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Intermediary Influence

Kathryn Judge[†]

Ronald Coase and others writing in his wake typically assume that institutional arrangements evolve to minimize transaction costs. This Article draws attention to a powerful, market-based force that operates contrary to that core assumption: “intermediary influence.” The claim builds on three observations: (1) many transaction costs now take the form of fees paid to specialized intermediaries, (2) intermediaries prefer institutional arrangements that yield higher transaction fees, and (3) intermediaries are often well positioned to promote self-serving arrangements. As a result, high-fee institutional arrangements often remain entrenched even in the presence of more-efficient alternatives.

This Article uses numerous case studies from the financial markets to illustrate how intermediaries acquire influence over time and how they have used that influence to promote high-fee arrangements. It further shows that intermediary influence helps to explain an array of observable trends—including the growth and increasing complexity of the financial sector—that are not readily reconciled with traditional predictions. After identifying some of the welfare losses that can result, this Article considers the implications of intermediary influence for both theory and policy.

INTRODUCTION

Intermediaries are a prominent feature of most modern markets, and with good reason. Intermediaries can bridge information asymmetries, enable parties to find one another, and otherwise make it easier for parties to overcome the many barriers to transacting. The high degree of specialization common in many industries today would not be possible without sophisticated intermediation systems. At the same time, improvements in information technology and other innovations are making it easier for parties to connect, share information, and otherwise surmount obstacles to transacting without relying on traditional

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intermediaries. And, when parties do continue to rely on intermediaries, these developments should enable intermediaries to fulfill their role more efficiently, reducing the costs of the services that they provide. Thus, one might expect the prevalence and revenue of traditional intermediaries to be on the decline. In some sectors, however, the opposite is occurring.

Nowhere is this puzzling pattern more evident than in the movement of capital. Improvements in information technology and financial innovations have radically changed how capital moves from investors to projects, suggesting significant efficiency gains. Yet the size of the financial sector had been growing consistently until the 2007–2009 financial crisis (“the Crisis”). In the decade before the Crisis, for example, the financial sector accounted for approximately 30 percent of all corporate profits, as compared to just 16 percent during the 1970s and 1980s.¹ Similarly, a recent study by Professor Thomas Philippon found that “the unit cost of intermediation is about as high today as it was at the turn of the 20th century,” and that “[i]mprovements in information technologies do not appear to have led to a significant decrease” in intermediation costs.² Moreover, recent studies suggest that the relationship between the size of a country’s financial sector and the rate of its development is an inverted “U”—having a robust financial system is critical for economic growth, but too much finance impedes development.³ It may be that sophisticated financial systems provide value in ways that these studies fail to capture.⁴ For example, the financial system may be expanding its scope, providing

¹ David Leonhardt, *Heading Off the Next Financial Crisis*, NY Times Magazine 36 (Mar 28, 2010).

² Thomas Philippon, *Has the U.S. Finance Industry Become Less Efficient? On the Theory and Measurement of Financial Intermediation* *5 (NBER Working Paper No 18077, Sept 2014), online at http://pages.stern.nyu.edu/~tphilipp/papers/Finance_Efficiency.pdf (visited Dec 4, 2014).

³ See, for example, Jean-Louis Arcand, Enrico Berkes, and Ugo Panizza, *Too Much Finance?* *3, 11 (IMF Working Paper No 12/161, June 2012), online at <http://www.imf.org/external/pubs/ft/wp/2012/wp12161.pdf> (visited Dec 3, 2014); Stephen G. Cecchetti and Enisse Kharroubi, *Reassessing the Impact of Finance on Growth* *1 (Bank of International Settlements Working Paper No 381, July 2012), online at <http://www.bis.org/publ/work381.pdf> (visited Dec 3, 2014); Siong Hook Law and Nirvikar Singh, *Does Too Much Finance Harm Economic Growth?*, 41 J Bank & Fin 36, 36–37 (2014).

⁴ See Philippon, *Has the U.S. Finance Industry Become Less Efficient?* at *27 (cited in note 2). Notably, despite the methodological limitations, other academics have started to employ Philippon’s methodology. See, for example, Robin Greenwood and David Scharfstein, *The Growth of Finance*, 27 J Econ Persp 3, 3–4 (2013). See also Part I.B.

credit to persons and firms that previously would have been unable to obtain it, and this might be more costly than providing credit to less risky borrowers.⁵ Nonetheless, the primary function of the financial sector is intermediation, and intermediation is a drag from a social welfare perspective.⁶ The sector's growth and the lack of a meaningful decline in the cost per unit of intermediation thus raise the question: Why are the expected efficiency gains not lowering costs for those seeking and supplying capital?

Shifting from facts to theory only accentuates the mystery. Much of the relevant literature stems from the work of Professor Ronald Coase. Nearly eighty years ago, Coase theorized that the mechanisms of production are likely to be brought together in a firm when the transaction costs associated with engaging in the same activity in the market exceed the benefits that the market otherwise confers.⁷ This insight has led to an entire field of economics that uses transaction costs to explain the existence and structure of firms and a range of other institutional arrangements.⁸ As Judge Richard Posner has explained, Coase, Professor Oliver Williamson, and other institutional economists "have argued persuasively that the primary function of the institutions that support the market is to reduce transaction costs."⁹ A core assumption underlying this work is that institutional arrangements generally evolve to minimize transaction costs.¹⁰ This means that "[t]he specific set of institutional arrangements chosen [] represent[s] the governance structure that minimize[s]

⁵ See Philippon, *Has the U.S. Finance Industry Become Less Efficient?* at *20, 23 n 19 (cited in note 2); Greenwood and Scharfstein, 27 *J Econ Persp* at 23 (cited in note 4).

⁶ See Part IV.

⁷ See R.H. Coase, *The Nature of the Firm*, 4 *Economica* 386, 390–98 (1937).

⁸ See, for example, Jeffrey T. Macher and Barak D. Richman, *Transaction Cost Economics: An Assessment of Empirical Research in the Social Sciences*, 10 *Bus & Politics* 1, 2 (2008) (describing the article's review of "approximately 900 articles that empirically test some aspect of [transaction cost economics] theory," reflecting the size of the field).

⁹ Richard A. Posner, *From the New Institutional Economics to Organization Economics: With Applications to Corporate Governance, Government Agencies, and Legal Institutions*, 6 *J Inst Econ* 1, 3 (2010). See also Oliver E. Williamson, *Economic Organization: Firms, Markets and Policy Control* 163 (NYU 1986) ("[A] guiding principle of comparative institutional study [is] the hypothesis that transactions are assigned to and organized within governance structures in a discriminating (transaction-cost economizing) way.").

¹⁰ See Posner, 6 *J Inst Econ* at 3–4 (cited in note 9).

the total cost of consummating the transactions of interest.”¹¹ Because intermediation is a type of transaction cost (albeit one that can reduce other transaction costs), the growth of the financial industry seems puzzling when situated in a simple Coasean frame.¹²

This Article helps to explain this otherwise-puzzling phenomenon by drawing attention to a market-based force that operates counter to these traditional assumptions: “intermediary influence.” Increasingly, transaction costs take the form of fees paid to intermediaries rather than costs incurred directly by the parties to a transaction.¹³ Because fees are revenue to the intermediaries to whom they are paid, intermediaries prefer laws, norms, market structures, and other institutional arrangements that entail higher, not lower, transaction fees.¹⁴ Moreover, intermediaries often have expertise and other strategic advantages that enable them to affect the processes through which institutions evolve in self-serving ways. As a result, adding intermediary influence to the picture reveals an important shortcoming in the proefficiency assumption underlying much of the literature on institutional design. By recognizing the influential role that intermediaries often play in the evolution of institutions, this Article helps to explain the growth of the financial industry and the existence of numerous institutional arrangements in the financial markets that cannot easily be reconciled with standard Coasean assumptions.

An array of forces collectively enable intermediaries to influence the evolution of institutions. Two important sources of influence are the informational and positional advantages that arise from the services that these actors provide as intermediaries.¹⁵ One role that intermediaries often play is helping parties overcome information asymmetries. In the process of playing this role on a repeat basis, intermediaries become experts; they understand the good and the market in which it is traded better than the parties that they serve, and often better than regula-

¹¹ Paul L. Joskow, *Asset Specificity and the Structure of Vertical Relationships: Empirical Evidence*, 4 J L, Econ & Org 95, 97 (1988).

¹² For a discussion of other explanations that may complement the analysis here, see Part V.A.

¹³ See Kathryn Judge, *Fee Effects*, 98 Iowa L Rev 1517, 1525–26 (2013).

¹⁴ Following Professor Douglass North, this Article defines an “institution” as any one of the “humanly devised constraints that structure political, economic and social interaction.” Douglass C. North, *Institutions*, 5 J Econ Persp 97, 97 (1991).

¹⁵ See Part III.A.

tors.¹⁶ Another role that intermediaries often play is to bring parties together, sometimes by eliminating the need for them to meet directly.¹⁷ To do so efficiently, intermediaries frequently create institutional arrangements—ranging from formal exchanges to informal relationship networks—through which a good is regularly traded. Particularly because network effects may favor such structures once created, intermediaries' control over these structures can provide intermediaries with significant positional advantages. The informational and positional advantages that intermediaries thus enjoy are critical to their ability to add value, and these advantages help to explain why parties so often find it cost-effective to use an intermediary in connection with a particular transaction type. In a dynamic environment, however, intermediaries may use these same informational and positional advantages to promote and entrench high-fee institutional arrangements.

Additionally, the structures of the industries in which intermediaries operate often facilitate their capacity to promote favorable institutional arrangements—a collective good from the perspective of intermediaries that earn higher fees as a result.¹⁸ By contrast, the parties that intermediaries serve are usually numerous and diffuse.¹⁹ This creates coordination problems and other challenges that reduce the capacity of parties to promote institutional arrangements from which they would collectively benefit. The net effect is that more resources are invested that promote high-fee institutional arrangements than are devoted to the adoption of more-efficient alternatives.

¹⁶ See, for example, Arthur Levitt Jr., *Don't Gut the S.E.C.*, NY Times A19 (Aug 8, 2011) (explaining that when the SEC sought “to implement regulation prohibiting accounting firms from doing auditing and consulting work for the same companies . . . [it] had to do a cost-benefit analysis,” but “the big audit firms alone held the cost data . . . , which they declined to provide”).

¹⁷ See Judge, 98 Iowa L Rev at 1541 (cited in note 13) (discussing the difficulties that prospective investors and companies would experience if they had to find each other without intermediaries).

¹⁸ Many intermediaries operate in industries dominated by relatively few market participants. This facilitates intermediaries' ability to act collectively to promote favorable institutional arrangements and increases the probability that individual intermediaries will have an incentive to promote such arrangements even when those arrangements have characteristics of a collective good. See Mancur Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups* 63 (Harvard 1971). Moreover, even when there are numerous intermediaries in a class, they often belong to trade or other organizations that promote their collective interest in high-fee institutional arrangements. See id at 63, 137–41.

¹⁹ See Part III.B.

This Article's examination of how intermediaries influence the evolution of institutional arrangements in a dynamic environment builds on earlier work examining the ramifications of society's increasing reliance on specialized intermediaries.²⁰ That work similarly recognizes that relying on a specialized intermediary can yield an array of benefits and thus will often be a cost-effective approach for a party seeking to engage in a particular transaction type.²¹ Moreover, a host of factors—ranging from competition to the importance of a good reputation—increase the probability that an intermediary will recommend a transaction that is well suited to the party's needs. Nonetheless, these factors are imperfect and often fail to reduce the number of possible transactions to just one. When that occurs, a profit-maximizing intermediary will use its influence to promote the transaction that yields the highest fee, and sometimes the intermediary will succeed. As a result, the overall mix of transactions consummated shifts toward the relatively high-fee transaction.²² This "fee effect" interacts with this Article's analysis of intermediary influence in a number of ways.²³ It sheds light on some of the social costs that arise when a class of intermediaries seeks to maximize fees by favoring institutional arrangements that entail ongoing reliance on the intermediaries' services. It also can be a mechanism through which intermediary influence alters the institutional landscape.

One of this Article's examples of intermediary influence illustrates how these two phenomena build on each other. The example looks at the influence of stockbrokers on individuals' investment decisions.²⁴ In 1975, a regulatory change made it easier and less expensive for individuals to own stock directly. Yet, in the wake of that change, the pattern has been the opposite of what traditional assumptions would predict: there has been a dramatic decline in individual ownership of stocks and a rise in the amount invested in costly mutual funds.²⁵ This Article suggests that this surprising development may be attributed, at least in part, to the influence of stockbrokers as intermediaries. In lowering the transaction fees that investors paid to buy and

²⁰ See generally Judge, 98 Iowa L Rev 1517 (cited in note 13).

²¹ See *id.* at 1520 (indicating that when "fee effects . . . outweigh the benefits associated with reliance upon a specialized intermediary," there is a "market failure").

²² See *id.* at 1527.

²³ See Part V.A.

²⁴ See Part II.C.

²⁵ See notes 125–26 and accompanying text.

sell stocks, the regulatory change also reduced stockbrokers' incentive to encourage their clients to invest in stocks, while increasing stockbrokers' incentive to push other investment products that entailed higher fees.²⁶ There was, accordingly, a fee effect favoring mutual funds over individual stocks. Drawing on other evidence showing that most mutual funds do not yield returns high enough to cover the associated fees and that individuals who acquire mutual funds through brokers tend to acquire funds with higher-than-average fees and lower-than-average performance, this Article suggests that stockbroker influence may help to explain the decline in individual ownership of stocks.²⁷

The rise of mutual funds highlights how individual intermediaries facing a common incentive scheme can use informational advantages, coupled with client relationships and other positional advantages, in ways that systematically alter the typical chains connecting investors and firms. This Article's other examples of intermediary influence do not rely on fee effects. These examples instead use other institutional arrangements found in the financial markets to demonstrate the importance of the capacity of intermediaries to promote their collective interests, as well as the ways that their various vectors of influence often work together to enhance intermediary influence.²⁸ The examples collectively reveal that, while none of the identified factors is necessary or sufficient for intermediaries to influence institutional arrangements, and the mechanisms through which intermediaries exercise that influence vary by context, these identified advantages arise with sufficient frequency and are sufficiently important that intermediaries can regularly entrench and promote high-fee arrangements. And intermediaries can do so even when serving sophisticated clients.²⁹

In conjunction with using intermediary influence to account for specific institutional arrangements, this Article shows how intermediary influence may help to explain a variety of characteristics of financial markets today.³⁰ For example, the rise of mutual funds is but one way that the typical chain connecting

²⁶ See Part II.C.1.

²⁷ See Part II.C.1.

²⁸ See Part II.

²⁹ See, for example, Part II.D (describing the capacity of intermediaries to entrench a relatively inefficient and high-fee market structure for credit-default swaps, a product available exclusively to sophisticated investors).

³⁰ See Part IV.

an investor and the project underlying his investment has become longer and more complex in recent decades. That the increasing length and complexity of these chains can create new opportunities for intermediaries to earn fees, increase parties' tendency to rely on intermediaries, and obscure intermediaries' profits may help to explain this development. The prevalence of these types of macrolevel phenomena buttresses this Article's claim regarding the power of intermediary influence in addition to illustrating its importance.

This Article also examines some costs of intermediary influence. Putting aside the expected wealth transfer from parties to intermediaries, high-fee institutional arrangements may preclude value-creating transactions and lead to excessive entry and overinvestment.³¹ Financial-intermediary influence specifically may cause capital to be allocated in socially suboptimal ways and, through a number of mechanisms, may tend to increase systemic risk.³² Intermediary influence is thus a timely and important topic that merits further attention, particularly in the context of financial markets.

Intermediary influence has implications for theory and practice alike. To begin, an array of theories help to explain the shape of institutions and related economic activity. Agency theory, collusion, path dependence, and public-choice theory are among the existing frameworks that overlap with intermediary influence. Each informs the analysis here accordingly.³³ The areas of overlap also provide a fruitful starting point for considering when intermediaries are likely to be most influential and the types of tools that may be helpful in counteracting their influence.³⁴ At the same time, focusing the analysis on a set of actors playing a particular economic role—helping to bridge a barrier to transacting—enables this Article to identify structural reasons why this class of actors will regularly enjoy strategic advantages that allow them to influence institutional arrangements in self-serving ways. And because intermediaries' interests are served by maximizing transaction fees—a friction that precludes otherwise value-creating transactions—their ca-

³¹ See Part IV.D.

³² See Parts IV.E, IV.F.

³³ See Part V.A (analyzing the relationship between intermediary influence and other theories that have been used to help to explain the phenomena at issue); Part V.C (showing how the overlap between intermediary influence and other theories may provide insights into the types of policy responses that may be warranted).

³⁴ See Part V.B.

capacity to shape institutions has distinctive and adverse welfare effects.

Given the persistent, and potentially increasing, importance of institutions,³⁵ recognizing this additional market-based force also has important policy implications. This Article thus concludes by considering, in broad terms, some types of responses that may help to reduce the resultant inefficiencies.³⁶

This Article proceeds in five parts. Part I presents the Article's main claim. It uses an example—pervasive reliance on real-estate agents and the high fees paid for their services—to illustrate why intermediaries have become so commonplace and how the informational and positional advantages that they possess, in addition to collective-action dynamics, may help intermediaries to entrench high-fee arrangements. This Part also situates the Article's claim in relation to the literature on transaction cost economics and identifies some effects of intermediary influence.

The next three parts focus on the influence of financial intermediaries. Collectively, these parts illustrate and expand on the framework presented in Part I. Part II examines the rise or persistence of an array of institutional arrangements observable in the financial markets that may be explained, at least in part, by intermediary influence. These microlevel analyses bring the dynamics through which intermediaries operate into sharp relief. Part III addresses why financial intermediaries may be particularly influential. It shows that the factors identified as favoring intermediary influence—informational and positional advantages, and industry structures conducive to promoting collective interests—commonly characterize financial intermediaries. Part IV takes a broader view to further support the claim that intermediaries seem to exercise significant influence over the shape of institutions in financial markets. It does so by drawing attention to a range of macrolevel phenomena that are consistent with intermediary influence and inconsistent with more-traditional models of how institutions evolve over time. It also identifies some of the distinctive costs that arise from financial-intermediary influence.

³⁵ See Andrew G. Haldane, *Why Institutions Matter (More Than Ever)* *2 (Sept 4, 2013), [online](http://www.bankofengland.co.uk/publications/Documents/speeches/2013/speech676.pdf) at <http://www.bankofengland.co.uk/publications/Documents/speeches/2013/speech676.pdf> (visited Dec 3, 2014).

³⁶ See Part V.C.

Part V addresses the theoretical and policy implications of this Article's claim. It first explores the interaction between intermediary influence and existing theories. It then considers ways that policymakers and market participants could reduce the inefficiencies that arise from intermediary influence.

I. THE CLAIM

A. An Illustration

This Section considers the roles played by one type of intermediary—real-estate agents—to illustrate why intermediaries have become so ubiquitous in modern economies. It then builds on this example to show how a class of intermediaries, once established, can affect the evolution of institutional arrangements in socially suboptimal ways.

1. Intermediaries.

The rise of intermediaries can be traced to the critical role that they often play in overcoming the barriers to transacting that are the source of transaction costs. To facilitate the analysis, “transaction costs can be divided into three somewhat overlapping functional categories: (1) get-together costs, (2) decision and execution costs, and (3) information costs.”³⁷ A somewhat stylized example—the real-estate market circa 1985—illustrates the reasons that parties so frequently use specialized intermediaries to overcome these hurdles.

The first category of transaction costs, get-together costs, includes the costs that a seller incurs trying to find a ready and willing buyer and those that a buyer incurs trying to find a house that suits his needs, including size, neighborhood, and price range. Real-estate agents can help both parties overcome these hurdles, primarily through the agents' access to the Multiple Listing Service (MLS). The MLS is a readily searchable database containing detailed information about the majority of

³⁷ Robert C. Ellickson, *The Case for Coase and against “Coaseanism”*, 99 *Yale L J* 611, 615 (1989). Coase never defined “transaction costs,” although he did endorse another scholar's articulation that transaction costs may be understood as consisting of “search and information costs, bargaining and decision costs, [and] policing and enforcement costs.” R.H. Coase, *The Firm, the Market, and the Law* 6 (Chicago 1988), quoting Carl J. Dahlman, *The Problem of Externality*, 22 *J L & Econ* 141, 148 (1979).

properties currently on the market.³⁸ When an agent adds a seller's home to the MLS, he ensures that the property is among those that potential buyers will see every time they search for a home of the type that he is selling.³⁹ Real-estate agents further help parties overcome the challenge of "getting together" by providing buyers with listings from the MLS, hosting open houses, and otherwise showing homes to potential buyers.⁴⁰

Real-estate agents can also help buyers and sellers overcome the second category of challenges, decision and execution costs. Relying on the knowledge of comparable transactions and market norms that they have gained through repeat transactions, real-estate agents can provide clients with guidance about the reasonableness of the price and other terms, making it easier for the buyer and seller to agree on the terms for the transfer.⁴¹

Third and finally, real-estate agents can play a critical role in helping parties overcome information asymmetries. A real-estate agent can, for example, help a seller discern what features of a house to highlight in order to make it attractive to potential buyers. Real-estate agents representing both the buyer and the seller can also play a role in reducing verification costs.⁴² Because real-estate agents are repeat players, it may behoove a seller's agent to encourage the seller to disclose nonobvious drawbacks of the home in order to protect the agent's reputation for integrity.⁴³ At the same time, a potential buyer may be more inclined to believe his agent's assessment of the home's quality than if comparable representations were made directly by the

³⁸ See Damien Abbott, *Encyclopedia of Real Estate Terms* 768–69 (Delta Alpha 3d ed 2008).

³⁹ See Federal Trade Commission and Department of Justice, *Competition in the Real Estate Brokerage Industry: A Report by the Federal Trade Commission and U.S. Department of Justice* *9 (Apr 2007) ("FTC and DOJ Report"), online at www.ftc.gov/reports/realestate/V050015.pdf (visited Dec 3, 2014) (stating that "[a]ccess to the MLS is one of the most important services that real estate brokers traditionally have offered" and describing the function and benefits of the MLS). See also id at *10–14.

⁴⁰ Id at *5.

⁴¹ See id (explaining that, because "most brokers have been involved in many more real estate transactions than their clients," brokers have "experience [that] builds expertise in gauging market conditions and knowledge of the details involved in completing a real estate transaction").

⁴² See id at *7 n 24 (explaining that real-estate agents can verify prequalification letters that prospective buyers receive from their mortgage brokers or lenders).

⁴³ See Paula C. Murray, *AIDS, Ghosts, Murder: Must Real Estate Brokers and Sellers Disclose?*, 27 Wake Forest L Rev 689, 691 (1992) (noting the "[e]rosion of the intentional misrepresentation doctrine" and the growth of the agent's legal duty to the buyer).

seller.⁴⁴ In light of these benefits, it is quite possible that the pervasive use of full-service real-estate agents was more efficient than alternative institutional arrangements, at least in the 1980s.

2. The evolution.

The role played by real-estate agents also illustrates how a class of intermediaries, once established, may subsequently shape the market in self-serving ways.⁴⁵ Much has changed since the 1980s. As a result of the Internet and other developments, it should be far easier for today's buyers and sellers to reach one another directly, overcome information asymmetries, and become better informed about comparable sales and common terms. Moreover, in the view of real-estate experts, "the efficiencies generated by the Internet and other technological advances suggest that broker costs should be falling"⁴⁶ and, in today's environment, "a more competitive outcome [should be] possible."⁴⁷ Thus, under traditional Coasean assumptions, one would expect

⁴⁴ Intermediaries may play roles that go beyond intermediation. A transactional attorney, for example, may play a valuable role in helping parties to overcome barriers to transacting (through activities like due diligence and drafting) yet also do more (like proposing value-creating transaction structures). See Ronald J. Gilson, *Value Creation by Business Lawyers: Legal Skills and Asset Pricing*, 94 *Yale L J* 239, 253–56 (1984). Similarly, financial intermediaries may facilitate consumption smoothing, reallocate risk to parties better positioned to bear it, and provide other socially valuable services. The fees earned for services beyond intermediation are not transaction costs and ideally should be excluded from the analysis. When services are bundled, however, this is easier said than done. This Article seeks to address this issue by focusing on situations in which the intermediary's primary function is to help parties overcome a barrier to transacting and acknowledging situations in which the intermediary provides additional services.

⁴⁵ This Article does not address the pure agency costs associated with the use of real-estate agents, such as their preference to sell a home with less effort than would be optimal from a seller's perspective. For more on these costs, see generally Steven D. Levitt and Chad Syverson, *Market Distortions when Agents Are Better Informed: The Value of Information in Real Estate Transactions*, 90 *Rev Econ & Stat* 599 (2008) (finding that homes owned by real-estate agents sell on average for 3.7 percent more than those that are not).

⁴⁶ FTC and DOJ Report at *30 (cited in note 39). See also *id.* at *22 (noting the belief "that the industry has not yet experienced the sort of sweeping benefits to consumers in the form of cost savings and service enhancements" that the Internet should have enabled).

⁴⁷ Lawrence J. White, *The Residential Real Estate Brokerage Industry: What Would More Vigorous Competition Look Like?*, 35 *Real Est L J* 11, 13 (2006). See also Robert W. Hahn, Robert E. Litan, and Jesse Gurman, *Bringing More Competition to Real Estate Brokerage*, 35 *Real Est L J* 86, 89 (2006) (counting on the Internet's unfulfilled potential to reduce the costs of buying and selling real estate).

to see new institutional arrangements that exploit the efficiencies that these technologies enable and, correspondingly, one would expect brokerage fees to have declined significantly over the past thirty years.⁴⁸ Nonetheless, while the commission rates paid to real-estate agents have declined a little, most buyers and sellers continue to use full-service real-estate agents⁴⁹ and to pay a commission of just over 5 percent of the value of the home sold for the services rendered.⁵⁰ As a result, Americans paid nearly \$60 billion for residential-real-estate brokerage services in 2005 alone.⁵¹ Even more striking, because of rising home values, the trend line moved in the opposite direction for a while, with “average brokerage fees per transaction [rising] 26 percent in real terms” from 1998 to 2005.⁵²

The failure of the dominant market structure to evolve in ways that would reduce transaction costs despite developments that should have enabled such an evolution is not easily reconciled with traditional assumptions. This failure is far less surprising once intermediary influence is added to the analysis. Consider first the positional advantages that real-estate agents enjoy. Real-estate agents created the MLS in order to better serve their customers, and it has been very successful in this regard.⁵³ Nonetheless, once the MLS had attracted a critical mass of listings, it became rational for many buyers to rely exclusively on the MLS to learn about homes for sale, which in turn made it difficult to sell a home without listing it on the MLS.⁵⁴ The phe-

⁴⁸ Switching to a completely new institutional arrangement can entail significant costs, so it may be efficient for regimes to persist even in the presence of more-efficient alternatives. Nonetheless, path dependence alone does not seem sufficient to explain the persistence of full-service real-estate agents and their capacity to continue to charge fees that are not clearly correlated with the costs that they incur in connection with selling a piece of real estate, since there is a range of possible institutional arrangements that could operate in conjunction with the existing regime while still yielding significant cost savings.

⁴⁹ See Hahn, Litan, and Gurman, 35 *Real Est L J* at 87 & n 2 (cited in note 47). See also *2014 Profile of Home Buyers and Sellers* *6 (National Association of Realtors, Nov 3, 2014), online at <http://www.realtor.org/reports/highlights-from-the-2014-profile-of-home-buyers-and-sellers> (visited Dec 4, 2014).

⁵⁰ See FTC and DOJ Report at *38–39 (cited in note 39). See also White, 35 *Real Est L J* at 12 (cited in note 47); *The Great Realtor Rip-Off: Why Is It So Expensive to Buy or Sell a House in America?*, *Economist* 65 (May 5, 2012) (noting an increase in average commission rates from 5.0 percent in 2005 to 5.4 percent in 2011).

⁵¹ FTC and DOJ Report at *1 n 1 (cited in note 39).

⁵² *Id.* at *30.

⁵³ See *id.* at *12–14.

⁵⁴ See *id.* at *9–11, 14 (describing the advantages of MLS access and the disadvantages of lack of access).

nomenon through which buyers and sellers increasingly valued access to the MLS because of others' tendencies to use the database is known as a "network effect."⁵⁵ As a result, the ability of traditional real-estate agents to control access to the MLS became a significant positional advantage, which they at times exploited to protect the high-fee, full-service model by limiting the capacity of discount brokers and homeowners to add properties to the database.⁵⁶ Another positional advantage enjoyed by full-service real-estate agents is the network of mutual support and coordination that often exists among them, which can play a significant role in selling a home.⁵⁷ Relatedly, as one expert explains, the "sell-side/buy-side reversible interaction provides a concrete means whereby agents who are the upholders of high fees can threaten to or actually discipline price-cutting rivals."⁵⁸ If agents representing potential buyers favor homes being sold by full-service agents, it may not be cost-effective for a seller to use a discount agent or proceed on his own even if he could otherwise replicate the actual services that a full-service agent would provide at a significantly lower cost.

Informational advantages and an industry structure conducive to promoting collective aims have also facilitated efforts by full-service agents to entrench the current regime. The influence of each of these factors is reflected in numerous state laws that restrict price competition, require real-estate agents to provide a statutorily mandated minimum level of services to their clients, and otherwise favor the traditional, high-fee model.⁵⁹ Intermediary influence helps explain the existence of these laws in two ways. First, real-estate agents, though numerous, are often members of professional organizations that can lobby in favor of such laws. They thus have a mechanism for promoting institutional arrangements that constitute a collective good from the perspective of real-estate agents generally.⁶⁰ By contrast, home-

⁵⁵ For an overview of the concept of "network effects," see David Easley and Jon Kleinberg, *Networks, Crowds, and Markets: Reasoning about a Highly Connected World* 449–78 (Cambridge 2010).

⁵⁶ See FTC and DOJ Report at *64–65 (cited in note 39) (describing lawsuits alleging that broker associations inappropriately limited access to the MLS).

⁵⁷ See *id.* at *66–70.

⁵⁸ White, 35 Real Est L J at 16 (cited in note 47). See also FTC and DOJ Report at *66–69 (cited in note 39).

⁵⁹ See FTC and DOJ Report at *49–57 (cited in note 39).

⁶⁰ See Hahn, Litan, and Gurman, 35 Real Est L J at 105–06 (cited in note 47) (noting that real-estate associations craft and lobby for state legislation that reduces competition in the industry).

owners are both numerous and dispersed, and they thus have few ways to overcome the hurdles that typically impede effective collective action. Relatedly, because homeowners far outnumber agents, individual agents have far more at stake in the adoption of laws favorable to real-estate agents than a typical homeowner has in precluding their adoption.⁶¹ Second, real-estate agents and trade groups acting on their behalf have genuinely greater expertise regarding the benefits and drawbacks of different regimes than persons less involved in the real-estate market. This superior knowledge enables these agents and trade groups to make colorable arguments that the type of flexibility that such laws preclude harms ignorant buyers and sellers and to rebut claims to the contrary.⁶² Hence, while such laws may seem puzzling if one assumes that institutional arrangements evolve to minimize transaction costs, the puzzle disappears if intermediary influence is added to the analysis.

The real-estate market thus illustrates how specialized intermediaries can and will seek to promote high-fee institutional arrangements.⁶³ It also demonstrates how the very informational and positional advantages that enable intermediaries to provide value to the parties that they serve also increase the probability that intermediaries will succeed in these efforts to entrench the high-fee regime. And it illustrates the way that these advantages, combined with the relatively greater capacity of intermediaries to promote collective interests, often function in complementary ways to give intermediaries a degree of influence that exceeds the sum of these different vectors of influence.

B. Current Theory

For a long time (and often even today), economists assumed away transaction fees along with numerous other frictions that

⁶¹ See Olson, *The Logic of Collective Action* at 53–57 (cited in note 18).

⁶² See FTC and DOJ Report at *57–59 (cited in note 39) (criticizing an argument in favor of minimum-service requirements).

⁶³ Higher-than-socially-optimal fee structures do not necessarily translate into supracompetitive profits for the intermediaries involved. It is easy to become a real-estate agent, and thus there tends to be market entry when current agents enjoy exceptional profits. See *id.* at *32–33. In such circumstances, the excess wealth transferred can be dissipated in forms of competition, such as expensive advertising campaigns, that yield minimal social value and that would not be viable under a more efficient arrangement. See *id.* at *34.

affect behavior in the real world.⁶⁴ These assumptions enabled economists to depict and understand an array of phenomena that otherwise would be impossibly complex to study with the tools that economists typically employ. Yet models built on such assumptions fail to explain many observable phenomena and often yield incorrect predictions. In his classic article *The Nature of the Firm*, Professor Coase helped to explain why.⁶⁵ Coase's core insight is that it may be optimal, from an efficiency standpoint, for the mechanisms of production to be brought together in a firm when the costs associated with doing the same activity through spot transactions are so great as to exceed the benefits that the market confers.⁶⁶ With this insight, Coase demonstrated that a friction ignored by others plays a first-order role in explaining observable institutional arrangements. Since that time, Coase, Professor Williamson, and numerous other scholars have significantly expanded on this core insight.⁶⁷ The result is an important and growing body of theoretical and empirical work that sheds valuable light on issues like the relative advantages of markets and firms in creating conditions that allow for adaptive, sequential decisionmaking in light of challenges like uncertainty, opportunism, and the need for relationship-specific investments.⁶⁸ Moreover, a recent review of the literature reveals that, while "still dominated by economics, other business-related areas—most notably marketing, international business and finance—are increasingly making use of transaction cost reasoning in examinations of empirical phenomena."⁶⁹

Most of this work on transaction cost economics assumes that market forces cause institutional arrangements to evolve to

⁶⁴ See Oliver E. Williamson, *Transaction Cost Economics: The Natural Progression*, 100 *Am Econ Rev* 673, 675 (2010) (noting the traditional, "implicit assumption of zero transaction costs").

⁶⁵ See generally Coase, 4 *Economica* 386 (cited in note 7). See also Williamson, 100 *Am Econ Rev* at 673–76 (cited in note 64) (describing the origins, evolution, and scope of the body of literature on this point).

⁶⁶ See Coase, 4 *Economica* at 390–98 (cited in note 7).

⁶⁷ See, for example, Williamson, *Economic Organization* at 83–191 (cited in note 9).

⁶⁸ See generally, for example, Harold Demsetz, *The Economics of the Business Firm: Seven Critical Commentaries* (Cambridge 1995); Ronald J. Gilson, Charles F. Sabel, and Robert E. Scott, *Braiding: The Interaction of Formal and Informal Contracting in Theory, Practice, and Doctrine*, 110 *Colum L Rev* 1377 (2010). See also, for example, Oliver Hart, *Firms, Contracts, and Financial Structure* 15–28 (Oxford 1995); Williamson, *Economic Organization* at 83–130 (cited in note 9); Joskow, 4 *J L, Econ & Org* at 104–15 (cited in note 11).

⁶⁹ Macher and Richman, 10 *Bus & Politics* at 11 (cited in note 8).

minimize the associated transaction costs.⁷⁰ This Article suggests that there is a limit to that assumption. The reason lies in the rise of intermediaries. As a society becomes more industrialized, globalized, and otherwise specialized, intermediaries bridge an increasing proportion of the coordination challenges that must be overcome for two parties to transact. As a result, an increasing proportion of transaction costs take the form of fees paid to a specialized intermediary rather than time or effort exerted directly by the parties involved.⁷¹ The rise of real-estate agents illustrates the gains that can arise as a result. Yet it also demonstrates how intermediaries, once established, can use their individual and collective influence in self-serving ways. And, because transaction fees are revenue to the intermediaries to whom they are paid, intermediaries will tend to favor high-fee institutional arrangements. Intermediary influence thus operates contrary to the classic proefficiency assumption about how transaction fees shape institutions over time.⁷² By adding intermediary influence to the analysis, theory can more accurately approximate the real world.

In addition to contributing to the literature on institutional arrangements, this Article's claim regarding intermediary influence overlaps with a number of other concepts that are commonly used to understand economic activity and relations among actors, including agency costs, path dependence, collusion, regulatory capture, and other dimensions of public-choice theory. Each of these theories informs the analysis here, and they serve as valuable starting points in assessing how best to address the welfare costs that arise from intermediary influence. Yet, as discussed further in Part V, this Article makes a contribution that goes beyond any of these existing theories. By focusing on the unique influence and incentives of intermediaries—rather than economic actors in general—this Article reveals a market-based force that systematically affects the evolution of institutions, the magnitude of which cannot be discerned from any existing theory.⁷³

⁷⁰ See note 10 and accompanying text.

⁷¹ See Judge, 98 Iowa L Rev at 1524–25 (cited in note 13).

⁷² An intermediary seeks to maximize profits, not revenue. While greater revenue tends to produce greater profits, the relationship is not linear and the focus here is on profits when feasible.

⁷³ For a more thorough analysis of the relationship between intermediary influence and collusion, path dependence, agency costs, and other overlapping theories, see Part V.A.

C. The Claim

In its most basic form, this Article's claim is simple: through repeatedly helping parties to overcome barriers to transacting, intermediaries develop informational and positional advantages relative to the parties that they serve. These advantages are critical to intermediaries' capacity to provide value, but they also put intermediaries in a superior position to influence the evolution of institutional forms. In addition, intermediaries of a particular type will often be fewer in number and better organized than the parties that they serve. This makes intermediaries relatively better positioned to shape laws and regulations and to otherwise act to promote institutional arrangements that serve their collective interests. For these reasons, intermediaries often succeed in their efforts to promote and entrench high-fee arrangements.

An extension of this basic claim is that each of these factors—informational and positional advantages, and industry structures conducive to collective action—will affect the probability that a particular class of intermediaries will successfully use its influence in ways that entrench or promote high-fee institutional arrangements. None of these conditions is necessary or sufficient, but each increases the probability that institutional arrangements will evolve in ways that favor intermediary interests. That probability increases even more when, as is often the case, these conditions interact in complementary ways.

Informational and positional advantages can have multiple dimensions. They can arise between intermediaries and the ultimate parties to a transaction. They can also arise between intermediaries and regulators or other policymakers who have the power to further or impede the adoption of particular institutional arrangements. The greater the advantages that a class of intermediaries enjoys along any of these dimensions, the more it will tend to succeed in efforts to promote favorable institutional arrangements.

Industry structure matters because institutional arrangements are a collective good from the perspectives of both parties and intermediaries. Thus, the relative capacity of each group to shape institutional arrangements in ways that serve its respective interests depends in significant part on its ability to overcome coordination challenges, free riding, and the other obsta-

cles that arise when a good operates to the benefit, or detriment, of an entire class of similarly situated persons.⁷⁴ One relevant factor is the number of intermediaries in a given class. It is easier for a smaller number of persons to coordinate and, even in the absence of coordination, individual actors are more likely to have the economic incentives to promote a favorable institutional arrangement when they expect to enjoy a significant proportion of the resultant gains.⁷⁵ Industries dominated by a small number of participants are thus more likely to invest the resources necessary to achieve aims that serve their collective interests.⁷⁶

Other aspects of industry structure matter as well. One way that a large group can overcome collective-action challenges is by coming together to form an organization that also serves the individual interests of its members. A “byproduct” of such a group, once formed, is that it can act to further the collective interests of the group even if the group would not have coalesced in its absence.⁷⁷ Hence, the presence of trade groups, self-regulatory organizations, and other similar bodies can significantly enhance intermediaries’ capacity to promote institutional arrangements that inure to their collective benefit.⁷⁸

⁷⁴ The analysis here uses the basic framework put forth by Professor Mancur Olson. See generally Olson, *The Logic of Collective Action* (cited in note 18). Some subsequent research suggests that collective action can succeed in environments in which Olson’s basic framework predicts that success is unlikely. See, for example, Margaret C. Levenstein and Valerie Y. Suslow, *What Determines Cartel Success?*, 44 *J Econ Lit* 43, 46 n 5 (2006). There has also been a proliferation of scholarship examining regulatory capture and considering other ways that industry groups can shape laws, regulations, and judicial decisions in self-serving ways. See, for example, Rachel E. Barkow, *Insulating Agencies: Avoiding Capture through Institutional Design*, 89 *Tex L Rev* 15, 42–64 (2010). The additional insights that this literature provides into the factors that can favor industry influence generally affirm this Article’s claim regarding the outsize influence of intermediaries relative to those that they serve.

⁷⁵ See Olson, *The Logic of Collective Action* at 53–65 (cited in note 18).

⁷⁶ The literature on collusion similarly suggests that industries with fewer players are more likely to successfully engage in interdependent behavior. See, for example, Louis Kaplow, *An Economic Approach to Price Fixing*, 77 *Antitrust L J* 343, 398 (2011); Levenstein and Suslow, 44 *J Econ Lit* at 44 (cited in note 74).

⁷⁷ Olson, *The Logic of Collective Action* at 137–41 (cited in note 18). See also Levenstein and Suslow, 44 *J Econ Lit* at 44 (cited in note 74) (“There are in fact many successful cartels in quite unconcentrated industries, but they almost always rely on industry associations.”).

⁷⁸ There is a large body of literature examining these dynamics. See Part V.A.

D. Some Effects

This Section completes the groundwork by identifying some effects of intermediary influence. Two types of distortions can result. First, intermediaries can entrench high-fee regimes, impeding change even when technological or other developments make more-efficient alternatives viable. Second, intermediaries can promote the affirmative adoption of high-fee institutional arrangements over existing or possible alternatives. In either case, the “high-fee” arrangement is the one that entails the greatest profit for intermediaries over time. Focusing on intermediaries’ longer-term interests reveals preferences that go beyond favoring relatively costly fee structures. Most importantly, one way that intermediaries can maximize their economic gains is by increasing the likelihood that parties will continue to use their services in the future. The high-fee arrangements that intermediaries will favor thus include laws, norms, and other institutional arrangements that effectively require parties to use their services in connection with a type of transaction, producing long-term expected revenue streams. Laws and norms mandating the use of a particular type of gatekeeper in connection with particular transactions are examples of such arrangements.⁷⁹

Moving from the types of arrangements that intermediaries prefer to the effects of those arrangements reveals why intermediary influence merits attention. One obvious effect of most institutional arrangements preferred by intermediaries is a wealth transfer from the parties to the intermediary. Though potentially troubling, this is not a clear social cost. Yet other effects of intermediary influence are likely to adversely affect social welfare. First, when an institutional arrangement enables a class of intermediaries to earn excessively high fees for the services that they provide, excess entry and inefficient investment often result.⁸⁰ Second, the higher the transaction fees associated with consummating a particular type of transaction, the greater the proportion of otherwise-value-creating transactions that will be blocked.⁸¹ Third, when intermediary influence results in insti-

⁷⁹ Gatekeeper requirements have the additional advantage of limiting entry. For a broad discussion of the ways that firms in a particular industry may use regulation to promote their collective interests, see Jonathan R. Macey and David D. Haddock, *Shirking at the SEC: The Failure of the National Market System*, 1985 U Ill L Rev 315, 337–41.

⁸⁰ See FTC and DOJ Report at *32–33 (cited in note 39).

⁸¹ See Judge, 98 Iowa L Rev at 1518 (cited in note 13).

tutional arrangements that increase intermediary influence in connection with a particular transaction type, the intermediaries involved can be expected to use that influence to alter the total mix of transactions consummated in socially costly ways.⁸² In addition, there will often be context-specific costs associated with intermediary influence.⁸³ Recognizing that intermediary influence can be welfare destroying suggests that interventions to reduce the adverse effects of intermediary influence will at times be warranted.⁸⁴

II. EVIDENCE FROM THE FINANCIAL MARKETS

This Part uses case studies from the financial markets to explore the effects of intermediary influence on institutional design. Because of the inherent messiness of the financial markets and the fact that most developments (or lack thereof) are the product of myriad causes, these phenomena are likely explained by a range of factors, of which intermediary influence is but one. Nonetheless, because each example entails situations in which a relatively high-fee, inefficient structure persisted longer than it should have or was adopted despite not seeming to create value in excess of the associated fees, each example supports this Article's claim regarding intermediary influence. When viewed in conjunction with the analyses in Part III regarding the influence of financial intermediaries and in Part IV regarding macrolevel phenomena indicative of intermediary influence, there is reason to suspect that the examples that follow are more the rule than the exception.

A. Tick Size

Tick size refers to the prices at which securities are traded on an exchange or other trading platform. If the tick size is set at 1/4, for example, then all offers to buy a security (bids) or to sell a security (asks) must be quoted in 1/4 increments. Setting a mandatory tick size simplifies trading and can help preserve priority when there are multiple bids or asks around the same price.⁸⁵ Determining the appropriate tick size for a given secu-

⁸² See id at 1530–32.

⁸³ See Part IV.

⁸⁴ See Part V.

⁸⁵ See James J. Angel, *Re: Tick Size Study Mandated by the JOBS Act *2* (comment to SEC, June 19, 2012), online at <http://www.sec.gov/comments/jobs-title-i/tick-size-study/tick-size-study-1.pdf> (visited Dec 4, 2014).

rity or exchange involves trade-offs.⁸⁶ A larger tick size typically increases the depth in the supply and demand at particular prices.⁸⁷ A mixed effect of larger tick sizes is that they tend to increase the bid–ask spread—that is, the difference between the highest price that a person who desires the security is willing to pay for it and the lowest price at which a person that owns the security is willing to sell it.⁸⁸ Greater spreads provide greater profits to market makers and other liquidity providers.⁸⁹ In a dynamic environment, this can provide parties with an incentive to play these roles, increasing liquidity.⁹⁰ Yet greater bid–ask spreads also have real costs. By increasing the transaction costs associated with buying or selling a security, greater spreads can preclude otherwise-value-creating transfers.⁹¹ Larger tick sizes also result in relatively less accurate pricing, as prices cannot be more fine-tuned than the increments in which a security is traded. Thus, while the appropriate tick size is context dependent, when a market is sufficiently large and other conditions are favorable, smaller increments are generally superior. The financial intermediaries that provide liquidity in a particular market, however, will almost always prefer larger tick sizes and the larger profits that result.

1. Persistence.

The debate over decimalization brought these questions about optimal tick size to the fore. For example, it was suspected and subsequently shown that, when trading is restricted to fractions like 1/4 or 1/8 rather than decimals (most often meaning a

⁸⁶ For a summary of the literature on the benefits and drawbacks of smaller increments, see Greg MacKinnon and Howard Nemiroff, *Tick Size and the Returns to Providing Liquidity*, 13 *Intl Rev Econ & Fin* 57, 59–60 (2004).

⁸⁷ See *id.* at 59.

⁸⁸ See Ingrid M. Werner, *Discussion of “The Competitive Effects of US Decimalization: Evidence from the US-Listed Canadian Stocks” by Oppenheimer and Sabherwal*, 27 *J Bank & Fin* 1911, 1912 (2003) (noting that the “[s]everal studies . . . examin[ing] the impact of tick size reductions . . . [g]enerally . . . show that quoted and effective spreads declined significantly following a tick size reduction” and that there is a “general consensus [] that retail investors have benefited from recent tick size reductions”).

⁸⁹ See MacKinnon and Nemiroff, 13 *Intl Rev Econ & Fin* at 59 (cited in note 86) (describing a “dramatic decrease in the profitability of supplying liquidity” after a decrease in tick size).

⁹⁰ See Angel, *Re: Tick Size Study Mandated by the JOBS Act* at *3 (cited in note 85) (“The tick represents the price of immediacy.”).

⁹¹ In some circumstances, the additional friction that results may also have beneficial effects. See generally Barry Eichengreen, James Tobin, and Charles Wyplosz, *Two Cases for Sand in the Wheels of International Finance*, 105 *Econ J* 162 (1995).

tick size of 1/100), the result is “enlarged bid–ask spreads,” which “inflate market makers’ profits.”⁹² One study examined the effects of a change in the rules governing the Toronto Stock Exchange and found “a dramatic decrease in the profitability of supplying liquidity”—the role played by financial intermediaries—after decimalization.⁹³ And when trading on the major US stock exchanges shifted from fractions to decimals, the effective spread between the bid and the ask prices declined significantly.⁹⁴ Thus, under traditional assumptions, one would expect trading platforms to shift to smaller tick sizes once the benefits exceed the associated costs.

At least in the United States, that is not what happened. Despite the benefits of decimalization, the major US platforms were very slow to shift from using fractions to using decimals. It was not until 2001, three years after Congress had mandated decimalization, and well after other major markets had made the transition, that the New York Stock Exchange (NYSE) and NASDAQ fully converted.⁹⁵ Intermediary influence helps to explain why. Not surprisingly, securities firms that earned higher fees from having larger spreads fought the change to decimalization.⁹⁶ Moreover, despite the large number of securities firms involved, they were well organized to do so. We can understand why by looking at the structure of the NYSE.⁹⁷ A securities firm was required to have a seat on the NYSE in order to trade stocks on it.⁹⁸ As a result, individual securities firms could not

⁹² Yan He and Chunchi Wu, *Price Rounding and Bid–Ask Spreads before and after the Decimalization*, 13 *Intl Rev Econ & Fin* 19, 20 (2004).

⁹³ MacKinnon and Nemiroff, 13 *Intl Rev Econ & Fin* at 59 (cited in note 86), citing Jeffrey M. Bacidore, *The Impact of Decimalization on Market Quality: An Empirical Investigation of the Toronto Stock Exchange*, 6 *J Fin Intermediation* 92, 100 (1997).

⁹⁴ See Annette L. Nazareth, *Regulatory and Compliance Issues in a Decimalized Environment* (speech to the Securities Industry Association Legal Compliance Committee, June 8, 2001), online at <http://www.sec.gov/news/speech/spch503.htm> (visited Dec 4, 2014).

⁹⁵ See He and Wu, 13 *Intl Rev Econ & Fin* at 21–22 (cited in note 92); Roberta S. Karmel, *Turning Seats into Shares: Causes and Implications of Demutualization of Stock and Futures Exchanges*, 53 *Hastings L J* 367, 374 (2002).

⁹⁶ See Karmel, 53 *Hastings L J* at 374 (cited in note 95) (“While Congressional pressures to effect such a change were frequently justified as lowering trading costs and modernizing trading, they were resisted by the securities industry, and to some extent the SEC.”).

⁹⁷ For a thorough theoretical discussion of the power of well-organized interest groups in various contexts, see Olson, *The Logic of Collective Action* at 132–67 (cited in note 18).

⁹⁸ See Hans R. Stoll, *Revolution in the Regulation of Securities Markets: An Examination of the Effects of Increased Competition*, in Leonard W. Weiss and Michael W.

opt out of the organization and then free ride on its work. So constituted, the NYSE had the funding and support needed to effectively promote the collective interest of its members—here, larger tick sizes and hence greater profits.⁹⁹

Only slightly less surprising is that the SEC in many ways aided the securities industry's resistance to decimalization.¹⁰⁰ Many would attribute this to the regulatory capture of the SEC by the industry that it regulates, and this may have been a contributing factor.¹⁰¹ Significantly, however, the SEC need not have been captured to have its policymaking biased by securities firms' preference for larger tick sizes. This is because the very securities firms that benefitted from trading only in fractions were in the best position to assess the benefits and challenges of decimalization. They understood the market better than those that bought and sold stock through the exchange and, in many ways, better than the SEC.¹⁰² By highlighting potential drawbacks, like the risk that the reduced depth at each bid and ask price would make it more difficult to execute large transactions or might trigger excessive consolidation, the securities industry sought to influence SEC decisionmaking.¹⁰³ And faced with a choice between a system known to work, albeit less efficiently than the proposed alternative, and one about which there were inevitable uncertainties, it would have been difficult—and irrational—for the SEC to entirely ignore the industry's dire predictions.

In addition to the industry structure and informational advantages favoring the intermediaries, securities firms with access to the NYSE and NASDAQ also enjoyed significant positional advantages. In the presence of these established fo-

Klass, eds, *Case Studies in Regulation: Revolution and Reform* 12, 15 (Little, Brown 1981).

⁹⁹ Some academics have claimed that the NYSE, particularly in its earlier days, could be viewed as a cartel. See Macey and Haddock, 1985 U Ill L Rev at 319 n 14 (cited in note 79).

¹⁰⁰ See Karmel, 53 Hastings L J at 374 (cited in note 95).

¹⁰¹ See, for example, Simon Johnson and James Kwak, *13 Bankers: The Wall Street Takeover and the Next Financial Meltdown* 149–50 (Pantheon 2010); Saule T. Omarova, *Bankers, Bureaucrats, and Guardians: Toward Tripartism in Financial Services Regulation*, 37 J Corp L 621, 629–32 (2012).

¹⁰² See Part III.A.

¹⁰³ See *Decimals 2000—Will the Exchanges Convert? Hearing before the Subcommittee on Finance and Hazardous Materials of the House Committee on Commerce*, 106th Cong, 2d Sess 6–11, 39 (2000) (statement of Arthur Levitt, SEC chairman) (discussing the reaction of the securities industry to SEC decisionmaking on decimalization).

rums for exchange, the debate over decimalization rested on the assumption that the great majority of shares of common stock would continue to be traded through them.¹⁰⁴ Put differently, 1/8 of a dollar was a far narrower spread than what an individual seeking to buy or sell shares of a listed company could get by going elsewhere—even if 1/8 of a dollar was larger than the minimum spread viable on either platform. Network effects, again, help to explain the dominance of these established platforms for exchange.¹⁰⁵

This situation thus illustrates how an industry structure conducive to collective action, combined with the strategic use of positional and informational advantages that the class of intermediaries derives as repeat players in a particular market, may operate to entrench an inefficient institutional arrangement. In light of the dynamic nature of the capital markets and the incremental nature of the processes through which market structures change, some institutional arrangements will inevitably deviate from the most efficient form possible. Nonetheless, the persistence of less-efficient structures is at odds with the expectation that market forces will inexorably push institutions toward more-efficient forms. And, while the forces pushing toward the more efficient institutional arrangement eventually prevailed, they did so only with the aid of Congress, and there were significant costs associated with the delay.

2. Affirmative distortion.

In addition to impeding regulations that reduced the average tick size, market makers engaged in separate (and covert) action to affirmatively impose an artificially high tick size in order to increase their fees. This example of intermediary influence was revealed when two economists examined the pricing patterns of NASDAQ dealers. NASDAQ functions as an electronic trading platform on which a large number of dispersed dealers continually post and update the lowest price at which they would sell a security and the highest price at which they would buy it. In 1994, two economists released a study “present[ing] strong circumstantial evidence that brokerage firms

¹⁰⁴ See *id.*

¹⁰⁵ The structure of these markets has subsequently undergone dramatic transformation. See, for example, Securities Exchange Commission, *Concept Release on Equity Market Structure*, 75 Fed Reg 3593, 3597–602 (Jan 21, 2010).

making markets in Nasdaq stocks . . . implicitly colluded to maintain profits at supracompetitive levels.”¹⁰⁶ More specifically, in examining the bid and ask prices for 100 companies with common stock traded on NASDAQ at a time when the prescribed increments were 1/8 of a dollar, the economists found that “odd-eighth quotes were extremely rare for 70 of the 100” firms and that there was no good economic rationale for this finding.¹⁰⁷ They concluded that the “results most likely reflect[] an understanding or implicit agreement among the market makers to avoid the use of odd-eighth price fractions when quoting these stocks . . . thereby inflating trading profits above those that would have been generated in the absence of this policy.”¹⁰⁸ In other words, the intermediaries effectively created a regime that used 1/4 rather than 1/8 increments, increasing the fees that they typically received accordingly.

When asked “[h]ow [] 60 independent market makers [could] coordinate the way they quote these stocks,” the economists answered, “quite easily.”¹⁰⁹ NASDAQ requires all market makers to display their bid and ask price in a way that is visible to all others on the market, making it easy for other firms to identify and target any market maker that fails to comply with the implicit arrangement.¹¹⁰ Tellingly, the moment that the findings were released, market makers started using odd-eighth prices, leading to an immediate and significant reduction in the average bid–ask spread for the stock of the firms at issue.¹¹¹ A similar, and similarly profitable, practice arose when market makers avoided using odd-sixteenth increments after NASDAQ officially switched to a system that allowed such increments in 1997.¹¹²

¹⁰⁶ William G. Christie and Paul H. Schultz, *Policy Watch: Did Nasdaq Market Makers Implicitly Collude?*, 9 J Econ Persp 199, 199 (1995), citing William G. Christie and Paul H. Schultz, *Why Do NASDAQ Market Makers Avoid Odd-Eighth Quotes?*, 49 J Fin 1813 (1994).

¹⁰⁷ Christie and Schultz, 9 J Econ Persp at 202 (cited in note 106).

¹⁰⁸ *Id.* at 203.

¹⁰⁹ *Id.*

¹¹⁰ See *id.* at 203–04.

¹¹¹ See Christie and Schultz, 9 J Econ Persp at 205–07 (cited in note 106).

¹¹² See Securities and Exchange Commission, *In the Matter of NASD and the NASDAQ Market: Report Pursuant to Section 21(a) of the Securities Exchange Act of 1934*, 52 SEC Dec & Reports 882, 883 (Aug 8, 1996) (finding that “Nasdaq market makers widely followed a pricing convention pursuant to which many securities were quoted only in even-eighth prices,” and further noting that “this practice . . . was not the result of natural economic forces and often increased the transaction costs paid by investors”).

In short, despite the relatively large number of parties who needed to be complicit for the scheme to work, NASDAQ market makers were able to overcome the typical impediments to collective action and implement a scheme that artificially increased the average fee paid (and received) per transaction. Meanwhile, the individual investors trading opposite the market makers had neither the incentives nor the capacity to understand—much less to rectify—these practices. Moreover, the advantages of trading through NASDAQ still far exceeded the slightly inflated costs, so individual investors had little incentive to seek an alternative forum. The arrangement to use only larger-increment tick sizes may thus be attributed both to the positional advantages enjoyed by the relevant market makers and to their superior capacity to engage in interdependent activity to promote their collective interest in large tick sizes.

These examples illustrate that, in addition to entrenching inefficient institutional arrangements, intermediary influence can give rise to affirmative distortions, changing institutional arrangements in ways that increase the associated transaction fees. These examples are also like the entrenchment accounts above in that they run directly contrary to what traditional Coasean assumptions would predict.¹¹³ In both instances (and in other affirmative-distortion scenarios described below), institutional arrangements evolved toward less efficient, higher-fee alternatives.

B. Brokerage Fees

Similar dynamics surround the history of brokerage fees in the United States. Until 1975, brokerage commissions were fixed by the exchange on which a stock traded.¹¹⁴ This arrangement persisted even though the fixed fees significantly exceeded the costs of the services provided.¹¹⁵ This regime provided securities firms with a steady source of income, with brokerage fees constituting half of the industry's total revenues in 1975.¹¹⁶ Con-

¹¹³ See Part I.A.2.

¹¹⁴ See Stoll, *Revolution in the Regulation of Securities Markets* at 18–19 (cited in note 98).

¹¹⁵ See *id.* at 19–29 (describing the ways that the fixed-price scheme and associated rules and regulations effectively enabled securities firms to maintain cartel pricing).

¹¹⁶ See Arthur E. Wilmarth Jr., *The Transformation of the U.S. Financial Services Industry, 1975–2000: Competition, Consolidation, and Increased Risks*, 2002 U Ill L Rev 215, 408.

sistent with this Article's claim regarding intermediary influence, securities firms fought to retain fixed brokerage fees even when it became clear that the fees were excessive and an alternative regime would likely be more efficient.¹¹⁷ And, for a while, these securities firms were successful.

Once again, the NYSE and the SEC played critical roles in facilitating the capacity of securities firms to maintain the high-fee arrangement. Recall that all securities firms that traded on the NYSE were members of the NYSE. They could thus use their control over the NYSE—a critical positional advantage that also facilitated collective action—to entrench the fixed-fee scheme. This arrangement ceased in 1975 only because the SEC mandated change, and the SEC did so only because it was required to by Congress.¹¹⁸ In the view of some scholars, the SEC's failure to bring an end to fixed fees on its own initiative may suggest that "the SEC is not motivated by some 'public interest,' but rather by the changing strength of competing, well-organized special interests," and securities firms were far better organized than the parties that they served.¹¹⁹ Regardless of whether one accepts this characterization, it is clear that industry structure and the relationship between the SEC and the securities firms that it regulates both play a critical role in explaining the prolonged persistence of fixed brokerage fees.

Informational advantages were also relevant and were often used in ways that complemented the other advantages that securities firms enjoyed. In particular, securities firms used their informational advantages to highlight potential costs and the challenges that might arise from ending fixed brokerage fees—most notably the risk of destructive competition among securities firms and the potentially adverse effects on small securities firms and small investors.¹²⁰ Ultimately, none of the grave concerns that securities firms raised was realized. The end of fixed

¹¹⁷ See William F. Baxter, *NYSE Fixed Commission Rates: A Private Cartel Goes Public*, 22 *Stan L Rev* 675, 675–76, 681 (1970) (arguing in favor of eliminating fixed brokerage fees).

¹¹⁸ See Securities Acts Amendments of 1975 § 7, Pub L No 94-29, 89 Stat 97, 111–12, codified at 15 USC § 78k-1(a)(2) (establishing a national market system for securities).

¹¹⁹ Macey and Haddock, 1985 *U Ill L Rev* at 316 (cited in note 79). See also Gregg A. Jarrell, *Change at the Exchange: The Causes and Effects of Deregulation*, 27 *J L & Econ* 273, 275–80 (1984).

¹²⁰ See Stoll, *Revolution in the Regulation of Securities Markets* at 29–45 (cited in note 98) (describing the myriad concerns raised by the securities industry).

brokerage fees led to lower transaction fees and a more efficient market.¹²¹ Nonetheless, as with the shift to smaller tick sizes, because the NYSE and its member firms were in the best position to understand the probable benefits and drawbacks of any change in the compensation scheme, it made sense for regulators to pay some heed to their concerns. Regulators again faced a trade-off between an institutional arrangement known to work well and an alternative that, although it promised to be more efficient if successful, was necessarily untested and uncertain. In the face of such dynamics and coordinated efforts by the industry to prevent change, the SEC proceeded with caution and was slow to implement the ultimately successful conversion from fixed brokerage fees.¹²²

C. Funds

1. Mutual funds.

When the SEC and Congress finally abolished the fixed-brokerage system in 1975, price competition and technological advances steadily eroded the amount that securities firms could charge to buy and sell individual stocks, causing revenue from commissions to decline from one-half of the industry's total revenue in 1975 to just 17 percent by 1991.¹²³ Moreover, the advent of the Internet and other developments enhanced the ability of individual investors to obtain information about companies in which they might want to invest.¹²⁴ As a result, one might expect that individual ownership of stocks would have become more prevalent since the end of the fixed-commission scheme. The reality, however, is that just the opposite has transpired. Institutional investors, like mutual funds, held only about 10 percent of publicly traded stock in 1970.¹²⁵ That figure

¹²¹ See *id.* at 14–15.

¹²² See Macey and Haddock, 1985 U Ill L Rev at 316 (cited in note 79).

¹²³ See Wilmarth, 2002 U Ill L Rev at 408 (cited in note 116). See also Lynn A. Stout, *Technology, Transactions Costs, and Investor Welfare: Is a Motley Fool Born Every Minute?*, 75 Wash U L Q 791, 806–07 (1997) (observing that technological advancements reduce transaction costs and encourage individual trading).

¹²⁴ See Arthur Levitt, *Common Sense Investing in the 21st Century Marketplace* (speech at the Los Angeles Times 3rd Annual Investment Strategies Conference, May 23, 1999), online at <http://www.sec.gov/news/speech/speecharchive/1999/spch280.htm> (visited Dec 5, 2014).

¹²⁵ Philippe Aghion, John Van Reenen, and Luigi Zingales, *Innovation and Institutional Ownership* *2, 44 (Fondazione Eni Enrico Mattei Working Paper No 99, 2010), online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1669323 (visited Dec 5, 2014).

rose to more than 60 percent by 2006 and, by 2007, institutions owned over 76 percent of the outstanding equity for the 1,000 largest corporations.¹²⁶ Individual ownership has declined accordingly—a phenomenon known alternatively as “institutionalization” or “deretailization.”¹²⁷

One explanation for this phenomenon could be that institutional investors—most notably, mutual funds—provide such value to investors that, despite the declining costs of owning stock directly, it is rational for most investors to invest through mutual funds instead.¹²⁸ This would be a compelling narrative if most of the money invested in mutual funds flowed into low-fee index funds, like the Vanguard 500 Index Fund, which can help investors realize the benefits of diversification in a cost-effective manner.¹²⁹ The data, however, quickly dispel this explanation. As an initial matter, more than three-quarters of the outstanding shares of mutual funds owned by investors outside employer-based retirement accounts are owned through professional advisers, like stockbrokers.¹³⁰ And, as Professors Eugene Fama and Kenneth French concluded based on their recent study, the evidence regarding the value of actively managed funds (the type that investors typically acquire from stockbrokers) is “disheartening.”¹³¹ Fama and French examined the ac-

citing *Flow of Funds Matrix* (Federal Reserve Board, 1950–2005), online at http://www.federalreserve.gov/apps/fof/DisplayMatrix.aspx?t=Flows_matrix (visited Apr 10, 2015).

¹²⁶ Aghion, Reenen, and Zingales, *Innovation and Institutional Ownership* at *2, 44 (cited in note 125); Jill E. Fisch, *Securities Intermediaries and the Separation of Ownership from Control*, 33 *Seattle U L Rev* 877, 880 (2010).

¹²⁷ See Donald C. Langevoort, *The SEC, Retail Investors, and the Institutionalization of the Securities Markets*, 95 *Va L Rev* 1025, 1026 (2009); Jill E. Fisch, *Rethinking the Regulation of Securities Intermediaries*, 158 *U Pa L Rev* 1961, 2038 (2010).

¹²⁸ For a variation on this claim, see Ronald J. Gilson and Jeffrey N. Gordon, *The Agency Costs of Agency Capitalism: Activist Investors and the Revaluation of Governance Rights*, 113 *Colum L Rev* 863, 884–86 (2013) (suggesting that the “triumph” of modern portfolio theory and the benefits of diversification that it reveals may help to explain the rise of mutual funds). But see Greenwood and Scharfstein, 27 *J Econ Persp* at 14 (cited in note 4) (acknowledging the benefits of diversification but noting that “[m]uch [] professional asset management [] is not explicitly directed at participation and diversification but rather at beating the market . . . [and h]ere the evidence on mutual fund performance strongly indicates that such active management is not directly beneficial to investors on average”).

¹²⁹ See Fisch, 158 *U Pa L Rev* at 1990, 1993 (cited in note 127).

¹³⁰ See id at 1999, citing Investment Company Institute, *2009 Investment Company Fact Book* *68 (49th ed 2009), online at http://www.ici.org/pdf/2009_factbook.pdf (visited Dec 5, 2014).

¹³¹ Eugene F. Fama and Kenneth R. French, *Luck versus Skill in the Cross-Section of Mutual Fund Returns*, 65 *J Fin* 1915, 1916 (2010).

tual performance history of actively managed mutual funds investing primarily in US common stocks and used simulations to assess investor returns. They found “that few active funds produce benchmark-adjusted expected returns that cover their costs,” indicating that “if many managers have sufficient skill to cover costs, they are hidden by the mass of managers with insufficient skill.”¹³² A number of other studies produced similar results regarding the undistinguished performance and hard-to-justify fees associated with the majority of actively managed mutual funds.¹³³ Moreover, for a long time, mutual fund fees were increasing even as economies of scale and scope should have resulted in lower fees.¹³⁴ Hence, deretailization, in the way that it has occurred, seems inconsistent with the assumption that institutional arrangements evolve in ways that minimize the associated transaction fees.¹³⁵

The intermediaries that benefit most directly from this shift are those involved in the mutual fund industry. The focus here,

¹³² *Id.*

¹³³ See, for example, Fisch, 158 U Pa L Rev at 1991–94 (cited in note 127) (questioning whether mutual funds indeed provide superior investment performance); Mark M. Carhart, *On Persistence in Mutual Fund Performance*, 52 J Fin 57, 80 (1997) (finding that, “[a]lthough the top-decile mutual funds earn back their investment costs, most funds underperform by about . . . their investment expenses” and “[t]he bottom-decile funds [] underperform by about twice their reported investment costs”); Martin J. Gruber, *Another Puzzle: The Growth in Actively Managed Mutual Funds*, 51 J Fin 783, 789 (1996) (finding that actively managed “mutual funds underperform an appropriately weighted average of the indices by about 65 basis points per year” because even though “active management adds value . . . mutual funds charge the investors more than the value added”); Yong Chen, Wayne Ferson, and Helen Peters, *Measuring the Timing Ability and Performance of Bond Mutual Funds*, 98 J Fin Econ 72, 73 (2010) (finding no significantly superior performance of bond funds after accounting for costs). To be sure, some actively managed mutual funds perform sufficiently well to justify their associated fees, but such funds are the minority and do not perform sufficiently well to justify the average fees of actively managed funds. See Malcolm Baker, et al, *Can Mutual Fund Managers Pick Stocks? Evidence from Their Trades prior to Earnings Announcements*, 45 J Fin & Quant Analysis 1111, 1119–20 (2010) (finding that “the average mutual fund . . . does not appear to possess stock-picking ability,” but that some funds do outperform the market); Robert Kosowski, et al, *Can Mutual Fund “Stars” Really Pick Stocks? New Evidence from a Bootstrap Analysis*, 61 J Fin 2551, 2553 (2006) (finding that, “while most funds cannot compensate for their expenses and trade costs, a subgroup of funds exhibits stock-picking skills that more than compensate for such costs”).

¹³⁴ See John C. Bogle, *Common Sense on Mutual Funds* 429 (Wiley 2d ed 2009) (noting that, because of “staggering economies of scale in portfolio management and research, expense ratios should have substantially *declined*,” but that the trend has nonetheless been in the opposite direction).

¹³⁵ The mystery is enhanced when one considers that mutual funds often entail tax consequences that are less desirable for investors than those that arise when investing in individual stocks. See Gilson and Gordon, 113 Colum L Rev at 885 (cited in note 128).

however, is on another group of intermediaries—the stockbrokers who recommend mutual funds to their clients and the securities firms for which those stockbrokers work. Individual investors originally used stockbrokers because that was the only way to trade individual stocks. Over time, however, stockbrokers developed relationships with their clients, and these relationships contributed to a norm that investors should utilize professional stockbrokers. Stockbrokers also often had the trust of the clients whom they served. Stockbrokers thus enjoyed a number of positional advantages that helped them to maintain influence over individuals' investment decisions even as the market structure changed. They also enjoyed informational advantages, as it can be daunting for an individual investor to assess various investment opportunities in light of his financial goals and other considerations without the aid of a professional stockbroker. Moreover, these two sets of advantages complement one another, as the informational challenge that individual investors face has helped to perpetuate the norm of relying on stockbrokers for advice.

So long as brokerage fees were fixed, securities firms could earn consistent profits from executing stock purchases and sales on a client's behalf and could compensate their stockbrokers accordingly. Securities firms and stockbrokers thus had an incentive to encourage individual investors to own and trade individual stocks, which is consistent with the pattern of pervasive individual ownership that dominated so long as fixed commissions remained mandatory. When that regime came to an end, however, the business of encouraging individuals to buy stocks became less profitable, as clients could readily compare the costs of doing a trade with different types of brokers, leading to price competition and lower fees.

Mutual funds, by contrast, provide less price transparency and enable a stockbroker to tell a new story to the client about the benefits that the client is receiving. A broker, for example, might explain that mutual funds provide clients with the opportunity to have their funds actively managed by financial professionals whose full-time job is to keep abreast of market developments and to identify the stocks most likely to achieve the fund's aim.¹³⁶ At the same time, the broker can claim to add

¹³⁶ See, for example, Vanguard, *Mutual Fund FAQs*, online at <https://personal.vanguard.com/us/help/FAQMutualFundContent.jsp#b> (visited Dec 5, 2014).

value by helping the client identify the best funds and determining how to allocate capital among different funds to best achieve his long-term financial goals.¹³⁷ This account, while necessarily speculative, could help to explain why there has been such a dramatic decline in individual ownership even as the costs of individual ownership have declined.

The data on the mutual funds that investors actually acquire through stockbrokers provide further evidence that intermediary influence has contributed to deretailization. A recent study found that “[o]n a risk-adjusted basis, funds sold by brokers underperform funds sold through direct channels—even before subtracting any distribution charges.”¹³⁸ The same study also found that individuals investing through stockbrokers are more likely to invest in funds with high distribution fees (used to compensate the broker, among other things) and are less likely to invest in funds with low distribution fees, “suggesting that sales in the broker sector might reflect broker compensation and incentives.”¹³⁹ This further suggests that stockbrokers use the influence that they derive from the informational advantages that they possess relative to their clients to encourage clients to acquire mutual funds based on whether the associated fee structure benefits the broker.

The rise of mutual funds and the role of stockbrokers in contributing to that rise also shed light on the challenge of drawing simple conclusions about the welfare implications of particular high-fee arrangements. Although these findings are troubling in a variety of ways, the fact that so many individual investors opt to invest in mutual funds through a stockbroker suggests that some investors believe that the overall package of services that they receive justifies the costs.¹⁴⁰ Investors who acquire mutual

¹³⁷ Another potential advantage of mutual funds, from the stockbroker’s perspective, is that many funds offer multiple classes of shares, each with a different fee structure. These different fee structures have raised numerous questions, with many suggesting that they operate primarily to enable brokers to engage in a form of price discrimination whereby less sophisticated clients pay more. See, for example, Jack Hough, *Beware Fund Share-Class Fees*, Wall St J E1 (Feb 18, 2012) (stating that in “2010 there were 6,928 U.S. funds available in 20,188 share classes” and quoting an expert as saying that “[m]ost of these share classes weren’t designed to help investors” and were instead intended “to pay someone else”) (quotation marks omitted).

¹³⁸ Daniel Bergstresser, John M.R. Chalmers, and Peter Tufano, *Assessing the Costs and Benefits of Brokers in the Mutual Fund Industry*, 22 Rev Fin Stud 4129, 4130 (2009).

¹³⁹ Id at 4131.

¹⁴⁰ Another explanation is that many individual investors do not understand the costs that they are incurring. See James J. Choi, David Laibson, and Brigitte C. Ma-

funds through a full-service broker often receive a bundle of services. A stockbroker may review a client's portfolio on a regular basis, propose changes to that portfolio based on market developments or the client's long-term investment objectives, and be available to address questions that the client might have. Often, the only compensation that the broker receives for these services are the fees that he earns when a client acquires mutual funds and other investments that the broker recommends. While high-fee, under-performing mutual funds might be a costly way for investors to compensate brokers for such ancillary services, the persistence of such arrangements might indicate that the value of the overall package justifies the cost for some segment of the population.¹⁴¹ To be sure, that high-fee institutional arrangements may help to support the provision of valuable services does not mean that such arrangements are necessarily efficient, but it does suggest that policymakers may be justified in worrying about the collateral consequences of forcing a transition away from such an arrangement to a seemingly more efficient alternative.¹⁴²

This example also illustrates how intermediary influence can have systemic effects even when the intermediaries in question are numerous, competitive, and lacking in meaningful organization. Deretailization is a significant institutional change, altering the typical relationship between an investor and the companies underlying his investments.¹⁴³ Yet stockbrokers never worked together to bring about this change.¹⁴⁴ Rather, it occurred because individual stockbrokers faced similar incentive

drian, *Why Does the Law of One Price Fail? An Experiment on Index Mutual Funds*, 23 *Rev Fin Stud* 1405, 1417–21 (2010) (finding that subjects who were required to choose among four S&P 500 index funds often failed to choose the one with the lowest fees even though that fund would perform best on a net-fee basis).

¹⁴¹ While there is now an array of different schemes for compensating brokers, commissions remain common, and alternative compensation schemes that reduce the incentive identified here give rise to other potential conflicts of interest. See Daisy Maxey, *How to Pay Your Financial Adviser*, *Wall St J R1* (Dec 12, 2011) (assessing the benefits and drawbacks of various compensation schemes).

¹⁴² As another example, the excess revenue enabled by fixed brokerage fees was often justified as necessary to fund research and the provision of other services. See Jarrell, 27 *J L & Econ* at 279 & n 14 (cited in note 119).

¹⁴³ See Langevoort, 95 *Va L Rev* at 1030 (cited in note 127) (addressing the implications of deretailization for securities regulation).

¹⁴⁴ The mutual fund industry has at times used regulation—a collective good—in ways that serve its interests, and such efforts likely contributed to deretailization even though that is not the focus here. See John Morley, *Collective Branding and the Origins of Investment Fund Regulation*, 6 *Va L & Bus Rev* 341, 366–94 (2012).

schemes, which shaped how they used their influence over individual investment decisions. When intermediaries enjoy a high level of influence over client decisions, we can expect intermediaries to use that influence to promote relatively high-fee transactions.¹⁴⁵ While subject to a number of constraints, including the intermediaries' desire to maintain a good reputation, the net effect is to alter the total mix of transactions consummated in a way that increases the number of high-fee transactions.¹⁴⁶ In this context, that shift transforms, in a lasting way, the nature of the relationship between the investor providing capital and the firms that ultimately receive it. And because this is a situation in which a class of intermediaries used informational and positional advantages derived from their roles as intermediaries to promote an institutional arrangement that appears less efficient than viable alternatives, the example supports this Article's claim regarding intermediary influence.

2. Fund of funds.

Deretailization has transformed the relationship between an investor and the companies and other projects in which he invests. In previous work, I have used the term "node" to refer to each entity, active or passive, through which capital flows as it moves from one end of this chain to the other.¹⁴⁷ While intermediaries cannot introduce a node arbitrarily—they must have a story about why the node creates value—the introduction of additional nodes tends to produce additional opportunities to charge fees. Mutual funds are not the only type of node that is becoming more prevalent. There has also been a dramatic increase in the prevalence of other actively managed investment funds—such as hedge funds and private equity funds—which tend to charge much higher fees.¹⁴⁸ And there has even been a rise in "fund of funds" ("FoF") arrangements, whereby an actively managed fund is created solely to invest in other funds—mutual funds, private equity funds, hedge funds, venture capital

¹⁴⁵ See Judge, 98 Iowa L Rev at 1530–34 (cited in note 13).

¹⁴⁶ See *id.*

¹⁴⁷ Kathryn Judge, *Fragmentation Nodes: A Study in Financial Innovation, Complexity, and Systemic Risk*, 64 Stan L Rev 657, 659 (2012).

¹⁴⁸ See Jenny Anderson, *Pension Funds Still Waiting for Big Payoff from Private Equity*, NY Times B1 (Apr 3, 2010) ("The nation's 10 largest public pension funds have paid private equity firms more than \$17 billion in fees since 2000.").

funds, and so forth.¹⁴⁹ As a result, it is now common for two or more actively managed nodes to separate an investor from the assets underlying his investments, and the total amount paid to asset managers has increased accordingly.¹⁵⁰

The amount of capital invested in FoF arrangements is significant and, prior to the Crisis, had been increasing steadily. The first private equity FoF was formed in 1978; by 2002, FoFs backed by private equity investments totaled approximately \$130 billion.¹⁵¹ FoFs accounted for an average of 11 percent of total private equity fund-raising from 2005 to 2009.¹⁵² FoF arrangements are even more prevalent in the hedge fund arena. In 2005, more than \$650 billion was invested in FoFs investing in hedge funds—a full half of the capital then committed to hedge funds.¹⁵³ Moreover, the amount of capital invested through FoFs backed by hedge funds has been increasing at a significant rate since 2004.¹⁵⁴

The appeal of such arrangements to financial intermediaries is clear: each additional node provides an additional opportunity to earn fees. In the hedge fund context, for example, FoFs “have typically charged investors 1% of assets and 10% of gains, on top of fees of 2% and 20% levied by individual funds in the portfolio.”¹⁵⁵ A number of potential benefits to clients have been proffered in favor of FoF arrangements, including diversification and the ability to rely on experts to conduct due diligence on the

¹⁴⁹ In 2006, the SEC modified rules promulgated under the Investment Company Act of 1940, 54 Stat 789, codified at 15 USC § 80a-1 et seq, to facilitate FoF arrangements that had previously been banned under federal securities laws. See SEC, Fund of Funds Investments, 71 Fed Reg 36640 (June 27, 2006), amending 17 CFR §§ 239, 270, 274.

¹⁵⁰ See Greenwood and Scharfstein, 27 *J Econ Persp* at 5 (cited in note 4) (identifying asset management as one of the two core drivers that help to explain the growth of the US financial industry in recent decades).

¹⁵¹ Tom Weidig, Andreas Kemmerer, and Björn Born, *The Risk Profile of Private Equity Funds of Funds*, 7 *J Alternative Investments* 33, 33 (2005).

¹⁵² Chris V. Nicholson, *As Investors Become Savvy, an Intermediary Loses Favor*, *NY Times* B4 (Feb 10, 2011).

¹⁵³ Sam Kirschner, Eldon C. Mayer, and Lee Kessler, *The Investor's Guide to Hedge Funds* 246 (Wiley 2006).

¹⁵⁴ See Joseph G. Nicholas, *Hedge Fund of Funds Investing: An Investor's Guide* 8 (Bloomberg 2004) (“The annual growth rate for fund of funds assets since 1990 has been 48 percent.”). This growth trend reversed rapidly when a number of the largest FoFs were revealed to have invested with Bernie Madoff, leading many to question the expertise provided by FoF managers. See *Funds of Hedge Funds: One and Ten, Never Again?*, *Economist* 72–73 (Apr 24, 2010).

¹⁵⁵ *Funds of Hedge Funds*, *Economist* at 73 (cited in note 154).

underlying funds.¹⁵⁶ Nonetheless, consistent with the data on actively managed mutual funds, the data on FoF arrangements backed by hedge funds “suggest either that [FoF] managers have not done a particularly good job at selecting superior hedge funds, or that the fees they charge more than capture the benefits they deliver.”¹⁵⁷ Data on the performance and costs of FoFs consisting of mutual funds are similarly disheartening from an investor’s perspective, with such funds consistently underperforming once fees are taken into account.¹⁵⁸ The rise of FoFs thus appears to be yet another development that cannot easily be reconciled with the assumption that institutional arrangements evolve to minimize transaction costs, and yet their rise is entirely consistent with this Article’s claim regarding the effects of intermediary influence on that process.

D. Credit Default Swaps

The tendency for intermediary influence to impede the evolution of market structures toward more-efficient forms remains a challenge. This is evident in the ongoing debate about the nature of the markets through which credit default swaps (“CDSs”) should trade. In a CDS, one party (the protection seller) agrees to compensate the other party (the protection buyer) upon the occurrence of an enumerated credit event—oftentimes, default by the company referenced in the agreement.¹⁵⁹ In exchange, the protection buyer makes periodic payments to the seller.¹⁶⁰ One reason that CDSs have received significant attention recently is the sheer volume of these transactions. According to one estimate, the notional amount of CDSs outstanding was about \$27 trillion as of June 2012.¹⁶¹ While the notional value of outstanding swaps far exceeds the amount of money that actually

¹⁵⁶ See Nicholas, *Hedge Fund of Funds Investing* at 66–74 (cited in note 154).

¹⁵⁷ Stephen J. Brown, William N. Goetzmann, and Bing Liang, *Fees on Fees in Funds of Funds* *12 (Yale International Center for Finance Working Paper No 02-33, June 2004), online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=335581 (visited Dec 5, 2014).

¹⁵⁸ See John C. Bogle, *Common Sense on Mutual Funds: New Imperatives for the Intelligent Investor* 217–19 (Wiley 1999) (showing the performance of various funds of mutual funds compared to the relevant index and describing related findings).

¹⁵⁹ For an overview of CDSs, see *About CDS* (International Swaps and Derivatives Association, 2014), online at http://www.isdacdsmarketplace.com/about_cds_market (visited Dec 5, 2014).

¹⁶⁰ See *id.*

¹⁶¹ *Quarterly Review* *A141 (Bank for International Settlements, Dec 2014), online at <http://www.bis.org/statistics/dt1920a.pdf> (visited Dec 5, 2014).

changes hands through premiums and payouts, this is an incredibly massive market by just about any measure.

There are also signs that the structure of the market in which CDSs are traded has failed to evolve on its own in proefficiency ways. CDSs were long traded, almost exclusively, in the over-the-counter (“OTC”) market as bilateral agreements between two parties.¹⁶² Because they can be easily customized and do not require broad interest in a product, OTC arrangements can facilitate innovation, and an OTC market structure was probably the only viable structure when CDSs were relatively rare and highly customized.¹⁶³ This was true when CDSs were first introduced, and it remains true for certain types of CDSs, but those conditions are no longer pervasive today. Following a common pattern for successful financial innovations, CDSs quickly became more standardized in addition to becoming very widespread.¹⁶⁴

The combination of a large number of buyers and sellers and a standardized product allows CDSs to be traded through a centralized exchange. So long as there is a sufficient volume of activity, trading through a centralized exchange tends to result in greater transparency, superior price discovery, and lower trading costs.¹⁶⁵ Even without a centralized exchange, the costs of trading in an OTC market can be reduced substantially when there is mandatory post-trade transparency for standardized products.¹⁶⁶ Thus, if institutional arrangements evolve to minimize transaction costs, one would expect that the most commonly used swaps would naturally transition to being traded through a centralized exchange or subject to a mandatory reporting requirement. For a prolonged time, however, there was little movement in this direction.

¹⁶² See Wilmarth, 2002 U Ill L Rev at 335 (cited in note 116) (“At the end of 2000, OTC derivatives accounted for more than four-fifths of the derivative portfolios held by five of the seven largest bank dealers, and for more than three-fifths of the portfolios held by the other two dealers.”).

¹⁶³ See id at 335–37.

¹⁶⁴ See Robert C. Merton, *Financial Innovation and the Management and Regulation of Financial Institutions*, 19 J Bank & Fin 461, 470–79 (1995).

¹⁶⁵ See Financial Economists Roundtable, *Reforming the OTC Derivatives Markets*, 22 J Applied Corp Fin 40, 45 (2010) (explaining, with reference to the market for CDSs, that a centralized clearing system that allows buyers and sellers “to trade directly with one another . . . would be important for ensuring relatively greater competition and tighter spreads and even more efficient pricing”).

¹⁶⁶ See id at 44–45.

A little history, viewed in light of intermediary influence, helps to explain why. In 1985, while the market was still in its infancy, ten leading market participants formed the International Swaps and Derivatives Association (ISDA).¹⁶⁷ ISDA serves a variety of functions, including creating and updating the form agreements that enable standardization as well as advocating on behalf of industry participants.¹⁶⁸ Like the NYSE, ISDA is a good example of Professor Olson's byproduct theory in action.¹⁶⁹ Membership confers direct, individualized benefits, so firms have incentives to join. Once established, however, the group functions as a mechanism through which swap dealers can effectively promote their collective interests.

ISDA is also akin to the NYSE in that its effects are mixed. As Professors Frank Partnoy and David Skeel have recognized, ISDA's influence serves both industry participants and social welfare so long as the interests of each are aligned.¹⁷⁰ Both sets of interests, for example, may well be served by standardization because standardization enables dealers to "increas[e] the volume of their [CDS] practice" while also lowering the transaction costs incurred by end users.¹⁷¹ Hence, it is unsurprising that standardization occurred relatively quickly. "But," Partnoy and Skeel explain, "the leading firms [that dominate ISDA] also may attempt to protect their own interests even when doing so undermines the efficiency of the market as a whole."¹⁷² The authors note, as an example, that ISDA may "develop . . . approaches that benefit ISDA members at the expense of others."¹⁷³ Control over ISDA thus provides swaps dealers a significant positional advantage that they can use to take actions like shaping the standardized terms in ways that benefit their interests, in addition to facilitating collective action.

Unsurprisingly, many commentators have suggested that a primary reason that the market for CDSs did not independently move to centralized exchanges or to requiring post-trade trans-

¹⁶⁷ International Swaps and Derivatives Association, Press Release, *ISDA Celebrates 20 Years at the Forefront of the Privately Negotiated Derivatives Industry* (May 10, 2005), online at <http://www.isda.org/press/press051005.html> (visited Dec 5, 2014).

¹⁶⁸ See *id.*

¹⁶⁹ See Olson, *The Logic of Collective Action* at 132–67 (cited in note 18).

¹⁷⁰ See Frank Partnoy and David A. Skeel Jr, *The Promise and Perils of Credit Derivatives*, 75 U Cin L Rev 1019, 1039 (2007).

¹⁷¹ *Id.* at 1037.

¹⁷² *Id.*

¹⁷³ *Id.*

parency is the efforts undertaken by swap dealers, individually and through ISDA, to protect the OTC market structure and the higher fees that they reap as a result.¹⁷⁴ The situation thus resembles the slow move to decimalization and the protracted period of fixed brokerage fees.¹⁷⁵ As part of the Dodd-Frank Wall Street Reform and Consumer Protection Act¹⁷⁶ (“Dodd-Frank”), Congress mandated significant changes in the structures through which CDSs and other derivatives are traded, including a requirement that most derivatives be centrally cleared.¹⁷⁷ This has triggered significant and ongoing changes in the market structures through which CDSs are traded, including many changes akin to those that commentators have long advocated.¹⁷⁸ Yet absent the largely exogenous shock of the Crisis and the po-

¹⁷⁴ See, for example, Financial Economists Roundtable, 22 J Applied Corp Fin at 45 (cited in note 165) (“[I]ntermediaries do not have an incentive to foster the migration of derivatives trading to exchange markets, where bid-ask spreads may be narrower and where ultimate buyers and sellers can trade directly with each other, rather than through a dealer.”). See also, for example, Kenneth R. French, et al, *The Squam Lake Report: Fixing the Financial System* 118 (Princeton 2010) (“Because the current OTC market is relatively opaque, in many cases bid-ask spreads are likely to shrink if trading moves to an exchange.”); *Financial Regulation in America: A Pox on Your Swaps*, Economist 75–76 (May 1, 2010) (“Derivatives-dealing has become one of the most profitable activities for Wall Street’s giants.”); *Derivatives: Drugstore Cowboys*, Economist 82, 83 (Jan 31, 2009) (“[B]rokers’ vested interest in protecting their high-margin franchises have [helped keep derivatives] off-exchange.”); Darrell Duffie, Ada Li, and Theo Lubke, *Policy Perspectives on OTC Derivatives Market Infrastructure* *10 (Federal Reserve Bank of New York, Mar 2010), online at http://www.newyorkfed.org/research/staff_reports/sr424.pdf (visited Dec 5, 2014):

Even after an OTC derivatives product has achieved relatively active trading, and would be suitable for exchange trading, dealers have an incentive to maintain the wider bid-ask spreads that they can obtain in the OTC market relative to the spreads that might apply to the same product on an exchange.

¹⁷⁵ Indirect support for this conjecture arises from the banking industry’s success at protecting its collective interests in other ways, as reflected most notably in its efforts to exempt swaps from regulation. See Johnson and Kwak, *13 Bankers* at 134–37 (cited in note 101) (describing the banking industry’s successful effort to fend off an attempt by the Commodity Futures Trading Commission (CFTC) to consider regulating this area and the subsequent entrenchment of its efforts in the Commodity Futures Modernization Act of 2000, Pub L No 106-554, 114 Stat 2763, which exempts swaps from regulation by the SEC or CFTC).

¹⁷⁶ Pub L No 111-203, 124 Stat 1376 (2010).

¹⁷⁷ Dodd-Frank §§ 701–74, 124 Stat at 1641–1802.

¹⁷⁸ See *Clearing and Settlement* (Securities and Exchange Commission, Mar 14, 2014), online at <http://www.sec.gov/spotlight/dodd-frank/clearing-settlement.shtml> (visited Dec 5, 2014). See also Shannon D. Harrington and Christine Harper, *Wall Street Shrinks from Credit Default Swaps before Rules Hit* (Bloomberg Nov 29, 2010), online at <http://www.bloomberg.com/news/2010-11-29/wall-street-shrinks-from-default-swaps-as-dodd-frank-rules-hit-speculators.html> (visited Dec 5, 2014).

litical will for reform that it inspired, there is little indication that these changes would have occurred.

There are also indications that the required changes have been implemented more slowly than Dodd-Frank mandates because the intermediaries that benefit from the OTC structure are seeking to protect as much of the current regime as possible.¹⁷⁹ As in the other examples, the story is multifaceted. There are some real costs and uncertainty associated with shifting to alternative structures.¹⁸⁰ Further complicating the analysis, the changes that Dodd-Frank mandates are intended, in part, to address the ways that CDSs may increase systemic risk. By seeking to force both parties and financial intermediaries to internalize this externality, these costly aspects of the new regime may outweigh any efficiency gains arising from the overall shift to more-efficient trading structures. Nonetheless, this situation parallels the other examples in that the intermediaries that profit from the current regime are in the best position to assess the costs and risks of possible changes. Thus, it should come as little surprise that those costs and risks have received more emphasis at times than the relative benefits, even though many nonindustry experts suggest that the benefits outweigh the drawbacks.¹⁸¹ The result, predictably, has been delay in the

¹⁷⁹ See Christopher Doering, *CFTC Moves to Delay Some Swaps Rules past July 16* (Reuters June 14, 2011), online at <http://www.reuters.com/article/2011/06/14/us-financial-regulation-deadline-idUSTRE75D35U20110614> (visited Dec 5, 2014) (describing the delayed implementation schedule).

¹⁸⁰ A number of scholars have identified drawbacks associated with mandatory clearing, a move that is related to but not synonymous with a shift to trading through a centralized exchange or post-trade transparency. See, for example, Craig Pirrong, *Derivatives Clearing Mandates: Cure or Curse?*, 22 *J Applied Corp Fin* 48, 48 (2010) (arguing that “expanded clearing has the potential to become a major source of risk in itself”); Mark J. Roe, *Clearinghouse Overconfidence*, 101 *Cal L Rev* 1641, 1644 (2013) (arguing that the Dodd-Frank enactors overestimated “clearinghouses’ potential to contain systemic risk”).

¹⁸¹ See, for example, Financial Economists Roundtable, 22 *J Applied Corp Fin* at 45 (cited in note 165); Duffie, Li, and Lubke, *Policy Perspectives on OTC Derivatives Market Infrastructure* at *11 (cited in note 174) (noting that “some derivatives trading can be inefficiently ‘trapped’ in the OTC market because of a lack of incentives for individual market participants to migrate from the OTC market to exchanges”); Chris Kentouris, *Funds Push Back on OTC Derivatives Rules* (Money Management Executive, May 9, 2011), online at http://www.mmexecutive.com/issues/19_19/funds-push-back-on-otc-derivatives-rules-219329-1.html (visited Dec 6, 2014) (explaining that “[f]und managers believe [] large banks want to keep as many swap contracts out of clearinghouses as possible because they earn more money if the deals are executed over the phone and not centrally cleared”).

movement toward more-efficient structures even in the face of legislative and public pressure in favor of such change.

III. INTERMEDIARY INFLUENCE ON FINANCE

The roles played by financial intermediaries are sufficiently diverse that it is impossible to draw any broad conclusions about the informational and positional advantages that they enjoy and the nature of the industries in which they operate. Nonetheless, the capital markets are sufficiently unique that there are some identifiable patterns in both regards. This Part considers why financial intermediaries may be particularly well positioned to influence institutional arrangements, while Part IV examines evidence suggesting that financial intermediaries have been successful in this regard.

A. Informational and Positional Advantages

The capacity of financial intermediaries to influence institutional arrangements depends on the advantages that they enjoy along two related but distinct axes—one connecting the intermediaries to the parties to a transaction, and a second connecting the intermediaries to policymakers with the authority to regulate the first relationship. A look at the roles typically played by financial intermediaries reveals why they often enjoy significant informational advantages along both dimensions.

A key role played by many financial intermediaries—including accountants, rating agencies, and, at times, underwriters—is to help overcome information asymmetries between a firm issuing securities and potential investors in those securities.¹⁸² The capacity to provide value in this manner requires that an intermediary have a superior understanding of the firm's financial health or the quality of the particular securities being issued than the investors to whom the securities are being sold. Similarly, the significant fees that investors pay intermediaries to actively manage investment funds make sense only if

¹⁸² See Bernard S. Black, *Information Asymmetry, the Internet, and Securities Offerings*, 2 J Small & Emerging Bus L 91, 92 (1998) (“[T]he single largest cost that stands between issuers and investors is the problem of asymmetric information.”). See also 15 USC § 77f–77g (requiring that firms selling securities to the public provide potential investors with audited financial statements); Richard Carter and Steven Manaster, *Initial Public Offerings and Underwriter Reputation*, 45 J Fin 1045, 1046 (1990) (explaining that an investment bank that underwrites a public offering effectively pledges its reputation on behalf of the firm issuing the securities).

investors believe that those intermediaries enjoy a superior understanding of the expected performance of particular financial assets.

In addition to having a superior understanding of the value of particular financial instruments, financial intermediaries often enjoy superior information regarding particular types of investments and their associated risks, as illustrated in the prominent role that stockbrokers and other advisors play in helping investors to allocate their funds. The increasing complexity of financial products and markets further accentuates the magnitude of the informational advantages that intermediaries typically enjoy.¹⁸³ Many financial instruments, for example, can be valued only by using highly complex models.¹⁸⁴ It generally makes little sense for individual investors to try to create, or even understand, such models. By formulating and employing such devices, intermediaries can provide significant value to their clients, but doing so also gives intermediaries significant informational advantages relative to their clients.¹⁸⁵

Similar dynamics help to explain the informational advantages that financial intermediaries often have relative to their regulators. When financial intermediaries control or dominate a medium of exchange, they are frequently in the best position to understand how the regime operates and the probable effects of changes that could be made to it.¹⁸⁶ This ongoing regulatory challenge is reflected in efforts to implement the changes required by Dodd-Frank.¹⁸⁷ As of December 1, 2014, 280 mandatory deadlines requiring financial regulators to adopt final rules with respect to specified issues had passed.¹⁸⁸ As of that same date, 104—that is, 37 percent—of the required rules had yet to

¹⁸³ See Dan Awrey, *Complexity, Innovation, and the Regulation of Modern Financial Markets*, 2 Harv Bus L Rev 235, 239 (2012) (identifying “a host of regulatory challenges” that arise from complexity and innovation in financial markets); John C. Coffee Jr, *What Went Wrong? A Tragedy in Three Acts*, 6 U St Thomas L J 403, 409 (2009) (describing many structured-finance transactions as “inherently opaque” as a result of their complexity); Steven L. Schwarcz, *Regulating Complexity in Financial Markets*, 87 Wash U L Rev 211, 213 (2009) (identifying complexity “as the greatest financial-market challenge of the future”).

¹⁸⁴ See generally Schwarcz, 87 Wash U L Rev 211 (cited in note 183) (describing the complex modeling approaches of modern investment securities).

¹⁸⁵ See Coffee, 6 U St Thomas L J at 408–10 (cited in note 183).

¹⁸⁶ See Part II.

¹⁸⁷ See Ben Protess, *Deconstructing Dodd-Frank*, NY Times F12 (Dec 12, 2012).

¹⁸⁸ *Dodd-Frank Progress Report *2* (Davis Polk & Wardwell LLP, Dec 1, 2014), online at <http://www.davispolk.com/Dodd-Frank-Rulemaking-Progress-Report> (visited Dec 6, 2014).

be finalized, and regulators had yet to even propose rules with respect to 42 of the 104 open matters.¹⁸⁹ These figures illustrate that financial regulators today are overwhelmed. While there are many contributing factors, information asymmetries that place regulators at a disadvantage relative to those they seek to regulate helps to explain regulators' inability to act in a timely fashion.

Regulators' attempts to adopt specific rules shed additional light on how informational advantages can shape the rulemaking process. For example, one of the most significant provisions in Dodd-Frank, known as the Volcker Rule, prohibits banks and bank affiliates from engaging in proprietary trading or sponsoring certain types of funds, subject to a number of exceptions.¹⁹⁰ Because this rule determines the scope of the market making and other trading that banks can engage in, it directly affects core institutional arrangements.¹⁹¹ All five regulators involved in implementing the Volcker Rule obtained significant information from industry participants and made other efforts to become experts in the matters at issue before proposing a rule. Nonetheless, the initial proposal still included questions and requests for comment with respect to more than 350 topics, "covering virtually every aspect of the proposed regulations."¹⁹² The regulators were openly seeking advice because they recognized, all too well, that the financial firms that they regulate would better understand the effects of the proposed changes than the regulators themselves.

A related reason that the informational advantages enjoyed by financial intermediaries may enhance their capacity to shape institutional arrangements is that such advantages transform the nature of the relationship between intermediaries and their regulators. Regulators' dependence on those they regulate can make regulators particularly attuned, and responsive, to the interests of the regulated parties. The result at the extreme is regulatory capture, which some suggest is pervasive in the fi-

¹⁸⁹ *Id.*

¹⁹⁰ Dodd-Frank § 619, 12 USC § 1851.

¹⁹¹ See *Dodd-Frank Rulemaking: Volcker Rule and SIFI Proposals* *2–5 (Skadden, Arps, Slate, Meagher & Flom LLP and Affiliates, Nov 17, 2011), online at http://www.skadden.com/evites/NY/Dodd_Frank_Rule_Making_Volcker_Rule_and_SIFI_Proposals_111711.pdf (visited Dec 6, 2014).

¹⁹² *Id.* at *2.

nancial domain,¹⁹³ but even-more-subtle forms of influence can be quite powerful in shaping institutional arrangements.¹⁹⁴ Relatedly, as Professor Jeffrey Gordon and Christopher Muller have explained, “growing profits seem to attest to the skill and sagacity of industry participants and increase normative deference to their views.”¹⁹⁵ This creates the possibility of a cycle wherein intermediary influence leads to greater profitability, which, in turn, increases intermediary influence.

Closely related are the positional advantages that intermediaries enjoy, again with respect to both the parties that intermediaries serve and policymakers. Positional advantages can range from control over a centralized exchange to informal relationships. The OTC market for CDSs, for example, relied on an extensive but powerful network of relationships among the leading investment banks, in addition to their expertise. A party seeking to engage in such a transaction thus often has little choice but to work with one of the leading investment banks.¹⁹⁶ Positional advantages can also arise with respect to particular products or transactions. For example, when a party acquires a bespoke financial instrument, the complexity of the instrument and the challenge of trying to value it accurately often preclude the party from turning to anyone but the bank that created the instrument should the acquiring party later seek to dispose of it.

¹⁹³ See Luigi Zingales, *Preventing Economists' Capture*, in Daniel Carpenter and David A. Moss, eds, *Preventing Regulatory Capture: Special Interest Influence and How to Limit It* 124, 124 (Cambridge 2014) (explaining that “standard economic incentives [often] push even the most well-intentioned regulators to cater to the interests of the regulated” in part because “[r]egulators depend on the regulated for much of the information they need to do their job properly . . . encourag[ing] regulators to cater to the regulated”); Omarova, 37 J Corp L at 630 (cited in note 101) (“Financial regulators often come to view their institutional interests or mission as largely congruent with the interests of their regulated industry constituency.”).

¹⁹⁴ This dynamic may favor financial intermediaries even when regulators are not wholly captured, as the term is commonly used. See Lawrence G. Baxter, *Capture Nuances in Financial Regulation*, 47 Wake Forest L Rev 537, 539 (2012) (suggesting that “capture’ is a very unsteady concept for assessing whether the public interest is being served in financial regulation”).

¹⁹⁵ Jeffrey N. Gordon and Christopher Muller, *Confronting Financial Crisis: Dodd-Frank's Dangers and the Case for a Systemic Emergency Insurance Fund*, 28 Yale J Reg 151, 178 (2011).

¹⁹⁶ See Michael Lewis, *The Big Short: Inside the Doomsday Machine* 122–35 (Norton 2011) (explaining the challenges facing a small institutional investor seeking to acquire CDSs on collateralized debt obligations).

B. Industry Structure

Two factors—the number of participants in an industry and whether industry participants are collectively organized for other purposes—affect the probability that intermediaries will take actions to promote favorable institutional arrangements. This is because such arrangements are typically collective goods that inure to the benefit of all intermediaries of a particular type. This Section addresses how financial intermediaries fare along each of these dimensions, and it then considers how these factors influence the capacity of parties that rely on financial intermediaries to successfully advocate for the adoption of more-efficient institutional arrangements.

Financial intermediaries often operate in industries dominated by a small number of players. For example, the four leading accounting firms dominate the auditing market for large, public corporations.¹⁹⁷ Similarly, regulatory and privately imposed restraints traditionally required a huge swathe of investors to use credit ratings given to a security by one of three designated rating agencies.¹⁹⁸ While there is nominally a far greater number of banks providing commercial and investment banking services, particular markets are often dominated by a small number of participants. For example, the top five banks underwrote 64 percent of common stock offerings in 2003, and the top ten banks captured 87 percent of the market.¹⁹⁹ Even more strikingly, as of the end of 2010, of the \$217 trillion in derivatives contracts outstanding with commercial banks, \$209.5 trillion, or 96.5 percent, were with the largest five banks (JPMorgan Chase Bank, Bank of America, Citibank, Goldman Sachs Bank, and

¹⁹⁷ See Lawrence A. Cunningham, *Too Big to Fail: Moral Hazard in Auditing and the Need to Restructure the Industry before It Unravels*, 106 Colum L Rev 1698, 1698–99 (2006); Mario Christodoulou, *Big-Four-Only Clauses Are Rare: BBA* (Accountancy Age June 18, 2010), online at <http://www.accountancyage.com/aa/news/1809491/big-four-clauses-rare-bba> (visited Dec 6, 2014) (questioning the ubiquity of provisions requiring British banks to use one of the Big Four accounting firms).

¹⁹⁸ See Frank Partnoy, *How and Why Credit Rating Agencies Are Not Like Other Gatekeepers*, in Yasuyuki Fuchita and Robert E. Litan, eds, *Financial Gatekeepers: Can They Protect Investors?* 59, 60 (Brookings 2006) (explaining that credit-rating agencies “benefit[] from an oligopoly market structure that is reinforced by regulations that depend exclusively on credit ratings issued by Nationally Recognized Statistical Rating Organizations”). See also Coffee, 6 U St Thomas L J at 408–12 (cited in note 183).

¹⁹⁹ Sergei Guriev and Dmitriy Kvasov, *Imperfect Competition in Financial Markets and Capital Structure*, 72 J Econ Behav & Org 131, 132 (2009) (citing data from the Securities Data Corporation).

Wells Fargo Bank).²⁰⁰ Even highly specialized niches, like the provision of custodian services, are often dominated by an exceptionally small number of players.²⁰¹ Numerous factors, including the importance of reputational capital,²⁰² licensing regimes that limit entry,²⁰³ and the positional advantages described above, help to explain these structures. These structures are important because when there are only a small number of firms—active or dominant—in a particular industry, each intermediary expects to enjoy a greater proportion of the gains from the collective good and is thus more inclined to invest individual resources to promote it. It is also easier for a smaller number of firms to coordinate their actions.²⁰⁴

Also relevant to this analysis are the self-regulatory organizations, trade associations, and other group affiliations that are common in financial markets. These organizations play a significant role in promoting the collective interests of financial intermediaries and have the capacity and incentive to do so in even those industries that are less concentrated.

The dynamics surrounding efforts to implement the Volcker Rule illustrate the extent to which financial intermediaries often have both the incentive and means to invest significant resources in promoting collective goods. To assess the influence of different groups on the Volcker Rule's adoption, Professor Kimberly Krawiec examined approximately 8,000 public-comment

²⁰⁰ *OCC Bank Derivatives Report* *10, Graph 4, Table 1 (Comptroller of the Currency, 4th quarter 2010), online at <http://www.occ.treas.gov/topics/capital-markets/financial-markets/trading/derivatives/derivatives-quarterly-report.html> (visited Dec 6, 2014).

²⁰¹ See Brian Bollen, *Bigger Providers Increase Domination*, Fin Times Special Report: Asset Servicing 2 (Sept 19, 2011) (stating that “[t]he dominance of the big four providers [of custodian services] is unquestioned,” and that “it is apparently the height of futility to aspire to join their ranks by any means other than by being consolidated into one of them”).

²⁰² See Wilmarth, 2002 U Ill L Rev at 366 (cited in note 116) (describing the “critical importance of reputation . . . [for] dealers in OTC derivatives,” as evidenced by advertising campaigns launched by the major dealers). See also Randolph P. Beatty, Howard Bunsis, and John R.M. Hand, *The Indirect Economic Penalties in SEC Investigations of Underwriters*, 50 J Fin Econ 151, 152 (1998) (finding “that SEC investigations of underwriters impose a variety of measurable and significant *indirect* penalties on both underwriters and their clients,” which the authors “attribute . . . to a sudden deterioration in the value of the underwriter’s assurance-based reputation capital”).

²⁰³ See 15 USC § 78f (regulating national exchanges and requiring that membership be limited to registered broker dealers and persons associated with them); 15 USC § 7211(c) (providing that one of the duties of the newly created Public Company Accounting Oversight Board is to “register public accounting firms that prepare audit reports”).

²⁰⁴ See Olson, *The Logic of Collective Action* at 63 (cited in note 18).

letters received by the Financial Stability Oversight Council in the thirty-day public-comment period prior to the Council's study on Volcker Rule implementation, as well as the meeting logs of the financial regulators responsible for adopting the Volcker Rule (the Treasury Department, the Federal Reserve, the Commodity Futures Trading Commission, the SEC, and the Federal Deposit Insurance Corporation) in the period before they issued their proposed rule.²⁰⁵ Her analysis revealed that the great majority of comment letters were sent by individuals, but these letters tended to be quite short and were often duplicates of a basic form letter created by a public-interest group.²⁰⁶ The letters from industry and trade groups, by contrast, were fewer in number but far greater in length, depth, and sophistication. As Krawiec explains, those letters tended to "advance detailed legal arguments relying on numerous statutes and cases, reference the Dodd–Frank legislative history, and often contain thorough empirical data. Most are meticulously argued and carefully drafted."²⁰⁷ The meeting logs, while relatively devoid of substance, are similarly revealing. They show that the three parties that met with federal regulators most frequently in regard to the Volcker Rule were JPMorgan Chase, Goldman Sachs, and Morgan Stanley, with twenty-seven, twenty-two, and nineteen meetings, respectively.²⁰⁸ This suggests that, even though the contours of the rule are a collective good, these firms expected the contours to sufficiently affect their operations and profitability to merit investing significant resources in influencing the form of the rule.

Other financial institutions, law firms representing financial institutions or trade groups, and "financial industry trade associations, lobbyists, and policy advisors" also met frequently with regulators to discuss the Volcker Rule.²⁰⁹ There were some, but far fewer, meetings with public interest groups, of which the

²⁰⁵ See Kimberly D. Krawiec, *Don't "Screw Joe the Plummer": The Sausage-Making of Financial Reform*, 55 *Ariz L Rev* 53, 58 (2013).

²⁰⁶ See *id.* at 86 (showing that the average comment letter from an individual, not following the form, was 86 words, while the average letter submitted by financial institutions and trade groups was 3,852 words and 4,027 words, respectively).

²⁰⁷ *Id.* at 74.

²⁰⁸ *Id.* at 79. See also *id.* at 98.

²⁰⁹ Krawiec, 55 *Ariz L Rev* at 79 (cited in note 205). See also *id.* at 95 (citing data showing that trade associations, lobbyists, and policy advisors held thirty-three meetings with financial regulators between July 26, 2010, and October 11, 2011).

majority were union affiliated.²¹⁰ Collectively, the data suggest that financial intermediaries, individually and through organizations serving their collective interests, invested significant resources to influence the adoption of the Volcker Rule in ways that favored their interests. Individuals showed that they cared, but they did not invest the resources necessary to meaningfully engage the issue at stake. While the substantive issues at stake in the contours of the Volcker Rule are in some regards an imperfect test of intermediary influence, the dynamics that Krawiec reveals seem typical.²¹¹ The meeting logs and comment letters reflect the advantages that typically operate in favor of intermediary interests—individual financial intermediaries with a sufficient stake in a particular outcome to make it rational for them to invest significant resources promoting that outcome, organizational structures through which intermediaries can coordinate and deploy resources in favor of their collective interests, and massive informational and positional advantages that give regulators little choice but to listen closely to industry concerns.

Note also that the claim here—regarding intermediaries' capacity to influence institutional arrangements through legislative and regulatory processes—is relative, not absolute. The ascent of institutional investors might seem likely to give rise to a group with the incentives and capacity to counteract intermediary influence. Nonetheless, as Krawiec notes, “large institutional investors are notably absent from Volcker Rule administrative activity,” and her analysis reveals little to suggest “dissension among important industry actors,” which could otherwise “ensure[] that agencies [] receive competing views and information . . . even in the absence of effective participation by

²¹⁰ See id at 80:

In sum, whereas financial industry representatives met with federal agencies on the Volcker Rule a total of 351 times, there were only 31 meetings with entities or groups that might reasonably be expected to act as a counterweight to industry representatives in terms of the information provided and the types of interpretations pressed.

²¹¹ The Volcker Rule has direct implications for institutional arrangements that will affect intermediary profitability and institutional design, but it is imperfect in the sense that the interests of parties and intermediaries may be aligned with respect to some of the core issues. See, for example, Darrell Duffie, *Market Making under the Proposed Volcker Rule* *22 (Rock Center for Corporate Governance, Working Paper Series No 106, Jan 2012), online at <http://www.darrellduffie.com/uploads/policy/duffievolckerrule.pdf> (visited Nov 29, 2014) (explaining how banks and investors may be well served by a broader interpretation of the market maker exception to the prohibition on proprietary trading).

public interest groups and other potential watchdogs.”²¹² A variety of factors likely contribute to this absence. Even large institutional investors often have less at stake in a particular institutional arrangement than the financial intermediaries affected by the arrangement, making it unlikely that institutional investors will enjoy sufficient individual gains to justify deploying significant resources to promote arrangements that will benefit investors generally.²¹³ There are also very few trade associations or comparable groups that serve the collective interests of investors. This may reflect the lack of individualized benefits that such organizations can offer would-be members, which Professor Olson identified as critical in overcoming the desire of each member in a group to free ride on the efforts of others. Thus, the challenges inhibiting investors and others—who would benefit from more-efficient institutional arrangements—from investing the resources necessary to achieve that goal further exacerbate the magnitude of the relative influence that intermediaries enjoy over the processes through which the relevant institutions evolve.

Broadening the lens to consider legislative processes provides yet further evidence of just how much influence financial intermediaries often enjoy. The financial industry has long made significant campaign contributions and invested heavily in lobbying to shape lawmaking in ways that favor its interests. According to OpenSecrets.org, which compiles, analyzes, and disseminates information about campaign-contribution patterns, “The financial sector is far and away the largest source of campaign contributions to federal candidates and parties, with insurance companies, securities and investment firms, real estate interests and commercial banks providing the bulk of that money.”²¹⁴ OpenSecrets.org reports that the financial sector was responsible for \$468.8 million in donations to federal campaigns in connection with the 2008 election.²¹⁵ There is also evidence

²¹² Krawiec, 55 *Ariz L Rev* at 80, 81 (cited in note 205).

²¹³ See Zingales, *Preventing Economists' Capture* at 124 (cited in note 193) (“The regulated are also perhaps the primary audience of the regulators, as taxpayers and citizens more generally have much less incentive to monitor regulation, and generally remain ignorant.”).

²¹⁴ Aaron Kiersh, *Finance/Insurance/Real Estate: Background* (OpenSecrets.org July 2009), online at <http://www.opensecrets.org/industries/background.php?cycle=2012&ind=F> (visited Dec 6, 2014).

²¹⁵ *Id.*

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that these contributions, combined with other factors, often enable financial intermediaries to exercise significant influence over the legislative process. For example, after reviewing relevant e-mails and other documentation, the New York Times reported that a bill that “would exempt broad swathes of trades from new regulation,”

sailed through the House Financial Services Committee this month [And, i]n a sign of Wall Street’s resurgent influence in Washington, Citigroup’s recommendations were reflected in more than 70 lines of the House committee’s 85-line bill. Two crucial paragraphs, prepared by Citigroup in conjunction with other Wall Street banks, were copied nearly word for word.²¹⁶

While it concerns just one bill, this account is consistent with evidence suggesting that the significant resources that the financial sector expends on lobbying and other political efforts often yield results.²¹⁷

Political activity by financial intermediaries and those representing their interests can also shape effective institutional arrangements by altering regulators’ capacity to take positions contrary to the interests of financial intermediaries. Many financial regulators, like the SEC, rely on congressional appropriations for funding, thereby making these regulators responsive when they receive a call from a member of Congress weighing in on particular matters. Relatedly, as the SEC has learned the hard way, trade groups representing financial intermediaries can be very aggressive and effective litigants, increasing both the probability that any rulemaking that does not serve the interests of financial intermediaries will be challenged and the likelihood that such challenges will succeed.²¹⁸

As should be evident, these industry characteristics are not independent. They often operate in conjunction with one another

²¹⁶ Eric Lipton and Ben Protess, *Banks’ Lobbyists Help in Drafting Bills on Finance*, NY Times A1 (May 24, 2013).

²¹⁷ See James R. Barth, Gerard Caprio Jr, and Ross Levine, *Guardians of Finance: Making Regulators Work for Us* 7 (MIT 2012) (“Research by academics and individuals at the International Monetary Fund shows that financial institutions get much of what they want from their lobbying expenditures, as campaign contributions change the voting behavior of legislatures on crucial financial policy issues.”).

²¹⁸ See, for example, *Business Roundtable v Securities and Exchange Commission*, 647 F3d 1144, 1146 (DC Cir 2011) (invalidating an SEC rulemaking requiring corporations to grant proxy access to certain investors).

and with other factors to increase the intermediaries' capacities to promote their collective interest in earning higher fees. This Part does not allow one to draw fast and hard generalizations about the influence of financial intermediaries, but it does suggest that intermediary influence is likely to be a powerful force in financial markets. The next Part addresses the ramifications of financial-intermediary influence and why it merits response.

IV. CONSEQUENCES OF FINANCIAL-INTERMEDIARY INFLUENCE

This Part addresses some effects of financial-intermediary influence.²¹⁹ Its function is two-fold. First, by identifying a range of observable trends that are consistent with financial-intermediary influence, this Part provides further support for this Article's claim regarding that influence. In other words, by shifting from the microlevel examples of Part II to a macroview of the financial system, this Part buttresses the claim that the examples provided in Part II are typical, rather than atypical, of financial-intermediary influence. Second, this Part highlights some costs and other drawbacks of allowing financial intermediaries to exercise such influence.

Notably, none of the identified effects assumes that high-fee arrangements will persist indefinitely. Other market forces often prevail eventually, particularly when there is a clearly identifiable—and viable—alternative to the high-fee institutional arrangement favored by intermediaries. Even in such settings, however, the delay can result in significant welfare losses.²²⁰

A. Somewhat-Less-Efficient Markets

In each of the examples, intermediary influence prolonged or resulted in the creation of an institutional arrangement that seemingly entailed higher fees than a viable alternative. One effect of high-fee arrangements is to inhibit otherwise-efficient transfers. If A owns an asset and B places a higher value on it

²¹⁹ While not addressed closely here because intermediary influence does not always entail collusion, when it does, insights from the literature on collusion shed additional light on the costs of intermediary influence. See generally, for example, Kaplow, 77 *Antitrust L J* 343 (cited in note 76); Richard A. Posner, *Antitrust Law* (Chicago 2d ed 2001).

²²⁰ Similarly, empirical work on collusion suggests that the median cartel survives for only a limited period of time; nonetheless, cartels receive significant scholarly and policy attention because of the costs that can arise in the interim. See, for example, Levenstein and Suslow, 44 *J Econ Lit* at 44 (cited in note 74) (finding that "the median duration of cartels in a wide range of studies is . . . five to six years").

than A, both will be better off if A sells it to B. As reflected in the traditional conception of transaction costs, however, this transfer will not occur if the additional value that B derives from the asset is less than the cost of effectuating the transfer. The greater the transaction costs, the greater the number of otherwise-efficient transfers that will be impeded. Moreover, in light of the volume of securities transferred in many of the above-explored markets, even marginal effects may, in aggregate, be quite significant.

The persistence of relatively inefficient market structures may also dampen and limit the accuracy of asset prices. In determining how much he is willing to pay for a particular asset, an investor considers the costs that he expects to incur when and if he chooses to sell it. The greater the costs of disposition, the less he will pay to acquire the asset, meaning that the increased transaction fees can depress asset values.²²¹ Less efficient market structures can also reduce the accuracy of price signals. It is, for example, impossible for prices to be any more accurate than the increments at which a security trades, so larger tick sizes result in less accurate price signals. Similarly, by reducing price transparency, OTC markets may yield less accurate prices than if the same asset were traded on an exchange, as exchanges facilitate price discovery and transparency.²²² In light of the many socially productive functions that price signals can serve, these impediments to accurate pricing may be quite costly.²²³

B. Longer Intermediation Chains

Another predictable and observable effect of intermediary influence is the lengthening of the typical chain connecting an investor with the project underlying his investment. Deretailization and the rise of FoFs are just two of many ways that the number of nodes on the chain connecting these two ends has in-

²²¹ See Yakov Amihud and Haim Mendelson, *Asset Pricing and the Bid-Ask Spread*, 17 J Fin Econ 223, 223–24, 246 (1986).

²²² See notes 165–75 and accompanying text.

²²³ See, for example, Jeffrey N. Gordon, *The Rise of Independent Directors in the United States, 1950–2005: Of Shareholder Value and Stock Market Prices*, 59 Stan L Rev 1465, 1470–71 (2007) (noting that independent directors might rely on a firm's stock price as indicative of the stock's performance); Oliver Hart and Luigi Zingales, *A New Capital Regulation for Large Financial Institutions*, 13 Am L & Econ Rev 453, 454–57 (2011) (proposing a capital requirement for large financial institutions that would change depending on the price at which CDSs referencing the institutions are trading).

creased in recent decades. For example, it used to be that a person seeking a short-term, highly liquid investment would likely place that money in a bank, which in turn would use the funds that it collected from depositors to make loans directly to homeowners and others. As Professor Hyun Song Shin has explained, that model persists but intermediation chains today are often much longer:

[M]ortgage assets are held in a mortgage pool, but [rather than being held by a bank] mortgage-backed securities (MBS) are owned by an asset-backed security (ABS) issuer who pools and tranches the MBS into another layer of claims, such as collateralised debt obligations (CDOs). Then, a securities firm might hold CDOs, financing them by pledging them as collateral to a commercial bank through repurchase agreements (repos). The commercial bank in turn funds its lending to the securities firm by issuing short term liabilities such as financial commercial paper. Money market mutual funds complete the circle, and household savers own shares to these funds.²²⁴

The increase in the number of nodes typically separating an investor from the assets underlying his investments may be attributed to a number of factors other than intermediary influence—such as technological and other innovations—but intermediary influence seems to be a significant contributing factor. Moreover, this type of change can have collateral consequences. For example, fragmentation nodes—like MBSs and CDOs—significantly reduce transparency and flexibility.²²⁵ As a result, an investor is less likely to understand the assets underlying his investments and is less able to make changes to the terms of those assets in the face of developments that might warrant such modification.²²⁶

²²⁴ Hyun Song Shin, *Macroprudential Policies beyond Basel III* *12–13 (Bank for International Settlements Working Paper No 60, Dec 2011), online at <http://www.bis.org/publ/bppdf/bispap60.pdf> (visited Dec 6, 2014).

²²⁵ See Judge, 64 *Stan L Rev* at 659–60 (cited in note 147).

²²⁶ See *id.* at 661–62. This does not necessarily lead to less accurate pricing, but it does increase the probability of market dysfunction should new information reveal that the downside risks are greater than market participants had appreciated. See *id.* See also Kathryn Judge, *13 Months: The Role of a Modern Lender of Last Resort* *48–49 (working paper, 2014) (on file with author).

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C. Complexity

A closely related, and similarly overdetermined, issue to ever-lengthening intermediation chains is the increasing complexity of financial products and markets. One reason for this development is that more-complex transactions tend to involve higher fees and greater profit margins. A second and related factor is that greater complexity can make an investor more reliant on an intermediary's guidance and other services. This increases the probability that the investor will continue to use that intermediary's services in the future, boosting the intermediary's long-term expected returns. Complexity can also make it more difficult for parties to see the full range of fees that an intermediary is earning on a transaction.²²⁷ To the extent that salience affects a party's inclination to push for a lower fee, intermediaries may prefer less-transparent, and hence more-complex, transactions and market structures.

To be clear, the claim here is not that intermediaries pursue complexity arbitrarily; the mechanisms through which complexity increases are usually more subtle and gradual. For example, this analysis suggests that intermediaries making decisions about how to allocate resources will often favor investments that enable them to become specialists in high-fee, complex transaction types. This may entail allocating the most talented new recruits to a particular department or developing expertise in a particular area. After these fixed investments are made, a more complex way of funding a project (like using securitization structures to funnel capital to residential mortgages) may be less expensive than simpler alternatives. In a dynamic environment, the result is a shift toward more-complex financial products and markets.²²⁸

²²⁷ See Frank Partnoy, *Infectious Greed: How Deceit and Risk Corrupted the Financial Markets* 52–53 (PublicAffairs 2d ed 2009) (stating that, “because their customers couldn’t evaluate complex swaps properly[,] Bankers Trust was making unheard-of profits” in connection with certain derivatives that it was selling); Tracy Pride Stoneman and Douglas J. Schulz, *Brokerage Fraud: What Wall Street Doesn’t Want You to Know* 23–34 (Dearborn 2002) (explaining how brokerage firms receive extra, and indirect, compensation for selling particular financial products to clients).

²²⁸ For a description of the increasing complexity and its effects, see Schwarcz, 87 Wash U L Rev at 216–36 (cited in note 183).

D. Size and Efficiency of the Financial Sector

Intermediary influence may also enable financial intermediaries to retain a greater portion of the value created in a financial transaction than they otherwise would. Evidence suggests that this is happening. Recall that the financial sector accounted “for about 30 percent of all corporate profits in the decade before the crisis, up from 16 percent in the 1970s and 1980s.”²²⁹ A closer look at particular types of financial intermediaries reveals similar trends. For example, “[b]etween 1994 and 2007, global investment banking fees rose from approximately \$3 billion to \$21 billion per year.”²³⁰ Moreover, evidence suggests that this is not just a matter of wealth transfers. Rather, Professor Philippon’s study indicates that the financial industry as a whole has become less efficient over the past century and, at the least, has not become more efficient despite important technological and other innovations that would seem likely to significantly reduce the cost of financial intermediation.²³¹

Recent work on the relationship between the size of a country’s financial sector and its level of development raises similar issues. Early studies suggested that there was a positive correlation between the development of a country’s financial system and its subsequent economic growth.²³² Recent work suggests that this relationship holds, but only up to a point.²³³ After the financial sector becomes sufficiently large, the correlation flips—further growth in the size of the industry tends to be correlated

²²⁹ Leonhardt, *Heading Off the Next Financial Crisis*, NY Times Magazine at 36 (cited in note 1).

²³⁰ David A. Becher and Jennifer L. Juergens, *M&A Advisory Fees and Analyst Conflicts of Interest* *9 (working paper, 2010), online at http://www.researchgate.net/profile/Michael_Hertzel/publication/228680942_MA_Advisory_Fees_and_Analyst_Conflicts_of_Interest/links/02e7e51815ae988ee0000000 (visited Dec 6, 2014). Studies show that fees from traditional asset management grew significantly between 1980 and 2007, which helps explain how “the securities industry grew from 0.4 percent of GDP in 1980 to 1.7 percent of GDP in 2007.” Greenwood and Scharfstein, 27 *J Econ Persp* at 7–9 (cited in note 4).

²³¹ See Philippon, *Has the U.S. Finance Industry Become Less Efficient?* at *5 (cited in note 2).

²³² See Law and Singh, 41 *J Bank & Fin* at 36 (cited in note 3) (citing studies concluding that “a well-developed financial market is growth-enhancing, and therefore consistent with the proposition of ‘more finance, more growth’”).

²³³ See, for example, *id.* at 36–38.

with slower economic growth.²³⁴ Moreover, a fast-growing financial sector tends to impede aggregate productivity growth.²³⁵

It is impossible to draw any hard and fast conclusions from these trends. Financial intermediaries provide a range of services—including helping to allocate risk more efficiently and providing liquidity to facilitate consumption smoothing—in addition to connecting investors and projects. It is also possible that advances in financial intermediation have increased the number of firms and individuals that can obtain credit, and it may be more costly to provide credit to those on the margins.²³⁶ The growth of finance may also be the byproduct and facilitator of greater specialization at the extremes, enabling activities that firms used to conduct in-house to instead be outsourced to a specialized intermediary. Nonetheless, these findings remain somewhat perplexing if one expects institutional arrangements to evolve to minimize transaction fees; yet these findings are precisely what we would expect in light of intermediary influence.

E. Misallocation of Capital

Intermediary influence may also distort the allocation of capital in systematic ways. When intermediaries earn higher fees from particular types of transactions, they tend to use their influence to favor that transaction type.²³⁷ The greater the influence that an intermediary enjoys, the greater the resultant distortion in the mix of transactions actually consummated—that is, the greater the fee effects.²³⁸ Thus, when intermediary influence results in institutional arrangements that make parties more reliant on a particular type of intermediary, greater fee effects generally result. And when certain firm types or sectors of the economy receive capital through pathways that are particularly profitable for financial intermediaries, greater fee effects result in greater amounts of capital being allocated to those firms and sectors than is socially optimal.²³⁹ At the extreme, as-

²³⁴ See *id.* at 43. See also Cecchetti and Kharroubi, *Reassessing the Impact of Finance on Growth* at *1 (cited in note 3).

²³⁵ See Cecchetti and Kharroubi, *Reassessing the Impact of Finance on Growth* at *10–13 (cited in note 3).

²³⁶ See Philippon, *Has the U.S. Finance Industry Become Less Efficient?* at *23 n 19 (cited in note 2).

²³⁷ See Judge, 98 Iowa L Rev at 1530–34 (cited in note 13).

²³⁸ See *id.* at 1520–21.

²³⁹ See *id.* at 1533.

set bubbles can result.²⁴⁰ A closely related effect is that, when firms or sectors are funded in ways that are less profitable for intermediaries, those firms or sectors may receive less capital than is socially optimal.

F. Systemic Fragility

Most of the trends just described contribute to another trend—increasing systemic fragility. The rents captured by the financial industry have contributed to growing income disparities that some believe play a critical role in undermining systemic stability.²⁴¹ The lengthening of intermediation chains increases systemic risk through multiple mechanisms. First, as recognized by Shin, because “the funding interest rate must be lower than the asset interest rate” at each node along an intermediation chain, “[a]s the intermediation chain becomes longer, more short-term funding must be used to support the chain.”²⁴² The predictable increased reliance on short-term debt renders the financial system less stable.²⁴³ Second, as the number of nodes separating an investor from the investment increases, transparency and flexibility are reduced.²⁴⁴ Both effects can inhibit efficient responses to new information in ways that increase systemic risk.²⁴⁵ Additionally, the bubbles that frequently result from the overallocation of capital often play a critical role in contributing to financial crises.²⁴⁶ Because systemic risk gives rise to externalities, the tendency of intermediary influence to contribute to systemic risk is yet another reason that other market forces cannot be relied on to produce a socially optimal outcome.

²⁴⁰ See *id.* at 1568–69.

²⁴¹ See, for example, Raghuram G. Rajan, *Fault Lines: How Hidden Fractures Still Threaten the World Economy* 183–201 (Princeton 2010) (describing the role of perceived and actual social polarization in contributing to financial instability).

²⁴² Shin, *Macroprudential Policies beyond Basel III* at *13 (cited in note 224).

²⁴³ See *id.*

²⁴⁴ See Judge, 64 *Stan L Rev* at 690–97 (cited in note 147).

²⁴⁵ See *id.*

²⁴⁶ See Richard A. Posner, *A Failure of Capitalism: The Crisis of '08 and the Descent into Depression* 10 (Harvard 2009) (recognizing that the “most dangerous type of recession/depression is caused by the bursting of an investment bubble”); Franklin Allen, Ana Babus, and Elena Carletti, *Financial Crises: Theory and Evidence*, 1 *Ann Rev Fin Econ* 97, 98 (2009) (noting that research on financial crises has shown “that systemic banking crises are typically preceded by credit booms and asset price bubbles”).

V. IMPLICATIONS

The foregoing analysis reveals that intermediary influence plays a critical, and often socially costly, role in the evolution of institutional arrangements. That there are costs associated with relying on specialized intermediaries does not, however, mean that we should avoid relying on them, particularly in light of the significant cost savings that such reliance can yield. The challenge is that it is impossible to continue to rely on intermediaries while eliminating intermediary influence. As this Article's examples make clear, the informational and positional advantages that facilitate intermediaries' capacity to favorably affect the evolution of institutional arrangements also enable intermediaries to more efficiently help parties overcome various barriers to transacting. Recognizing that intermediary influence is a force to be grappled with rather than a problem to be solved, this Part addresses, in turn, the implications of intermediary influence for theory, future study, and policy.

A. Theory

Using both theory and examples, this Article illustrates why intermediaries often have strategic advantages that enable them to influence institutional arrangements in self-serving ways despite other market forces that favor more-efficient outcomes. The effects of intermediary influence are not necessarily permanent; more-efficient institutional arrangements often prevail eventually. But this process can be slow. Moreover, because institutions continue to evolve, and intermediaries continue to enjoy strategic advantages in the processes through which they evolve, the entrenchment and adoption of relatively high-fee institutional arrangements are recurrent patterns. Even as some inefficient regimes are displaced by more-efficient alternatives, others become more entrenched or are replaced with even higher-fee alternatives. Thus, particularly in complex markets in which there are established and influential intermediaries, efficient outcomes cannot be presumed.

To be sure, that market forces do not always produce efficient outcomes is not a new insight. A number of other theories help to explain why market forces often yield suboptimal outcomes, and the concept of intermediary influence developed here

overlaps with, and draws on, a number of those theories.²⁴⁷ For example, intermediaries are often agents of one of the parties that they serve, rendering many of the dynamics at issue here agency costs. At the same time, many intermediaries cannot be deemed a simple agent for either party to a transaction. More importantly, the analysis here assumes multiple periods and its focus is on how actions taken today may affect institutional arrangements tomorrow. The actions that an intermediary takes today to promote a favorable institutional arrangement often affect arrangements only in future periods. As a result, the actions do not operate to the detriment of the intermediary's current clients. Future clients may be affected, and some current clients might also be future clients, but assuming that neither party has an obligation to continue to work together, the fact that intermediaries may be acting contrary to future clients' interests does not fit neatly into the agency-cost paradigm.²⁴⁸ Thus, the notion of agency costs and intermediary influence overlap, but neither fully encompasses the range of phenomena captured by the other.

There is a similarly meaningful but imperfect overlap with theories about collusion, public choice, and related concepts. The overlap with collusion arises because engaging in interdependent behavior to maintain or increase transaction fees is one way that intermediaries promote their collective interest in higher fees. Likewise, public-choice theory helps to explain how industry structure and other factors can affect an industry's ability to influence legislative and regulatory processes in self-interested ways.²⁴⁹ This too is one of the mechanisms that intermediaries employ to promote favorable institutional arrangements.²⁵⁰ Re-

²⁴⁷ See generally, for example, Posner, *A Failure of Capitalism* (cited in note 246).

²⁴⁸ See Part II.

²⁴⁹ See, for example, Olson, *The Logic of Collective Action* at 141–48 (cited in note 18).

²⁵⁰ See generally William F. Shughart II, *Public Choice*, in David R. Henderson, ed., *The Concise Encyclopedia of Economics* (Library of Econ & Liberty 2008), online at <http://www.econlib.org/library/Enc/PublicChoice.html> (visited Dec 6, 2014). A related body of literature examines the range of destructive effects that money can have on political processes. See, for example, Monica Youn, *Introduction*, in Monica Youn, ed., *Money, Politics, and the Constitution: Beyond Citizens United* 1, 4 (Century Foundation 2011) (“[A] volume of essays [that] attempt to map out the complex labyrinth that led to [the Supreme Court’s decision in] *Citizens United* and to explore where this decision may lead.”). See also generally Lawrence Lessig, *Republic, Lost: How Money Corrupts Congress—and a Plan to Stop It* (Hachette 2011) (suggesting that the influence of money on politics has given rise to a subtle but powerful form of corruption that fundamentally undermines the legitimacy of our political regime). Professor Olson’s work on collective

lated work by Professor Mark Roe provides particularly valuable insight into the ways that economic, institutional, and political economy factors interact to help explain the formation and shape of capital markets in various settings.²⁵¹ As a result, the extensive literature on collusion, public-choice theory, and related topics sheds helpful light on the factors that may facilitate the ability of intermediaries to alter institutional arrangements to serve their collective interests.²⁵² Collective or interdependent action is not a prerequisite for intermediaries to influence institutional forms, and many examples of intermediary influence, such as the way that individual stockbrokers encourage clients to invest in high-fee mutual funds, entail dynamics that have little relation to theories of public choice. Because intermediaries' efforts to influence policymaking typically result in higher transaction costs, intermediary influence also has costs—such as precluding otherwise-efficient transactions—that are distinctive from industry influence in other areas.²⁵³

This Article's claim also complements existing understandings of path dependence.²⁵⁴ Because of path dependence, current arrangements will often deviate from the optimal form that one would expect if starting from scratch under current conditions.²⁵⁵ Particularly when switching costs are high, a regime that deviates from the apparently optimal form may nonetheless be the best regime under the circumstances. Yet the effects of path dependence depend on context; and, in contrast to intermediary influence, the types of deviations that result do not consistently shift outcomes in a particular direction.²⁵⁶ Thus, while path dependence plays a critical role in explaining why intermediaries are so influential and the persistence of that influence on insti-

action also falls under this heading. See generally Olson, *The Logic of Collective Action* (cited in note 18).

²⁵¹ See generally Mark J. Roe, *Capital Markets and Financial Politics: Preferences and Institutions*, 7 *Capitalism & Society* 1 (2012).

²⁵² See Part III.

²⁵³ See Part IV.

²⁵⁴ For an overview of the factors that can contribute to path dependence, see Scott E. Page, *Path Dependence*, 1 *Q J Polit Sci* 87, 88 (2006).

²⁵⁵ See Mark J. Roe, *Chaos and Evolution in Law and Economics*, 109 *Harv L Rev* 641, 643–44 (1996).

²⁵⁶ See *id.* at 667 (noting that path dependence “yields . . . little direct policy prescription” and, “even worse[,] . . . is [not] developed enough to enable us to make explanatory predictions”).

tutional forms, the account here goes further by identifying a force that tends to shape the path in a systematic way.²⁵⁷

Returning to the big picture, this Article and many of these existing theories can be understood as different exercises in pointillism. Individual examples of intermediary influence often are also manifestations of one (or more) existing theory, and this Article borrows liberally from each. At the same time, the analysis here creates an overall composition that is new. No single alternative theory provides the same set of brushstrokes as the notion of intermediary influence introduced here. As a result, the image revealed here is not one that could be discerned from any of the existing frames.

Intermediaries play a distinct economic function. This affects both their capacity to influence institutional arrangements and the costs that arise when they do. By focusing on the impact of intermediaries in a dynamic environment, this Article uses some familiar brushstrokes, but ultimately it reveals something new—an affirmative market-based force that alters the evolution of institutional arrangements in predictable and suboptimal ways.

The final interaction that merits attention is how this relates to my earlier work on intermediaries. This Article was written in conjunction with, and complements, my previously published work examining the ramifications of the rise of intermediaries.²⁵⁸ Both works rest on the premise that, because transaction fees are revenue to the intermediaries to whom they are paid, intermediaries prefer high-fee transactions. That preference is expressed in two ways. First, treating the environment, including a party's tendency to rely on a particular type of intermediary, as static, an intermediary will use its influence over the party's decisionmaking to favor high-fee transactions. The result, called fee effects, is a change in the total mix of

²⁵⁷ Roe proposes a particular type of path dependence, which he labels "strong-form path dependence," that bears a stronger resemblance to intermediary influence. Strong-form path dependence arises when the very process of creating the path also has the effect of entrenching it. See *id.* at 651–52. Moreover, Roe identifies both information and public choice as factors that may preclude change even when the value created by shifting to an alternative exceeds the transition costs. See *id.* This is the closest notion in existing literature to intermediary influence. Nonetheless, lacking the focus on intermediaries, which is critical to the analysis here, or any analysis of the factors that allow particular types of actors to get a toehold that enables them to establish such advantages, this notion too fails to predict the type of systematic biases revealed by an analysis of intermediary influence.

²⁵⁸ See generally Judge, 98 *Iowa L Rev* 1517 (cited in note 13).

transactions consummated.²⁵⁹ The previous work drew attention to fee effects, developed a framework for identifying and assessing factors that affect the magnitude of the resultant distortion in a given area, and considered the social costs and other ramifications that arise as a result.²⁶⁰ A second and distinct way that intermediaries' desire to maximize their returns will manifest is in efforts to alter institutional arrangements so as to obtain higher fees over the long term. That is the focus here. There is some overlap. Fee effects can contribute to changes in institutional arrangements.²⁶¹ Similarly, understanding fee effects sheds light on the costs of intermediary influence. In particular, intermediary influence operates in favor of institutional arrangements that increase the probability that parties will rely on a class of intermediaries in the future, thereby increasing the probability and magnitude of future fee effects. Nonetheless, the two concepts of fee effects and intermediary influence are quite distinct. Fee effects arise in a static environment and focus on the mix of transactions consummated, while intermediary influence arises only in a dynamic, multiple-period setting and focuses on institutional design.

B. Understanding and Responding to Intermediary Influence

A key lesson for scholars, policymakers, and market participants is that society needs to better understand how intermediaries promote high-fee arrangements and when they are likely to succeed. The dynamics through which intermediary influence wanes and the factors that facilitate a transition from a high-fee arrangement to a more efficient alternative also merit further study. At times, simply becoming more attuned to intermediary influence may improve outcomes. For example, this Article illustrates the (rather obvious) point that the greater the economic stake of financial intermediaries, the more skeptical policymakers should be of their assertions about the potential costs or risks associated with a proposed policy change. Financial intermediaries are often the best sources of information about the likely consequences of policy changes, so it would be foolish not to consider their views on such matters. It would be just as foolish, however, to ignore the ways that such interests color the

²⁵⁹ See *id.* at 1526–30.

²⁶⁰ See *id.*

²⁶¹ See Parts II.B, II.C.1.

claims that they make. An important corollary is that the smaller an intermediary's economic interest in a particular outcome, the more reliable its feedback is likely to be. Thus, it may be appropriate for regulators to actively seek feedback from market participants that have a relatively small economic stake in how a particular policy issue is resolved and yet are well positioned to understand the trade-offs at stake.

Market participants may also be able to reduce some of the costs of intermediary influence, particularly if aided by academics or policymakers. While some institutional arrangements (like a centralized exchange) have the character of collective goods, other arrangements (like the increasing number of nodes on the typical chain connecting investor and investment) arise from individual intermediaries and parties taking similar actions as a result of facing similar incentives and challenges. In those settings, a better-informed party would most likely make a different choice. In order to identify the better option, however, it must be cost-effective for the party to obtain, process, and verify the relevant information. Regulation thus may have a role to play in helping parties obtain useful information. Moreover, as this analysis reveals, the information that will be most helpful to parties is comparative data: What other products might function as substitutes for the proposed investment, and how do the fee structure and other features of those substitutes differ from the proposed offering? This type of information is critical to empowering parties to make decisions independent of the biased recommendations of intermediaries yet is rarely required by current disclosure regimes. Hence, an important implication of this analysis is the need to rethink the types of disclosure requirements that are most likely to enable consumer choice.

Notably, policymakers and market participants are starting to heed this call. Perhaps one benefit of the Crisis is that it seems to have left all involved more skeptical of intermediaries' expertise and more attuned to their self-serving ways. For example, despite the significant and, to some degree, inevitable role that large banks played in the process through which the Volcker Rule was drafted and revised, there are few indications that the final rule was excessively friendly to banks. It does not appear to have been excessively harsh, either, but the most frequent critiques of the final rule focus on its complexity rather

than any apparent substantive weakness.²⁶² Additionally, the chair of the SEC recently highlighted the importance of the SEC's role in ensuring that "intermediaries harness the forces of technology and competition to better serve the needs of investors." She has also acknowledged that there seem to be areas in which "technology is [instead] being leveraged simply to make [] old, decentralized method[s] of trading more efficient for market intermediaries," thereby preventing investors from realizing potential gains.²⁶³ Investors also seem to be more skeptical of financial intermediaries and appear to be changing their behavior accordingly. For example, individual investors are increasingly investing in lower-cost index mutual funds rather than actively managed mutual funds.²⁶⁴ And sophisticated investors are increasingly spurning FoFs backed by hedge funds and private equity funds, pulling money from such arrangements even as they continue to invest in the underlying products.²⁶⁵

Despite these hopeful signs however, empowering parties is alone not enough to counteract the power of intermediary influence. A persistent challenge is that intermediary influence often leads to changes that take effect only in subsequent time periods. If a financial intermediary's clients change over time, the

²⁶² See, for example, *The Impact of the Volcker Rule on Job Creators, Part II, Hearing before the House Committee on Financial Services*, 113th Cong, 2d Sess 8–9, 98–104 (2014) (testimony of Daniel K. Tarullo, Federal Reserve).

²⁶³ Mary Jo White, *Intermediation in the Modern Securities Markets: Putting Technology and Competition to Work for Investors* (speech at the Economic Club of New York, June 20, 2014), online at <http://www.sec.gov/News/Speech/Detail/Speech/1370542122012#.U9pw2xaaZfM> (visited Dec 6, 2014).

²⁶⁴ See Kirsten Grind, *Miller Time: Stock Picker Rises Again, Unchanged by Crisis*, *Wall St J* A1, A8 (June 30, 2014) ("[I]nvestors poured \$318 billion into passively managed products in 2013, compared with \$136 billion for actively run funds."); Jason Zweig, *Simple Index Funds May Be Complicating the Markets*, *Wall St J* B1 (Feb 18, 2012) ("A decade ago, 278 index mutual funds and 119 exchange-traded funds [(ETFs)] held \$347 billion, or about 16% of all assets in U.S. stock funds. Today, according to Morningstar, 336 index funds and 1,148 ETFs hold \$1.24 trillion, or fully one-third of all the money in U.S. stock funds.")

²⁶⁵ See Lawrence C. Strauss, *Rediscovering the Fund of Hedge Funds*, *Barron's* 28 (May 24, 2014):

By the end of 2008, assets in [hedge FoFs] had dropped roughly 25% The pace of outflows accelerated the following year . . . and the sector hasn't had a year of positive flows since, even as hedge funds collectively have pulled in more money than went out every year since 2010.

See also Ellen Kelleher, *Private Equity: Funds of Funds Falter in Battle for Survival*, *Fin Times* 18 (July 8, 2013) (noting that, in the first half of 2013, "private equity funds of funds have raised just \$6.1bn, while direct PE funds have brought in \$152.6bn").

intermediary's current clients have little reason to monitor intermediary investments that will have effects only in future periods. And tomorrow's clients are not in a position to monitor the intermediary's actions today. Increased attention to intermediary influence and innovative disclosure policies are thus important first steps, but these changes alone will not suffice as a response.

C. Policy

As reflected in many of the examples, the shift from a relatively less efficient institutional arrangement to a more efficient alternative often occurs only when regulators—and more often Congress—intervene to push for such a change. These examples illustrate that the appropriate response will generally be context specific and will often entail trade-offs, but intervention can create real value. These examples, and others like them, also function as a starting point for considering how to respond to intermediary influence. They suggest that sometimes transparency will suffice; other times, greater intervention will be warranted. By studying situations in which we observe a shift away from high-fee institutional arrangements to more-efficient alternatives, we may be able to identify the conditions that warrant replication in other settings. That said, one drawback of looking to history for guidance is that many of the examples discussed in this Article occurred at a time when money and lobbyists held less sway over lawmaking than they do today.²⁶⁶ In light of the increasing importance of money in politics and the increasing complexity of the financial markets, Congress cannot be relied on to regularly adopt appropriate, context-sensitive laws.

Insights from other fields also illuminate the types of interventions that should be pursued. For example, Judge Posner, Professor Louis Kaplow, and others have spent years studying the costs of collusion and the efficacy of various approaches to

²⁶⁶ See *The Money behind the Elections* (OpenSecrets.org), online at <http://www.opensecrets.org/bigpicture> (visited Dec 7, 2014) (documenting an increase in spending on elections since 1998). See also Lee Drutman, *The Business of America Is Lobbying: Explaining the Growth of Corporate Political Activity in Washington, DC* *1 (2010), online at http://www.leedrutman.com/uploads/2/3/0/1/2301208/business_of_america_is_lobbying.pdf (visited Nov 18, 2014) (“In 2009, politically active organizations reported \$3.47 billion on direct lobbying expenses, up from \$1.44 billion reported just ten years prior, and, controlling for inflation, almost seven times the estimated \$200 million in lobbying expenses in 1983.”).

reducing those costs.²⁶⁷ Given that some of the examples of intermediary influence clearly entail collusion, this body of work can guide us in reducing intermediary influence in those settings.

More concretely, while antitrust law does not reach all the forms of interdependent behavior (and virtually none of the forms of independent behavior) that intermediaries undertake in promoting high-fee institutional arrangements, it does cover some.²⁶⁸ Regulators and market participants have at times already used antitrust claims to challenge intermediaries' efforts to maintain high-fee arrangements, and more could be done in this vein.²⁶⁹ By paying attention to the additional welfare losses that arise when the parties that are engaged in collusion are intermediaries, antitrust authorities may find it worthwhile to allocate a greater proportion of their limited resources to investigating and prosecuting such collusion.²⁷⁰ The analysis here also suggests that failing to prosecute certain financial intermediaries because of their size or importance, reflecting the controversial notion that some financial institutions may be "too big to jail," may be costly in ways not previously appreciated.²⁷¹

²⁶⁷ See generally, for example, Posner, *Antitrust Law* (cited in note 219); Kaplow, 77 *Antitrust L J* 343 (cited in note 76). See also Herbert Hovenkamp, *Exclusive Joint Ventures and Antitrust Policy*, 1995 *Colum Bus L Rev* 1, 7–9 (discussing the costs of collusion in joint ventures).

²⁶⁸ Antitrust laws can reach anticompetitive conduct of firms in a trade association. See, for example, *American Column & Lumber Co v United States*, 257 US 377, 411–12 (1921) (holding that a trade association's "Open Competition Plan" violated the Sherman Act). At the same time, the *Noerr-Pennington* doctrine immunizes the government from petitions requesting that the government take a particular action. See *Eastern Railroad Presidents Conference v Noerr Motor Freight, Inc*, 365 US 127, 144–45 (1961).

²⁶⁹ See, for example, FTC and DOJ Report at *49–63 (cited in note 39) (discussing antitrust challenges to real-estate-broker conduct). See also *Credit Suisse Securities (USA) LLC v Billing*, 551 US 264, 267–68 (2007) (describing an antitrust challenge to underwriter conduct in an initial public offering of securities).

²⁷⁰ This may also focus enforcement attention on particular types of intermediary behavior. See, for example, C. Scott Hemphill and Tim Wu, *Parallel Exclusion*, 122 *Yale L J* 1182, 1189 (2013) (highlighting the potential adverse effects of parallel exclusion—that is, "self-entrenching conduct, engaged in by multiple firms, that harms competition by limiting the competitive prospects of an existing or potential rival to the excluding firms"—and showing how the law may reach such behavior).

²⁷¹ Shahien Nasiripour, *Too-Big-to-Jail Dogs Obama's Justice Department as Government Documents Raise Questions* (Huffington Post May 23, 2013), online at http://www.huffingtonpost.com/2013/05/22/too-big-to-jail-obama-justice_n_3322824.html (visited Dec 7, 2014) (discussing comments by Attorney General Eric Holder "that some banks were 'too large,' impeding attempts to bring criminal prosecutions," and the controversy that has arisen about the possibility that certain banks have been treated as "too big to jail"). Recent settlements with certain large banks have been touted by some

Similarly, a core insight from the public-choice literature is that institutional problems require institutional solutions.²⁷² Marrying this insight with this Article's analysis of the sources of intermediary influence suggests that structural reforms that reduce the magnitude of the advantages that entrenched intermediaries typically enjoy may also reduce intermediary influence. Two different responses illustrate.

First, the analysis here suggests that a significant factor contributing to intermediary influence arises from the distribution of information and expertise—financial intermediaries have these while other parties do not. Since intermediaries use their expertise in ways that generate significant social value, seeking to reduce their expertise would risk throwing the baby out with the bathwater. Focusing on the source of the challenge—the differential between the expertise of intermediaries and those who would benefit from a more efficient institutional arrangement—suggests an alternative approach: create one or more bodies that have the information, expertise, and incentives needed to produce a more balanced debate. A number of academics have proffered proposals along these lines.²⁷³ By shedding new light on the costs of the current regime, this Article provides additional support for such proposals. While the analysis regarding intermediaries' capacity to promote collective interests may seem to undermine the viability of such proposals, a significant advantage is that their effects are unclear at the time of adoption, and those effects are likely to be diffuse, affecting multiple classes of

as evidence that such a policy does not exist, but those same settlements have led others to the opposite conclusion. See, for example, Robert Jenkins, *An Opportunity Missed rather than a Case Settled*, *Fin Times* 9 (July 2, 2014) (recognizing that a recent \$8.9 billion settlement between the US government and BNP Paribas may appear “extremely stringent,” and that it is “the first time that a bank has been found guilty of this particular type of offence,” but suggesting that “[r]elative to the offence committed the fine is arguably small” and that “[t]he bank will avoid permanent damage”).

²⁷² See, for example, Steven P. Croley, *Theories of Regulation: Incorporating the Administrative Process*, 98 *Colum L Rev* 1, 12–25 (1998) (identifying institutional solutions to the collective-action problems identified by Olson).

²⁷³ See, for example, Barth, Caprio, and Levine, *Guardians of Finance* at 204, 215–20 (cited in note 217) (proposing the creation of a completely new institution, “the Sentinel,” to counterbalance the ways that current legislative and regulatory regimes are tilted to favor the interests of financial institutions); Brett McDonnell and Daniel Schwarcz, *Regulatory Contrarians*, 89 *NC L Rev* 1629, 1630–33 (2011) (proposing the introduction of “regulatory contrarians” that would be “affiliated with, but independent of, a financial regulator” and charged with “monitoring that regulator and the regulated marketplace and publicly suggesting new initiatives or potential structural or personnel changes”).

intermediaries. As a result, the collective-action challenges may be less pressing than in settings in which regulators seek to impose specific changes that will result in clear revenue losses for the intermediaries affected.

Another institutional response could focus on reducing the capacity of intermediaries to exploit their positional advantages to favor high-fee institutional arrangements. This could entail regulatory efforts to promote competition in ways that go beyond enforcing antitrust laws, such as promoting disruptive innovations. Even without regulatory intervention, innovation plays an important role in limiting intermediary influence in many domains. Technological advances like the Internet have simultaneously displaced previously powerful intermediaries and given rise to others.²⁷⁴ Nonetheless, even the Internet has been less disruptive than one might have expected, and entrenched intermediaries may succeed in preventing other potentially disruptive innovations from ever taking hold.²⁷⁵

Suggesting that the government actively support certain technologies, industries, or firms could create, rather than reduce, inefficient distortions; caution is warranted accordingly. Nonetheless, these challenges can be mitigated by ensuring that the support provided is modest and otherwise appropriately structured to minimize the risk that the subsidy results in favoritism rather than merely leveling the playing field. For example, to the extent that regulation has been used to protect a particular class of intermediaries, it may be appropriate for regulators to accelerate the review of licensing or other requests from potential competitors that may offer genuinely more-efficient alternatives. Somewhat more aggressively, if network effects provide a dominant arrangement, then a particularly great competitive advantage and a more efficient alternative appear to be viable. Regulators may have a role to play in facilitating movement to the more efficient alternative. The aim in any of these approaches should not be to displace established intermediaries simply because they are established but rather to limit intermediaries' capacities to use their influence in ways that

²⁷⁴ See Felix Salmon, *Kickstarter for Hedge-Funders: Step 1: Disintermediate the Banks. Step 2: Sell Out to Them*, NY Magazine 58–59 (Oct 7, 2013) (describing a website launched with the aim of “disintermediat[ing] the banking system and its fat cats” and identifying a number of recently successful companies that have business models that connect consumers and producers without relying on a traditional intermediary).

²⁷⁵ See Part I.A.2.

impede the adoption or spread of viable alternatives when they do arise.

Ultimately, intermediary influence arises in context-specific ways, and efforts to reduce its adverse effects must be sensitive to the trade-offs inherent in any form of intervention. There can be no one-size-fits-all solution. This Part nonetheless lays the groundwork by illustrating how insights from established theories may be combined with this Article's insights to formulate appropriate interventions.

CONCLUSION

This Article draws attention to the important role that intermediaries play in the evolution of institutional arrangements. In so doing, it helps to explain an array of observable arrangements and trends that cannot be easily reconciled with traditional assumptions. The focus here has been on finance, reflecting the critical role that intermediaries play in the movement of capital and the importance of the welfare losses that result. At the same time, this Article provides a general framework for understanding the operation and effects of intermediary influence. It thus lays the groundwork for exploring the theoretical and policy implications of intermediary influence across the diverse range of settings in which society has come to rely on intermediaries. By adding intermediary influence to the dynamics commonly recognized as among those that shape institutions, theory can come closer to reflecting reality, and policies can be devised to promote more-efficient outcomes.