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An Essay on Pluralism in Financial Market Infrastructure Design: The Case of Securities Holding in the United States

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AN ESSAY ON PLURALISM IN FINANCIAL MARKET INFRASTRUCTURE DESIGN: THE CASE OF SECURITIES HOLDING IN THE UNITED STATES

Charles W. Mooney, Jr.*

I. INTRODUCTION

Financial market infrastructures provide the essential plumbing for the financial markets. Within these infrastructures financial assets are traded and used as collateral, transactions in assets are settled, financial contracts are entered into, performed, and enforced, and transfers of funds are effected.

Notwithstanding the aptness of this plumbing metaphor, the financial market infrastructures provide much more than mere platforms for trading and conduits for the movement of assets and funds. For securities, these infrastructures also provide an abode in which securities reside and are beneficially held by many types of investors. Publicly traded securities held in the securities holding infrastructure in the United States, as in many developed economies, generally remain in the intermediated holding system—credited to securities accounts with intermediaries such as broker-dealers and banks. This phenomenon evokes a second metaphor—that of the Eagles' apocryphal Hotel California:

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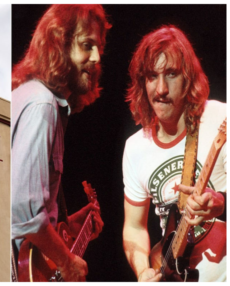
"We are programmed to receive.
You can check out any time you like,
But you can never leave!"[1]



Like guests at the Hotel California, these securities never leave the system. In this infrastructure the interests of the beneficial owners—investors—are reflected only on the records of the intermediaries. Their interests are not reflected as holders of securities on the books of the securities issuers.

In a recent article, *Beyond Intermediation: A New (FinTech) Model for Securities Holding Infrastructures* (*Beyond Intermediation*), I argue that serious consideration should be given to major modifications of these deeply intermediated holding systems.[2] The article (on which this essay builds) proposes that investors should have a practical, efficient, and cost-effective option of being directly connected with issuers—direct holding—following settlement of securities trades. The proposal envisions a New Platform System (NPS) that would generally preserve the roles of intermediaries in trading and settlement and provide efficiency and flexibility equivalent to that under the intermediated holding system as it currently exists.[3] It also posits that the NPS, by including issuers, investors, and intermediaries (including central securities depositories) in a single interconnected infrastructure, could provide a "primordial soup" that could lay a foundation for a future comprehensive integrated system for trading, settlement, and post-settlement holding.[4] The article also identifies various costs and risks imposed by the intermediated holding system.[5] Some of these costs and risks are squarely within the primary domain of the regulation of securities markets (internal costs), such as impairments of shareholder voting and bondholder claims against issuers.[6] Others fall outside of that sphere

[1] Glenn Lewis Frey, Don Felder & Donald Hugh Henley, *Hotel California* lyrics, LyricFind, https://www.google.com/search?source=hp&ei=bYr2XeLFGqHr_QbIqJSYBg&q=Hotel+California+lyrics&oq=Hotel+California+lyrics&gs_l=psy-ab.3..0l10.2614.7676..7955...0.0..0.57.1114.23......0....1..gws-wiz.......0i131.gXeQq7Sx3qg&ved=0ahUKEwiisPHNsrjmAhWhdd8KHUgUBWMQ4dUDCAs&uact=5.
[2] Charles W. Mooney, Jr., *Beyond Intermediation: A New (FinTech) Model for Securities Holding Infrastructures*, 22 U. Pa. J. Bus. L. 386 (2020).
[3] By retaining the incumbent trading and settlement infrastructure, post-settlement direct holding under the NPS would be compatible with the existing settlement infrastructure. These would include, for example, The Depository Trust & Clearing Corporation in the United States, the Clearstream and Euroclear organizations in Europe, and the operation of the Target2-Securities platform operated by the European Central Bank.
[4] Mooney, *Beyond Intermediation*, *supra* note 2, Part VI.
[5] *Id.*, Part III.
[6] *Id.*, Part III.C.

(external costs), such as the enforcement of anti-money laundering (AML) and anti-terrorist financing regulations and tax laws.[7]

This intermediated securities holding infrastructure embodies a legally sustained monopoly for the intermediary community that benefits greatly from the system.[8] Any major modifications of the infrastructure that would move it toward transparency and direct holding likely would require a top-down legislative or regulatory intervention.[9] Notwithstanding several prevailing internal costs (flaws that should be core concerns for the regulation of securities markets), the United States Securities and Exchange Commission (SEC) has not acted to move the infrastructure in that direction. This reflects, no doubt, the path dependence resulting from the power and influence of the relevant intermediaries and the entrenched, sticky characteristics of the infrastructure itself.[10]

The thesis of this essay focuses on another fundamental regulatory failure. In particular, it argues that the SEC is even more unlikely to reconsider the merits of the incumbent intermediated infrastructure based primarily, or even materially, on external costs. This situation reflects a paradigmatic negative externality.[11] The prevailing securities holding infrastructure confers benefits on intermediaries while imposing external costs—costs and risks imposed on other constituencies and society in general. But the beneficiary intermediaries do not appear to internalize these costs and risks.[12] Although this essay focuses primarily on financial infrastructure, the failures of administrative agencies to adequately take account of external costs are not limited to the financial markets. These regulatory failures warrant further attention and research.

This volume is devoted to financial market infrastructure, and in particular the securities and derivatives markets. The other chapters offer valuable contributions to the literature, to the worthwhile end of promoting the efficiency, integrity, and quality of those markets. This essay, however, argues that a goal of financial infrastructure design also should be to meet the needs and address the problems of stakeholders external to those markets and the public interest generally. In that respect my thesis may embody yet a third metaphor—a skunk at the picnic.[13]

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[7] *Id.*, Part III.D.; *see, e.g.*, Financial Action Task Force, *Money Laundering and Terrorist Financing in the Securities Sector*, 22-24, 38 (Oct. 2009), https://www.fatf-gafi.org/media/fatf/documents/reports/ML%20and%20TF%20in%20the%20Securities%20Sector.pdf (discussing money laundering vulnerabilities resulting from lack of transparency in connection with omnibus accounts).
[8] *Id.*, Part VII.
[9] *Id.*
[10] *Id.; see* pp. [11-12], *infra* (discussing path dependence).
[11] *See* pp. [9-10] *infra* (discussing negative externalities).
[12] *Id.*
[13] *Cf.* L. BRITT SNIDER, SKUNK AT THE PICNIC (CreateSpace Independent Publishing Platform 2013).

On the other hand, I am also advocating that those external interests should be addressed only through financial infrastructure reforms that would not impair the operations of the securities markets or compromise the internal objectives of those markets. By referring to "pluralism" in the title of this essay I intend to embrace the idea that a securities holding system is a feature of a financial market's powerful impact and role in a society. As a result, the infrastructure should be structured to meet the needs and goals of a wide variety of public interests and stakeholders, not merely those of the direct participants in the securities markets.

This essay aspires to several goals: (i) identifying and highlighting the enormously broad societal impact of financial market infrastructures, (ii) stimulating further research on financial market infrastructures, which are very *under*studied attributes of financial markets, (iii), drawing attention to the myopic regulatory failures that exist not only in the regulation of financial markets but in administrative law and regulation more generally, (iv) challenging the regulatory community to establish more ambitious goals for the securities holding infrastructures and challenging the Fintech community to meet those goals,[14] and (v) further explicating the roadmap and framework for a cost-benefit analysis of the prevailing infrastructure and the reforms that are outlined in *Beyond Intermediation*.[15]

II. OVERVIEW OF UNITED STATES SECURITIES HOLDING INFRASTRUCTURE

Intermediation by stockbrokers and banks is an essential and beneficial feature of modern securities markets. Intermediaries accommodate trading on exchanges and other platforms, settlement of securities transactions (payment for and transfer (delivery) of securities), and post-settlement holding (custody) of securities through securities accounts maintained with these intermediaries.

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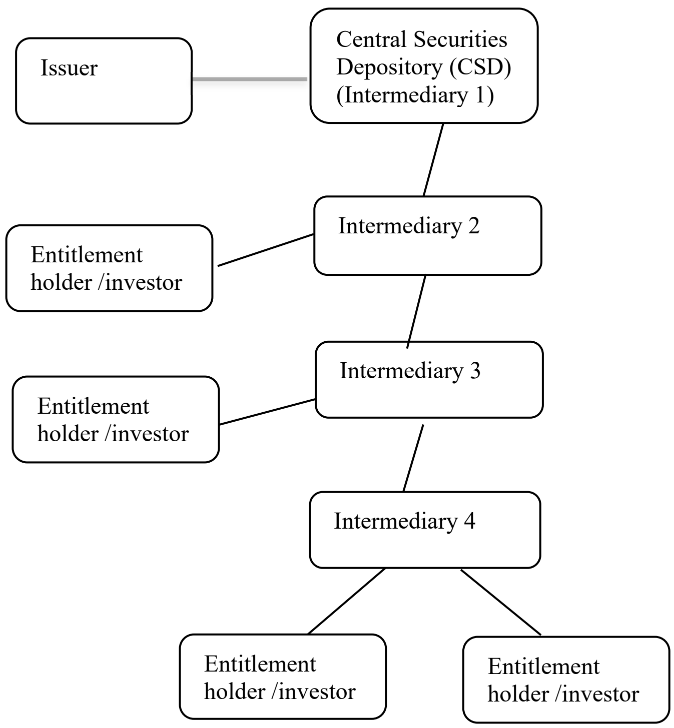
[14] See Julia Kagan, Financial Technology – Fintech, INVESTOPEDIA (June 25, 2019), http://www.investopedia.com/terms/f/fintech.asp#ixzz4aZxr0YMG [https://perma.cc/7KC4-Y 2M3] (describing the expansion of the term Fintech to include any technological innovation in the financial sector, including innovations in financial literacy and education, retail banking, investment and even crypto-currencies, like Bitcoin).

[15] For a thoughtful, ambitious, and sophisticated analysis of the challenges to financial regulation presented by Fintech innovation, see TERESA RODRÍGUEZ DE LAS HERAS BALLELL, CHALLENGES OF FINTECH TO FINANCIAL REGULATORY STRATEGIES (2019). Professor Rodríguez articulates a framework for analyzing these challenges based on an examination of three layers: (i) structure (i.e., financial architecture or infrastructure, (ii) activity, and (iii) market players. A rigorous application of her theoretical framework to the specifics of the securities holding infrastructures is beyond the scope of this essay. But future work will benefit greatly from the methodology she proposes.

The figure below illustrates a typical, although simplified, intermediated holding structure involving tiers of intermediaries, with each intermediary having its own set of securities account holders. The intermediary at the top tier normally is a central securities depository (CSD),[16] which in the United States is The Depository Trust Company (DTC).[17] Under Uniform Commercial Code (UCC) Article 8 in the United States, by the credit of a "security"[18] or another "financial asset"[19] by a "securities intermediary"[20] to a "securities account,"[21] an "entitlement holder"[22] acquires a "security entitlement."[23]



Various taxonomies have been developed to describe different types of intermediated securities holding systems. For example, in a "direct" holding system investors are the direct

[16] *See* INTERNATIONAL INSTITUTE FOR THE UNIFICATION OF PRIVATE LAW (UNIDROIT), UNIDROIT LEGISLATIVE GUIDE ON INTERMEDIATED SECURITIES, xxii (2017) (LEGISLATIVE GUIDE), https://www.unidroit.org/instruments/capital-markets/legislative-guide (describing a Central Securities Depository, or CSD, in part as "[A]n entity that provides the initial recording of securities in a book-entry system or that provides and maintains the securities accounts at the top tier of the intermediated holding chain.").
[17] In 1999 DTC and National Securities Clearing Corporation (the principal clearing organization and central counterparty in the United States market) became subsidiaries of a newly formed holding company, The Depository Trust & Clearing Corporation (DTCC). *See* Paolo Saguato, *The Ownership of Clearinghouses: When Skin in the Game Is Not Enough, the Remutualization of Clearinghouses*, 34 Yale J. Reg. 601 (2017) (discussing a critical assessment of DTC).
[18] U.C.C. § 8-102(a)(15) (defining "security").
[19] U.C.C. § 8-102(a)(9) (defining "financial asset").
[20] U.C.C. § 8-102(a)(14) (defining "securities intermediary").
[21] U.C.C. § 8-501(a) (defining "securities account").
[22] U.C.C. § 8-102(a)(7) (defining "entitlement holder").
[23] U.C.C. § 8-102(a)(17) (defining "security entitlement").

holders of securities on the books of issuers.[24] "Intermediaries" in direct-holding systems may serve as keepers of accounts for investors and issuers, but have no legal or equitable interest in the securities.[25] "Indirect" systems are those in which intermediaries in the holding chain each has an interest in the securities.[26] A more useful and functional classification characterizes a holder in a "direct" holding system as the legal owner of securities entitled to exercise directly against the issuer the rights of a security holder (such as a shareholder or holder of a debt security). In general, a holder in an "indirect" system would not be entitled to exercise such rights.[27]

The UNIDROIT Legislative Guide outlines another dichotomy—transparent and nontransparent intermediated holding systems.[28] A transparent system is one in which the "ultimate" beneficial owner is known and identified at the CSD level and at each other tier in the intermediated chain.[29] But this transparent versus nontransparent distinction reflects not so much a dichotomy as a spectrum of relative transparency in the relationships among investors, intermediaries, and CSDs.[30] ("Transparent" also may be misleading—the fact that an end investor's interest is recorded at the CSD level does not necessarily mean that the investor's identity is disclosed to any particular person, much less made available to the public generally.) At the nontransparent end of the spectrum are the so-called "omnibus" CSD accounts in which a CSD participant holds securities for its account holders, including its participants' lower-tier intermediaries and ultimate investors, and in some cases for its own account, on a commingled basis.[31] This is the dominant approach in the United States, Canada, and in the major markets in Europe. For example, in an omnibus structure in the context of Figure 1, above, Intermediary 3 would know and have a direct relationship with its account holders, including Investor 2 and Intermediary 4, but it would not know or have any direct relationship with Intermediary 4's account holders, including Investors 3 and 4.

Other systems involve varying levels of segregation of investor securities. At the opposite end of the spectrum from omnibus accounts, "end investor segregation" systems involve separate securities accounts with the CSD for each individual end investor and the identity of the investor is associated with each account. Even in those systems, however, the

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[24] LEGISLATIVE GUIDE, *supra* note 15, at 16.

[25] *See, e.g.*, Asaf Raz, *Share Law: Toward a New Understanding of Corporate Law*, 40 U. Pa. J. Int'l L. 255, 315 & n. 236 (discussing effect of Israel Companies Act § 132).

[26] LEGISLATIVE GUIDE, *supra* note 16, at 16.

[27] Although the systems and the legal relationships vary greatly around the world, almost all have in common the power of an intermediary to transfer securities to some form of good faith purchaser, even without an account holder's authorization, and the resulting possibility of a shortfall upon the failure of the intermediary—each an element of intermediary risk discussed in Part III.

[28] LEGISLATIVE GUIDE, *supra* note 16, at 22-25.

[29] *See* Thomas Keijser & Charles W. Mooney, Jr., *Intermediated Securities Holding Systems Revisited: A View Through the Prism of Transparency*, in INTERMEDIATION AND BEYOND 309, 331-35 (Louise Gullifer & Jennifer Payne eds. 2019) (examining the various contexts in which transparency is relevant and arguing that the adoption of transparent information technology systems could provide substantial benefits, even without a change in law, and that such systems also could provide a catalyst and roadmap for law reforms affecting securities holding systems).

[30] The following discussion draws on Delphine Nougayrède's thoughtful discussion. *See* Delphine Nougayrède, *Towards a Global Financial Register? The Case for End Investor Transparency in Central Securities Depositories*, 4 J. Fin. Reg. 276, 284-91 (2018).

[31] Omnibus systems in Europe, however, segregate a CSD's own account securities from its clients' securities. *See* Mooney, *Beyond Intermediation*, *supra* note 2, at 398 & n. 45.

CSD may not have a direct relationship with the end investor and a CSD participant manages the securities account.

All of these models of intermediated holding systems have evolved to meet the needs of financial markets and market participants. The intermediated securities infrastructures are designed in particular to accommodate the post-trade clearing and settlement of securities transactions. Given the volume and velocity of modern securities markets, settlement could not be achieved through traditional transfer mechanisms such as the delivery of paper certificates or changes in registration on issuers' legacy registries. Modern infrastructures have achieved more than the replacement of traditional means of transfer (delivery). Crucially, they also accommodate the payment side (as well as the delivery side) of settlement through mechanisms for delivery versus payment (DVP). Note the function of intermediation in this context—it accommodates the delivery component of securities settlement, which in turn facilitates DVP mechanisms.

These observations are pertinent not only for the United States markets but for the global intermediated holding systems more generally. Because intermediated securities are "in the system," the intermediated infrastructure ensures that the securities will be available and free of obstacles to delivery in the post-trade settlement systems. This explains why many investors continue to "hold" through an intermediary after acquisition (i.e., post settlement). By holding in the intermediated system, the investor maintains the liquidity of its investments and avoids the delay and expense of removing securities from the system, connecting the investor with the issuer, and re-insertion of securities into the system for subsequent disposition. These obstacles to withdrawals and insertions of securities from and into the systems persist primarily because it is in the interest of the intermediaries and CSDs that the securities remain credited to securities accounts in the holding system. These market participants have no incentive to facilitate ingress and egress.[32]

III. COSTS AND RISKS OF INTERMEDIATED HOLDING AND CORRESPONDING BENEFITS OF DISINTERMEDIATION

As Part II makes clear, intermediation is a necessary and positive aspect of modern securities markets. But intermediation also imposes a variety of costs and risks. *Beyond Intermediation* identifies and summarizes the principal costs and risks of intermediation.[33] Several of these costs and risks are attributes of the post-settlement holding of securities in securities accounts.[34] *Beyond Intermediation* also argues that a carefully structured disintermediation of the securities holding infrastructure could reduce the costs and risks of intermediated holding.[35] The principal intermediary risk arises from the potential for an

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[32] *See Id.*, at 402 & n. 62 (discussing cumbersome, time-consuming, and expensive aspects of moving securities in and out of the intermediated system in the United States); p. [14], *infra* (discussing DTC's Direct Registration System). Note however that post-settlement intermediated holding supports various services that intermediaries provide to their account holders, such as extending credit secured by securities credited to securities accounts (so-called "margin lending") and securities lending and borrowing.
[33] *See Id.*, Part III.
[34] *Id.*
[35] *Id.*

intermediary to become insolvent or otherwise default on its obligations to its account holders.[36] These risks are exacerbated by the phenomenon of holding securities through chains of intermediaries, especially when the chains extend across national borders.[37] For example, an intermediary other than an account holder's own relevant intermediary may have no liability whatsoever to the account holder and, by contract, the account holder's relevant intermediary may have no responsibility for the default or failure of another intermediary in the holding chain.[38]

Another set of costs and risks inflicted by intermediated holding relates to an account holder's exercise and enjoyment of investor rights against issuers. For example, intermediation may impair an account holder's rights with respect to corporate actions such as the voting of shares.[39] It also may impose obstacles to an investor's assertion of claims and pursuit of legal actions against issuers.[40] Intermediated holding also impairs issuers' interests such as the ability to communicate directly with the holders of their securities.[41] These problems would be ameliorated if not entirely solved through investor holdings of securities directly on the books of issuers,[42] an arrangement that currently is not practical for most investors in deeply intermediated systems.[43] Intermediated holding thus impairs basic investor and issuer economic and legal interests. It is not surprising that these problems have attracted most of the commentary on intermediated holding by scholars of corporate and securities regulation law.[44]

Consider the example of voting of corporate shares. Problems associated with voting and the attendant solicitation of proxies epitomize the serious flaws in the prevailing intermediated holding infrastructure in the context of investor rights. The seminal study by Marcel Kahan and Edward Rock details various voting related pathologies of intermediated holding.[45] They identify a host of untoward results, including failures of beneficial owners to receive proxy materials on a timely basis,[46] failures to count votes,[47] failures to accurately verify votes,[48] the unexpected inability to vote shares and over-voting as a result of securities lending and short selling,[49] and mismatches between economic interests and voting rights.[50] More recently Jill Fisch has identified and explored systemic defects and plausible solutions in the context of voting by retail (as opposed to institutional) investors and the ongoing failure of the SEC to rectify the situation.[51]

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[36] *Id., Part III.B.*
[37] *Id.*
[38] *Id.*
[39] *Id., Part III.C.*
[40] *Id.*
[41] *Id.*
[42] *Id.*
[43] *Id.,* Part II.
[44] *Id., Part III.C.*
[45] Marcel Kahan & Edward Rock, *The Hanging Chads of Corporate Voting*, 96 GEORGETOWN L.J. 1227 (2008).
[46] *Id.*, at 1249-51.
[47] *Id.*, at 1251-53.
[48] *Id.*, at 1255-55.
[49] *Id.*, at 1253-63.
[50] *Id.*, at 1263-67.
[51] Jill E. Fisch, *Standing Voting Instructions: Empowering the Excluded Retail Investor*, 102 MINN. L. REV. 11 (2017).

The intermediated holding infrastructure, and its nontransparency in particular, also imposes external costs—those visited on stakeholders other than investors and issuers and on the public interest more generally. These costs of nontransparency have attracted considerable attention as the need for increased transparency in the financial markets (including in the context of securities holding) has become increasingly important from a regulatory perspective. One major CSD has acknowledged this "evolutionary path of regulation . . . towards increased transparency" in its consideration of the potential benefits of distributed ledger technology (DLT) and blockchain technology in the context of securities settlement.[52] The relevant regulatory issues relate primarily to public-interest concerns such as taxation, AML, anti-terrorist financing, sanctions compliance, know-your-customer (KYC) monitoring, cyber security, and privacy, and national security.[53]

There can be little doubt that the profound nontransparency of the intermediated holding structure imposes costs on these regulatory functions that would be eliminated or at least materially reduced by the implementation of more transparent systems. Of course, some of these costs of compliance are substantial and are borne directly by the intermediaries that also benefit from the prevailing infrastructure. But it is also apparent that these intermediaries would rather absorb those costs than witness meaningful modifications of the holding system. Moreover, some of these costs may be passed on to other stakeholders, such as the intermediaries' customers, and some costs may be avoided by eschewing relationships with customers from certain States. But even if the intermediaries were absorbing all of these direct compliance costs of nontransparency, other costs would nonetheless fall on external stakeholders. In particular, to the extent that nontransparency renders these important regulatory functions less effective the resultant costs are imposed on society in general.[54]

This situation presents a classic example of a negative externality: The intermediaries that benefit from the intermediated holding infrastructure do not internalize and absorb these social costs of nontransparency imposed by that infrastructure.[55] The intermediaries and the SEC,

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[52] Euroclear & Slaughter and May, *Blockchain Settlement: Regulation, Innovation and Application* at 6 (3 November 2016), https://www.euroclear.com/dam/PDFs/Blockchain/MA3880%20Blockchain%20S&M%209NOV2016.pdf.

[53] *See* Nougayrède, *supra* note 30, at 306-308 (overview of this evolutionary path and various multilateral transparency initiatives); *see also* Mooney, *Beyond Intermediation*, *supra* note 2, Part III.D. The listing in the text is exemplary and certainly not exhaustive. For example, enhanced transparency also could provide a useful means for regulators to monitor various risks that could impair liquidity and complicated ownership structures that could impose risks of systemic financial instability. Federico Panisi, Ross P. Buckley & Douglas Arner, *Blockchain and Public Companies: A Revolution in Share Ownership Transparency, Proxy-voting and Corporate Governance?*, 2 STAN. J. BLOCKCHAIN L. & POL'Y 1, 12 (2019). It also is plausible that some aspects of disintermediation might reduce risks and costs in other areas of financial infrastructure, such as payment systems. In general, the impact of the intermediated holding infrastructure on these areas of concern and external costs has received too little attention and study.

[54] *See* pp. [15-16], *infra* (discussing ISSA paper).

[55] *See* Wendy J. Gordon, *Copyright and Tort as Mirror Models: On not Mistaking for the Right Hand What the Left Hand is Doing*, in COMPARATIVE LAW & ECONOMICS 317-18 (Theodore Eisenberg & Giovanni B. Ramello eds. 2016):

> Central to the economic analysis of law is the following notion: privately motivated decisions will also serve social ends if the decision-maker has sufficient reason to take social effects into account. . . . However . . . private and social effects may diverge widely. Economists use the term "externality" to

which provides legal cover and support for the maintaining the holding infrastructure, arguably take into account the internal direct costs and benefits for the stakeholders in the securities markets.[56] But they also presumably fail to take into account these external social costs. Part V considers the challenges and obstacles to interventions that might overcome this negative externality.

IV. GOALS OF INFRASTRUCTURE REFORM: ENHANCING INVESTOR RIGHTS AND TAMING THE NEGATIVE EXTERNALITIES WHILE PRESERVING FLEXIBILITY AND EFFICIENCY

Before turning to the practical and political difficulties of implementing any major modifications of securities holding infrastructures it is worthwhile to consider the appropriate goals of reforms. Positing the principal goal as maximizing social welfare might elicit general agreement. But that would amount to mere pablum—easy to state but hard to measure. A more concrete formulation would assess the principal costs and risks of intermediated holding as compared to direct holding on the books of issuers. Direct holding necessarily would produce transparency, even if a platform such as the NPS were implemented on an optional basis.[57] Assuming that on a cost-benefit analysis a move toward direct holding and transparency would be warranted, the principal goal of infrastructure reform should be the implementation of a direct-holding infrastructure *without* any material impairment of the existing core functions and flexibility of the current intermediated regime. *Beyond Intermediation* engages this goal by considering how, for example, the NPS might accommodate current practices (or their equivalents) for margin lending, rehypothecation, and securities lending.[58]

Congress, the SEC, and academic commentary and analysis might be unlikely candidates for developing the technology necessary to achieve this goal, although thoughtful input from these quarters would no doubt be crucial. A more plausible approach would be for the SEC to establish the baseline goals that the securities holding infrastructure should achieve. As suggested, these should include the substantial elimination of (i) intermediary risk in post-

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> identify the divergence. Lawyers too have come to use the concept of externality to help describe why some privately motivated decisions fail to serve social ends. An externality is basically an effect that a decision maker is not taking into account. It refers to some gain or loss that her actions *could* bring into being–but to which she is indifferent because it does not affect her personally. . . . Conversely, an effect is said to become 'internal' to an actor when something brings the impact of what she does home to bear on her. When effects are internal, private and social costs come into alignment, and the private decision maker will reach decisions that serve society as well as her own interests.

[56] While the intermediaries clearly benefit from the current infrastructure, whether the investors and issuers are net beneficiaries is unclear and perhaps doubtful. *See* David C. Donald, *"Market Quality" and Moral Hazard in Financial Market Design*, in RETHINKING GLOBAL FINANCE AND ITS REGULATION 217, 219 (Douglas Arner, et al. eds., 2016) ("Issuers and investors, who have only minimal input into the design of financial market infrastructure, have generally been the losers, while the large broker-dealers who both design and own the infrastructure, have usually been the winners."). Donald argues that lowering costs and increasing profits for certain market participants does not necessarily reflect general efficiency, much less social welfare. *See id. passim.*

[57] A direct-registration regime as contemplated by the NPS necessarily would generate data that would identify a post-settlement ultimate beneficial holder, even if the holder had not elected to hold in the NPS direct registration system. That data, even if not utilized for direct registration in favor of the holder under the NPS, necessarily would then be available and accessible (i.e., transparent) for other permitted purposes. *See* Mooney, *Beyond Intermediation*, *supra* note 2, at n. 139 and accompanying text.

[58] *See Id.*, Part V.B.7.

settlement holding, (ii) the obstacles to voting and other corporate actions, (iii) the impairments of issuer-beneficial holder communications and the exercise of security holder rights, and (iv) the negative externalities imposed on external constituencies. And an overarching goal should be the preservation of the essential benefits—flexibility and efficiency—of the current infrastructure. Were the SEC to issue a "request for proposal" or "RFP" for achieving these goals it would then be up to the intermediary community and Fintech to make it happen—or concede that they are not up to the task. Perhaps these bold and ambitious goals are not achievable in a cost-effective package. But even if feasible and achievable, it is highly unlikely that they would be achieved in fact in the absence of a request or mandate. Moreover, this approach (as opposed to a regulatory prescription) would reflect a healthy agnosticism about details and an important recognition that pluralism and results should drive the decision making process. As discussed next in Part V, it will be a cold day in Hell before the intermediary community pursues these goals on its own initiative. On the other hand, given the experience and expertise of the intermediary community, and in particular DTCC and other global CSDs, there is every reason for optimism that the challenge, if duly issued, could be successfully met.[59]

V. POLITICAL ECONOMY AND REGULATORY OBSTACLES TO INFRASTRUCTURE REFORM

Part VII of *Beyond Intermediation* addresses the prospects for the adoption and implementation of the NPS. It also summarizes more generally how path dependence and the entrenched interests and business models of the intermediary community represent enormous obstacles to transparency and direct-holding reforms to the securities holding infrastructure in the United States.[60] That discussion illustrates that securities intermediaries in the United States support maintenance of the status quo insofar as it involves the dominance of intermediated holding through omnibus accounts. The profitability of margin lending by broker-dealers is an obvious example of the benefits of the legacy infrastructure.[61] The same can be said of the environment in Europe. Reliance on legacy technologies and holding infrastructures likely

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[59] The RFP approach shares attributes of the "radical technology-forcing" approach to environmental regulation. *See* Thomas O. McGarity, *Radical Technology-Forcing in Environmental Regulation*, 27 Loy L.A. L. Rev 943, 957 (1994) ("Radical technology-forcing enables the agency to 'take a leap of faith' in cases in which substitutes are not presently available. . . . [T]he agency is able to place its faith in the ingenuity of American industry to develop substitutes for the banned substance or activity by the specified deadline."). The Environmental Protection Agency appears to support this approach in appropriate circumstances. *See* Environmental Protection Agency, Setting Emissions Standards Based on Technology Performance, https://www.epa.gov/clean-air-act-overview/setting-emissions-standards-based-technology-performance (Feb. 16, 2017) ("In setting national emissions standards, EPA generally sets emissions performance levels rather than mandating use of a particular technology.").

[60] *See* Mooney, *Beyond Intermediation*, *supra* note 2, Part VII. The following discussion also draws substantially on Delphine Nougayrède, *supra* note 30, at 291-95. For an important earlier study, see Jonathan R. Macey & David D. Haddock, *Shirking at the SEC: The Failure of the National Market System*, 1985 U. ILL. L. REV. 315 (concluding that the SEC's failure to implement a national market system stemmed from its desire to protect entrenched institutions and special interests). *See also* Kathryn Judge, *Intermediary Influence*, 82 U. CHI. L. REV. 573 (2015) (explaining negative influences of intermediaries); Alistair Milne, *Central Securities Depositories and Securities Clearing and Settlement: Business Practice and Public Policy Concerns*, in ANALYZING THE ECONOMICS OF FINANCIAL MARKET INFRASTRUCTURES 344, 352 (Martin Diehl, et al. eds., 2016) (observing that the complexity the current infrastructure "entrenches the market power of securities brokers, at the expense of higher charges to final investors").

[61] Specialized lawyers, lobbyists, and internal operations experts also could be expected to support maintaining the relevance of their expertise, as discussed below. *See* p. [12-13], *infra*.

persists as a result of path dependency, inasmuch as the beneficiaries of the status quo may block change through political influence and the public may be uninformed about the benefits of the alternative technologies or structures.[62] Specifically, path dependency may inhibit change in the current securities holding infrastructure because of the political influence of intermediaries that benefit from the existing system and regulators' belief that the prevailing infrastructure is already sufficiently safe and efficient—"if it ain't broke don't fix it."[63] Regulatory resistance to material infrastructure reforms (or at least non-intervention by regulators) may be exacerbated by the related phenomena of "regulatory capture" and the "revolving door."[64] But it seems to me inconceivable that anyone would today, starting from a clean slate, advocate creating from scratch a system resembling these deeply intermediated omnibus account-based systems.

Resistance to material modifications of the securities holding infrastructure may be expected not only from the intermediaries, the principals, but also by their agents, the lobbyists and lawyers. A study by Matthew Stephenson and Howell Jackson is particularly illuminating.[65] They argue that the lobbyist-constituent agency problem produces an excessive status quo bias because lobbyists have invested in acquiring expertise and relationships that make their services valuable under an existing regime.[66] And in some cases this bias may persist even when the interests of lobbyists diverge from those of their clients.[67] Whether or not lawyers are acting as lobbyists in a technical sense, there is every reason to believe that this same bias extends to

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[62] *See* Mark J. Roe, *Chaos and Evolution in Law and Economics*, 109 HARV. L. REV. 641, 651-52 (1996). Path dependency refers to "the peculiar fact that incremental changes in technology, once begun on a particular track, may lead one technological solution to win out over another, even when, ultimately, this technological path may be less efficient than the abandoned alternative would have been." Douglas C. North, INSTITUTIONS, INSTITUTIONAL CHANGE AND ECONOMIC PERFORMANCE 93 (1990).

[63] *See* David C. Donald, *Heart of Darkness: The Problem at the Core of the U.S. Proxy System and its Solution*, 6 VA. L. & BUS. REV. 41, 99-100 (2011). In this sense path dependency imposes a negative externality inasmuch as fealty to the existing infrastructure thwarts serious consideration of alternative systems. *See* pp. [9-10], *infra* (discussing negative externalities). Vince Buccola has suggested that the SEC may be inclined toward maintaining the status quo through the operation of an "environmental drift." For example, at an earlier time the SEC may have been the appropriate agency to oversee the securities holding infrastructure. At that time many of the current external concerns may not have existed or were not amenable to being addressed through modifications of the infrastructure. Although the world now has changed, the SEC's sticky authority persists even though it may no longer have the most significant interest in the infrastructure oversight.

[64] *See, e.g.*, Francine McKenna, MarketWatch, Capitol Report, *Speed of Revolving Door between SEC and Private Sector is Shocking, Says Expert on Regulatory Capture* (quoting Luigi Zingales):

> One option, not very popular, is to pay SEC attorneys more in exchange for a longer period of "cooling off" before taking a job in the private sector. Even though there is an SEC rule that prevents lawyers from taking on a case on the outside that they were involved in as SEC attorneys, the speed at which the doors revolve is quite shocking. … One approach to reducing this form of regulatory capture is to mix different sets of expertise at the SEC.

https://www.marketwatch.com/story/speed-of-revolving-door-between-sec-and-private-sector-is-shocking-says-expert-on-regulatory-capture-2018-12-07.

[65] Matthew Stephenson & Howell E. Jackson, *Lobbyists as Imperfect Agents: Implications for Public Policy in a Pluralist System*, 47 HARV, J. LEGIS. 1 (2010).

[66] *Id.* at 17-20.

[67] *Id.* at 20 (emphasis in original):

> [T]he point is *not* that an interest group's opposition to a change in government decision-making processes, or enthusiasm for delegation to agencies, *necessarily* arises from an agency problem between the interest group and its lobbyists. In most cases, lobbyists will likely advance positions that do in fact favor their clients' interests. The argument is that there may be a subset of cases at the margin where the lobbyist-constituent agency problem distorts an interest group's behavior in systematic ways.

lawyers who possess the same level of investment in expertise and quality of relationships as lobbyists. For example, lawyers who specialize in giving expert advice on the regulation of broker-dealers in the United States are unlikely to favor reforms that would render their knowledge and experience obsolete, even if their clients might find a comfortable niche in a new regime. However, this attitude may be shortsighted. Lawyers who participate (directly or indirectly) in the "ground floor" studies and negotiations that lead to material reforms have an opportunity to capitalize in the future on their involvement in the formulation and design of the new system.[68]

There are also institutional and structural obstacles to such reforms in the United States, including the ubiquitous issuance of "book-entry only" debt securities, which can be held only through the DTC, and the dominant use of bank custodians by registered investment companies.[69] This Part need not repeat the overview and analysis offered by my earlier article. Instead, it offers some concrete examples of the influence of the securities industry and its opposition—indeed, intransigence—to reforms.

I should emphasize that there is absolutely nothing nefarious or wrongful about the support of the intermediary community, including DTCC, for the status quo and the likely concomitant resistance to reform proposals. For example, DTCC notes its role to "simplify the complexities" of its services and its efforts to "lower costs, improve efficiency and bring stability to the industry we serve."[70] It also describes its Board's mission as including service to "the interests of the Corporation, its shareholders and other stakeholders including investors, issuers and participants in the financial markets which DTCC serves" and "supporting the operation of orderly and efficient markets in the interest of the investing public."[71] On the other hand, that a market participant is acting and advocating in its own interest does not mean that it is acting appropriately for the role that it occupies in society.[72] The SEC, however, owes a broader duty to public interest more generally, which should take into account the various external costs and risks imposed by the intermediated holding infrastructure beyond the core interests of the financial markets.[73] But the SEC sometimes has required a reminder of its broader responsibilities.[74]

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[68] This thought offers some optimism for constructive deliberations and a positive outcome for the new American Bar Association initiative discussed below. *See* pp. [18-19], *infra*.
[69] *See* Mooney, *Beyond Intermediation*, *supra* note 2, Part VII.
[70] DTCC, DTCC's Businesses, Subsidiaries and Joint Ventures, http://www.dtcc.com/about/businesses-and-subsidiaries.
[71] DTCC, Mission and Charter, http://www.dtcc.com/about/leadership/mission-and-charter.
[72] For a trenchant critique of the role of intermediaries in the construction and maintenance of the financial infrastructure, including the securities holding infrastructure, see David C. Donald, *Information, and the Regulation of Inefficient Markets* in THE POLITICAL ECONOMY OF FINANCIAL REGULATION 38, (Emilios Avgouleas & David C. Donald eds. 2019). This criticism notwithstanding, the DTCC would be an important, probably essential, participant and contributor to any substantial overhaul of the infrastructure in the United States and to the post-restructuring operations.
[73] *See* 15 U.S.C. § 78b (indicating that the SEC's mandate includes protection of "interstate commerce, the national credit, the Federal taxing power . . . the national banking system and Federal Reserve System").
[74] *See, e.g.*, *See, e.g.,* Business Roundtable v. Sec. & Exch. Comm'n, 905 F.2d 406 (D.C. Cir. 1990) (vacating SEC rule on shareholder nomination and election of directors as arbitrary and capricious for failure to provide adequate cost-benefit analysis); *see also* Motor Vehicle Mfr. Ass'n v. State Farm Mut. Auto. Ins., 463 U.S. 29 (1983) (rejecting agency's deference to preferences of members of regulated industry). Unlike the situation of a rulemaking that fails to take a sufficiently broad account of the public interest, the present context involves the failure of the

With this background, consider next three examples of earlier reform efforts in the specific context of intermediated securities holding.[75] The first was an effort to adopt a viable direct registration alternative in the United States, which ultimately proved ineffective. The second was a move to enhance the remedies of judgment creditors against intermediated securities, which met with only very limited success. The third was a European study of how to enhance transparency in the securities holding infrastructures, which did not result in meaningful reforms.

In 1990 the U.S. Working Group of the Group of 30 considered a proposal for a Direct Registration Clearing System (DCRS) 1990.[76] The DCRS was originally an issuer supported proposal intended to enhance transparency and issuer-shareholder communications, but it met opposition from both DTC and the broker-dealer community.[77] The ultimate result of the proposal is a DTC service that provides direct registration for a fee. As David Donald has colorfully and accurately observed, DTC's Direct Registration System (DRS) currently "offers little more than a parking lot for untransferable shares—if a shareholder wants liquidity, he must place the shares back" into the indirect holding system.[78] Although moving shares between the DRS and the intermediated system remains cumbersome, DTC has nonetheless invested in making the process of moving shares as between itself and issuers highly efficient.[79]

Reform efforts in the United States aimed at of enabling judgment creditors to reach foreign government financial assets that have been blocked in accordance with United States government sanctions offer another example of industry intransigence. Under the generally applicable law in the United States, Uniform Commercial Code (UCC) section 8-112, a creditor may reach securities credited to a securities account only by legal process against the intermediary with which the judgment debtor maintains a securities account.[80] This is the so-called prohibition against "upper-tier attachment." In general, this rule makes perfect sense—an intermediary other than the debtor's intermediary may not have information as to the nature and extent of the debtor's interest (if any) in a fungible bulk of securities. Allowing legal process against such an intermediary could force the intermediary to block assets other than those of the

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SEC to take action. Absent a legislative mandate to act, however, the SEC has broad discretion as to whether or not to impose or encourage infrastructure reform.

[75]Of course, other examples abound. *See, e.g.*, Nougayrède, *supra* note 30, at 294-95 (discussing consultation by European Securities and Markets Authority on segregation practices, which rejected imposition of segregated accounts and accepted omnibus accounts).

[76] For background see Charles W. Mooney, Jr. *Property, Credit, and Regulation Meet Information Technology: Clearance and Settlement in the Securities Markets*, 55 LAW AND CONTEMP. PROBS. 131, 142-45, 149-55 (1992).

[77] *See* Mooney, *Beyond Intermediation*, *supra* note 2, n. 273.

[78] Donald, *supra* note 63 at 91. Given this, the fact that many investors choose to hold securities in the intermediated system in no way suggests that they are indifferent to the risks associated with intermediated holding.

[79] Mooney, *Beyond Intermediation*, *supra* note 2, at 449:

> The intermediaries and CSDs have little incentive to remove obstacles to portability of securities in and out of the system. On the other hand, when it would increase the efficiency and lower the costs of the specific relationship between DTC *itself* and issuers of securities, DTC has indeed invested in reforms and innovation affecting direct-holding relationships.

[80] Uniform Commercial Code § 8-112(c).

judgment debtor, thereby disrupting the chain of securities holding and potentially affecting many other investors and even the settlement process.[81]

When assets are *identified and already blocked*, however, these concerns should fall away. In this setting, in 2012 counsel for judgment creditors holding a judgment against Bank Markazi, the central bank of Iran (Markazi),[82] undertook negotiations with a member of Congress and staff over legislation that would allow their clients to reach blocked assets held in an account of Clearstream Banking S.A. (Clearstream) at Citibank in New York, which in turn held the assets in its account at DTC.[83] Clearstream, was the intermediary for its account holder, Markazi. DTCC and its counsel took an active role in the negotiations and advocated for the interests of securities intermediaries and articulated their concerns about potential disruptions resulting from any upper-tier attachments. The ultimate result of these negotiations was the enactment of a federal statute allowing the judgment creditors to reach the blocked Markazi assets at issue. But the statute was limited in scope to those particular blocked assets held at Citibank and to the particular consolidated enforcement proceeding involved.[84] There are no apparent policy bases for this limitation or for any principled objections to a statute applying more generally so long as the assets would be similarly identified and blocked. This vignette cogently illustrates the industry intransigence of the opposition to *any* reforms that might chip away at the deeply intermediated holding structure.[85]

A 2014 discussion paper produced by the International Securities Services Association (ISSA) provides a third example.[86] The ISSA Paper sought "to provoke industry-wide discussion into the question of transparency in securities transaction and custody chains."[87] The paper recognized that reduced transparency resulting from the "omnibus model" of securities

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[81] *See* UNIDROIT Convention on Substantive Rules for Intermediated Securities (2009), http://www.unidroit.org/instruments/capital-markets/geneva-convention (GSC), art 22(1) (prohibiting upper tier attachment); LEGISLATIVE GUIDE, *supra* note 16, at 140-41:

> Permitting such [upper-tier] attachment would undermine the ability of an intermediary to perform its functions and disrupt the integrity of the intermediated holding system . . . If upper-tier attachment is permitted, such blockage [of securities accounts of other account holders] could happen because upper-tier intermediaries usually do not know and are unable to specify what part of securities or intermediated securities are the relevant securities . . .

The GSC creates an exception to the prohibition if a contracting state has made a qualifying declaration to the effect that it has procedures that eliminate the information problems addressed by the prohibition—primarily intended for States with transparent holding systems. GSC, art 22(3).

[82] The judgments were based on the claims of victims and survivors of victims of Iran-sponsored acts of terrorism.

[83] By way of full disclosure, I was a consultant to counsel for certain of the judgment creditors and in that capacity participated in some of these negotiations.

[84] 22 U.S.C. § 8772. The constitutionality of the statute was upheld by the Supreme Court of the United States in Bank Markazi, aka Central Bank of Iran v. Peterson, 578 U.S. ___, 136 S.Ct. 1310, 194 L.Ed.2d 463 (2016).

[85] I do not suggest that there was any bad faith or impropriety on the part of DTCC, its counsel, or the various stakeholders that they may have informally represented in these discussions. Some of the individuals involved I count as my friends and hold in the highest regard. The point is, simply, that they were willing to concede only the bare minimum that they deemed necessary even though more generally applicable legislation could have been formulated that would not have presented any detrimental effects.

[86] International Securities Services Association (ISSA) Working Group, Discussion Paper on Transparency in Securities Transaction and Custody Chains (April 22, 2014) (ISSA Paper).

[87] *Id.* at 2. The ISSA Paper and other discussions of omnibus accounts within the securities industry was prompted (at least in part) by alleged misbehavior of Clearstream Banking (Luxembourg), ultimately settled, in connection with the assets of Bank Markazi discussed above. *See* Delphine Nougayrède, *supra* note 30, at 301-02.

holding inhibits the identification by issuers of beneficial holders.[88] As a result, the system necessitates "complex disclosure processes" and makes more difficult the "management of the risks arising from money laundering, terrorist financing, market manipulation, tax evasion and capital flight."[89] The paper surveyed several means of introducing increased transparency in intermediated securities holding systems. It suggested that an "extreme version" of better managing omnibus accounts would be to "move away from the nominee/omnibus model completely, as has been done in some domestic markets"—an approach that the paper rejected.[90] A better approach, it argued, would be "to regulate the conditions under which securities intermediaries offer omnibus accounts,"[91] but the paper did not seriously examine or evaluate the alternative of eliminating omnibus accounts.

The paper also explored the possibility of incorporating a system of identifying information in an omnibus account-based intermediated holding system. The paper discussed a system of messaging such as that used by correspondent banks in payment systems, a system of transmitting beneficial ownership information as in tax processing, and the maintenance of audit trails along the lines used by the SEC in addressing market abuse.[92] In the end, however, the ISSA Paper made no recommendations for transparency reforms. As aptly summarized by Delphine Nougayrède:

> In short, one takes away from this 2014 ISSA working paper that a number of technological solutions for end investor identification already existed within the securities industry. However, they seemed to all fall victim to the industry's preferences for status quo, and to the perceived absence of sufficiently strong regulatory pressure on a transnational basis.[93]

Putting aside the obvious solution of adopting a strictly transparent direct-holding infrastructure, arguably the principal obstacles (both practical and cost-based) to enhanced transparency identified in the ISSA Paper arise from attempts to graft attributes of transparency on essentially nontransparent, omnibus-account infrastructures. This calls to mind another metaphor, the proverbial problem of inserting a "square peg into round hole."

[88] ISSA Paper, *supra* note 86, at 4.
[89] *Id.*
[90] *Id.* at 10-11. As the ISSA Paper explained: "Leaving aside the benefits of the omnibus model, one difficulty with [eliminating omnibus accounts] is that it would only identify the principals behind securities transactions rather than the successive layer of the intermediation chain if the industry put in place additional features." ISSA Paper, *supra* note 72, at 11. Nougayrède noted the cryptic nature of this explanation. Nougayrède, *supra* note 29, at 302.
[91] ISSA Paper, *supra* note 86, at 11.
[92] *Id.* at 12-13.
[93] Nougayrède, *supra* note 30, at 304.

Summing up, the industry view might aptly be characterized as satisfaction with an infrastructure based on intermediated holding of securities through omnibus accounts, a structure generally in the industry's self interest, and opposition to modifications of the holding infrastructure that would disrupt this status quo. This position would not necessarily take into account social welfare more generally and would not favor material infrastructure modifications even if the benefits to the industry could be preserved within another structure. As already noted, favoring preservation of the beneficial status quo is in no way improper. On the other hand, the industry's position should have little persuasive impact on the question whether retaining the status quo or modifying the holding infrastructure would reflect an appropriate public policy. Few would believe that the consistency between the industry's expressed views on public policy and its own self interest in maintaining the status quo is merely a coincidence. This observation is reminiscent of a persistent problem plaguing law reform efforts, which I have in another paper dubbed the "Fallacy of Expertise."[94] As "this silly little syllogism" is there explained:

> [The Fallacy of Expertise] may be simply stated with respect to a given proposal for a change in the legal rules from the perspective of any person occupying a position of formal or informal influence and respect in the process of law reform:
>
> (i) I exercise my responsibility as an expert competently to recognize the need to improve the law and to propose any beneficial reforms.
>
> (ii) I did not think of the proposed change in law.
>
> (iii) Therefore, the proposal is not a good idea and should not be adopted.[95]

This essay and *Beyond Intermediation* identify key internal and external effects of the current intermediated securities holding infrastructures. They establish a plausible basis for seriously considering whether a transparency and direct-registration oriented infrastructure reform might enhance social welfare. They aspire to establishing a useful framework for further research and analysis. It is obvious, but nonetheless worth emphasizing, that these efforts do not

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[94] Charles W. Mooney, Jr., *Lost in Transplantation? Modern Principles of Secured Transactions Law as Legal Transplants*, in SECURED TRANSACTIONS LAW IN ASIA (Louise Gullifer & Dora Neo Eds., Oxford, Hart Publishing, forthcoming 2020).

[95] *Id.*

(and could not) conduct a comprehensive cost-benefit analysis of such reforms. Such a project necessarily would entail a quantitative and qualitative analysis of the net costs or net benefits.[96]

VI. IMPLEMENTING REFORM: CONFRONTING THE CITADEL OF INTERMEDIATED HOLDING

Beyond Intermediation explores the political economy challenges facing implementation of the NPS (or any fundmental modification of the intermediated holding systems).[97] That discussion highlights in particular the opposition of entrenched interests, the strong path dependence fostered by the existing infrastructure and business models, and structural obstacles to disintermediation imposed by current law. Its tentative conclusion is that implementation of disintermediating reforms (such as the enhanced transparancy through direct registration as contemplated by the NPS) in the United States probably would require regulatory invention, most likely by the SEC.[98] It argues that such reforms might be influenced by interests outside of the community of intermediaries, perhaps through the auspices of one or more SEC advisory committees or through the work and influence of the American Bar Association Section of Business Law (ABA Section).

More recently a nascent task force of the ABA Section is being organized to take a critical look at the prevailing securities holding infrastructure. In addition to participation of the "usual suspects" from the private sector such as the communities of intermediaries, investors, and issuers, the project also seeks to attract the attention and involvement of regulators as well as more diverse external stakeholders, including those concerned with taxation, AML, anti-terrorist

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[96] A cost-benefit analysis would be facilitated by a comparison of the current infrastructure with alternative infrastructures. Ideally this would entail one or more concrete "real-world" reform proposals offering substantial operational and technical detail. On the other hand, the RFP approach suggested above (a variation of the radical technology-forcing approach) may offer a viable alternative. *See* pp. [10-11] & note 59, *supra*.

[97]Mooney, *Beyond Intermediation*, *supra* note 2, Part VII.

[98] Although the discussion in *Beyond Intermediation* does not express optimism for SEC intervention, a recent rulemaking proposal relating to the market data infrastructure might be a good sign. *See* SEC Market Data Infrastructure, 85 Fed. Reg. 16726 (proposed Feb. 14, 2020) (to be codified at 17 C.F.R. Regulation National Market System Rules 600, 603 and new Rule 614); Davis, Polk & Wardwell LLP, SEC Proposes Changes to Market Data Infrastructure (April 2, 2020), https://www.finregreform.com/single-post/2020/04/02/sec-proposes-changes-to-market-data-infrastructure/?utm_source=Davis+Polk+%26+Wardwell+LLP+-+FinReg+Blog&utm_campaign=202ff06820-RSS_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_198cc84cef-202ff06820-73350909 ("This is the first major market data infrastructure proposal since the SEC adopted Regulation National Market System . . . in 2005.").

financing, sanctions compliance, KYC monitoring, cybersecurity, privacy, taxation, and national security. Of course, one cannot expect that project to undertake any serious cost benefit analysis. But it offers a real opportunity to trigger and lay the groundwork for such work by other organizations and, hopefully, the SEC.[99] One hopes that those with interests aligned with maintaining the status quo will balance the "stick" of being left behind with the "carrot" of participating in groundwork that may lead to a new infrastructure.

Enthusiasm generated by the ABA Section project notwithstanding, the barriers to change may be so high that thoughtful analysis and discussion may be insufficient to prompt any formal regulatory initiatives. Perhaps only something akin to another financial crisis that negatively implicates the securities holding infrastructure could provoke reforms, a sad but plausible prospect. Or, a relevant scandal or two might illustrate the potential for abuse inherent in nontransparent systems and provide incentives for breaking through the chains of path dependence.[100] On a happier and more optimistic note, the emergence of new technologies—in particular blockchain and DLT more generally—may provide a catalyst for rethinking the infrastructure.[101] For example, one or more privately developed Fintech solutions might offer breakthroughs that would ameliorate the problems imposed by intermediated holding while also avoiding costly and disruptive consequences. Such proposals, perhaps encouraged by an RFP from the SEC as mentioned above,[102] might attract welcome industry and regulatory support.

VII. CONCLUDING OBSERVATIONS

Intermediation by brokers and banks is essential for modern securities markets. But one aspect of this intermediation in particular, post-settlement intermediated holding of securities in securities accounts, imposes a host of costs and risks. Some of these are internal costs imposed on securities markets and market participants in connection with the core interests such as securities holding and related trading and settlement of trades, use of securities by intermediaries, the exercise of investor rights including claims against issuers, and similar interests. Other costs are imposed primarily on external actors and society in general. This essay has focused on the

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[99] In this connection note that the ABA Section played an instrumental role in the major revisions to UCC Article 8 in 1994 and the corresponding federal regulations governing United States Treasury and Agency securities. *See* Charles W. Mooney, Jr., *The Roles of Individuals in UCC Reform: Is the Uniform Law Process a Potted Plant? The Case of Revised UCC Article 8*, 27 OKLA. CITY U. L. REV. 553, 560-74 (2002).

[100] *See, e.g.,* European Securities and Markets Authority, Report: Preliminary Findings on Multiple Withholding Tax Reclaim Schemes (July 2, 2019), https://www.esma.europa.eu/sites/default/files/library/esma70-154-1193; Karin Matussek, Clearstream Staff Suspected of Misleading Authorities on Tax Fraud Scandal (September 12, 2019), https://www.bloomberg.com/news/articles/2019-09-12/clearstream-staff-suspected-of-misleading-authorities-on-cum-ex.

[101] *See* Charles W. Mooney, Jr., *Global Standards for Securities Holding Infrastructures: A Soft Law/Fintech Model for Reform*, 40 MICH. J. INT'L L. 531, 541, 545 (2019) (arguing that the emergence of Fintech interest in DLT make this a propitious time for considering basic changes in securities holding infrastructures); *see also* Tom C.W. Lin, *the New Financial Industry*, 65 ALA. L. REV. 567, 595-622 (outlining first principles for developing a regulatory framework for finance in the context of emerging technologies). The NPS proposal advanced in *Beyond Intermediation*, however, is agnostic as to the relevant technology.

> It may well be that legacy technology would be up to the task of performing the essential functions of the NPS, at least as contemplated here for its initial functions. For now, it is sufficient to issue an RFP to the Fintech community to address the goals and functions of the NPS.

Mooney, *Beyond Intermediation*, *supra* note 2, at 445 (footnotes omitted).

[102] *See* pp. [10-11], *supra*.

latter set of costs. It has argued that the intermediated securities holding infrastructure in the United States harbors substantial negative externalities. The holding infrastructure benefits the intermediaries whose business models rely on its continuation while imposing costs on external constituencies that are not internalized by these beneficiaries. *Beyond Intermediation* offers, and this essay extends, a framework for a cost-benefit analysis of the securities holding infrastructure as compared to reforms oriented toward increased transparency and direct-holding. This essay builds on that framework in particular by elaborating on the impact of the securities holding infrastructure on external constituencies.

This essay also extends the discussion of the difficulties confronting any substantial reforms in view of the entrenched interests favoring the status quo, the path dependency of the legacy infrastructure, and the stickiness of the regulatory regime. It offers some discrete examples of failed attempts to overcome the powerful interests that support maintenance the deeply intermediated infrastructure. But it also considers the means and potential for breakthroughs that might preserve the substantial benefits of efficiency and flexibility afforded by the incumbent infrastructure while reducing or eliminating many of the costs and risks that the infrastructure imposes. Despite the obstacles, there may be reason for optimism. New technologies may effectively force market participants and regulators to face the real prospects reforms provoked by the benefits of disruptive technology. And the new initiative by the ABA Section promises to assemble an unprecedented breadth and diversity of internal and external stakeholders to consider the securities holding infrastructure. Stay tuned.