the primary account of the issuer’s list of securityholders.

While directly damaging to issuers and securityholders, it creates significant advantages for intermediaries, as they become the owners of the economy's outstanding securities as well as of all the information about securityholders. They use this information to bind their clients to them and profit from value-added services that issuers cannot perform because they have transferred the information regarding their securityholders to the intermediaries. When permitted by their brokerage or depository contracts, they also earn fees by loaning their client’s securities to third parties. In the contemporary capital market, in which securities are dematerialized, secondary and tertiary bookings on the accounts of intermediaries is not only unnecessary, but dangerous. It runs a very high risk of creating securities that were never issued.

Securities settlement infrastructure should progress beyond the depository-based model. Uncertificated securities should be traded on their original register, which would render ownership transparent and remove all disruptions from the governance structure of corporate law. It would also prevent the creation of securities that were never issued, by restricting bookings to the originating account/register. Transfer of uncertificated securities could still be effected by the same high-speed CCP operations currently used to transfer claims on depository accounts. The types of assurances currently given to allow a CCP to access securities accounts and cash accounts could apply with little or no change to a CCP accessing an account/register. Such account/registers could be managed by the issuers, their transfer agents, or the same companies that now operate CSDs. If this change were made, intermediaries would process and communicate trading information, not own securities and the information about "beneficial" owners. Every owner of a listed security would simultaneously become a registered owner, holding all rights to vote and receive dividends or interest from the issuer, unless the
securityholder chose to remain anonymous. During, and at the very latest, at the end of each trading day, every issuer would have an exact and complete list of its securityholders. Communication for corporate law purposes would be simple, cheap and direct. A new, better and fairer path would be cut, and this new path would require neither a new commercial law nor extensive distortions of the proxy voting system.

Instead of moving in this direction, CSDs and other intermediaries continue to multiply the ways in which they sell securityholder information back to issuers and securityholders. Regulators continue to work on ways to twist the paths of commercial, corporate and securities law around the central depository. They have not taken appropriate action because even “just thinking about change clashes with our path-induced perception of ‘normal’ mechanisms.” 362 They focus on the safety and efficiency of securities settlement in relation to the overall financial system, not its effects on corporate governance and the costs of issuers and securityholders. Although regulators should be in a position, given ample time, to recognize the dangers of creating shadow securities within the intermediated system through multiple bookings, the structure of newly amended laws and freshly drafted international conventions further solidify the current path. Given their comportment to date, there is no reason to expect regulators will raise the issue with strong conviction unless prompted to do so. Major deficits in the regulation of securities settlement infrastructure are a lack of independently generated information on the settlement process, a new perspective that allows the problem and its solutions to become visible, and a concrete understanding of the interests of the market participants; this article attempts to reduce those knowledge deficits. It is now up to regulators to make the right choice for the investing public.

362 Roe, supra note 272, at 651.