THE COMMON EQUITY PROBLEM IN BANK REGULATION

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ABSTRACT

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INTRODUCTION

In 2016, the Department of Justice (DOJ) demanded $14 billion in fines from Deutsche Bank, the German banking behemoth, for improperly selling mortgage-backed securities in the run up to the financial crisis.[1] News of the the $14 billion fine left Deutsche Bank teetering on the brink of collapse.[2] Its share price was down by 53% from the start of the year; its market value a shattered $17 billion – just a fraction higher than the amount of the DOJ's proposed fine.[3] This crisis at one of the world's largest and most interconnected banks came down to the bank holding an insufficient cushion of shareholder-supplied funding – or equity capital – to support its business.[4] Predictably, the remedy favored by regulators looked to equity investors to infuse Deutsche Bank with a fresh shot of capital to bolster its flagging reserves and to bring these back to acceptable standards. Existing Deutsche shareholders would see their already-shaky holdings diluted by the new issue of equity. But a stronger capital base, with deep reserves of readily-available funds, would stave off an expensive taxpayer-financed bailout and return confidence to the banking sector.[5]

This suggested path forward for Deutsche Bank followed a conventional tenor. Mandating that banks keep thick cushions of shareholder capital to constrain them from taking outsize risks represents a

[1] Landon Thomas Jnr., *Concern over Deutsche Bank's Health Shakes Markets,* N. Y. TIMES, Sept 29, 2016, at B3.

[2] *See for example*, Geoffrey Smith, *5 Things to Know about the Deutsche Bank Train Wreck*, FORBES, Sept 27, 2016; Thomas Jnr., *supra* note [ ] (discussing the chances of a possible bailout for Deutsche Bank); Martin Wolf, *Deutsche Bank Offers a Tough Lesson in Risk*, FIN. TIMES, Oct. 4, 2016. It should be noted that a sizable portion of Deutsche Bank's assets are thought to be complex and difficult to value and not liquid enough to be able to generate a market-valuation. For discussion, Laura Noonan, *Balance Sheet Doubts Widen German Lender's Credibility Gap*, FIN. TIMES, Sept. 30, 2016.

[3] Georgina Prodhan et al., *Deutsche Bank Shares Slip Again in Race to Reach U.S. Settlement*, REUTERS, Oct. 3, 2015, http://www.reuters.com/article/us-germany-deutsche-bank-idUSKCN1220NA.

[4] *See for example*, Landon Thomas Jnr., *Deutsche Bank Denies Asking Germany to Help in U.S. Dispute*, N. Y. TIMES, Sept 27, 2016, at B3. Smith, *supra* note [ ]; Wolf, *supra* note [ ]. See also, INTERNATIONAL MONETARY FUND, FINANCIAL STABILITY ASSESSMENT REPORT: GERMANY (June 10, 2016), 19-24, 29-30.

[5] Thomas Jnr., *supra* note [ ]; Prodhan, *supra* note [ ]; Wolf, *supra* note [ ]. For discussion of capital regulation see, *infra* Part [ ]. For discussion of bailout mechanisms versus the use of the bankruptcy regime, Cheryl Block, *Overt and Covert Bailouts: Developing a Public Bailout Policy*, 67 IND. L. J. 951 (1992) (an early theoretical account of the different forms that bailouts might take, from loans to tax breaks); Kenneth Ayotte & David A. Skeel Jnr., *Bankruptcy or Bailouts?* 35 J. CORP. L. 469 (2010) (comparing the advantages of the traditional bankruptcy regime as an alternative to bailouts); Adam J. Levitin, *In Defense of Bailouts,* 99 GEO. L. J. 435 (2011); Steven Davidoff Solomon & David Zaring, *Regulation by Deal: the Government's Response to the Financial Crisis*, 61 ADMIN L. REV. 461, 470-475 (2009) (analyzing the response of the U.S. government to the financial crisis and the different techniques utilized by authorities to re-capitalize failing institutions).

hallmark of the post-Crisis regulatory consensus.[6] Banking theory has long recognized the essential place of capital regulation in maintaining the safety and soundness of banking firms.[7] If a bank must set aside some of its own cash for every loan that it makes (in case that loan defaults), it ensures that it has a reserve of money to hand in case it needs to pay its own depositors – those that keep their savings with the bank. With this cushion in place, a bank is better able to perform its all-important function as an institution that takes savings from people and companies and that then uses this supply of cash to make loans to those that grow businesses or buy homes.[8] Not only is a bank forced to pay for the risky loans that it assumes – motivating it to take on safer projects – but the fallout from its bad decisions does not have to spread far beyond its four-walls. It can use this pot of capital to pay out on its liabilities to depositors and to prevent a wider panic from ensuing within the financial system.[9]

With the recognition that many of the major financial institutions were badly under-capitalized prior to the Crisis, this core tenet of banking theory has assumed enormous significance in post-2008 regulatory reform.[10] Regulators around the world have adopted rules that sharply increase the amount of capital that banks must keep.[11] Specifically, to ensure that crisis-ready capital is free and available to firms without constraint, regulation requires that these reserves be more fully provided in the form of simple equity.[12] With common equity increasingly funding reserves, institutions face no legal pressure to return money to investors (to contrast with a loan, for example). In this way, shareholder-funded capital can better absorb the losses that a financial firm can suffer.

This Article shows that unquestioned reliance on shareholder capital as the main safety valve in markets faces a challenge when viewed from the standpoint of who supplies this capital in practice. Modern U.S. markets are increasingly characterized by a concentration of equity

[6] *See sources cited infra* note [ ]; For discussion *infra* Part [ ].

[7] *See sources cited infra* note [ ]; For discussion *infra* Part [ ].

[8] *See sources cited infra* note [ ].

[9] MORGAN RICKS, THE MONEY PROBLEM (2016) (arguing that panics constitute a root cause of financial crises, including the 2008 Financial Crisis where panic ensued in the bank-like money market for financial institutions).

[10] *See sources cited infra* note [ ]; See also, Erik Lüders, Max Neukirchen, and Sebastian Schneider, *Hidden in Plain Sight: The Hunt for Banking Capital*, McKinsey & Company (Jan. 2010), http://www.mckinsey.com/industries/financial-services/our-insights/hidden-in-plain-sight-the-hunt-for-banking-capital.

[11] Peter Miu et al., *Can Basel III Work? Examining the New Capital Stability Rules by the Basel Committee: A Theoretical and Empirical Study of Capital Buffers* (Feb. 2010, 6-9 https://a1papers.ssrn.com/sol3/papers.cfm?abstract_id=1556446 (providing the historical background to the development of Basel III); Peter Went, *Basel III Accord: Where Do We Go From Here?*, https://a1papers.ssrn.com/sol3/papers.cfm?abstract_id=1693622&rec=1&srcabs=1688594&alg=1&pos=2 (providing an early explication of the rationale grounding the Basel III international reforms.

[12] *See sources cited infra* note [ ].

ownership in the hands of a relatively small cohort of institutional shareholders. Chiefly, these shareholders comprise the major fund management companies, the Vanguard Group, T. Rowe Price and Fidelity Investments; asset managers BlackRock Inc. and State Street Global Advisors.; as well as top investment firm, Warren Buffet's Berkshire Hathaway Inc.[13] This core grouping of asset management companies specialize in holding and investing capital into U.S. stock markets on behalf of a vast swath of the American public.[14] Typical savers include those looking to build their pensions, provision for college tuition, or grow a future nest egg. In addition, fund managers also service U.S. companies and other financial institutions that wish to manage their cash holdings.[15] As shareholders of record representing the capital of American homes and businesses, this cohort of firms are also key voting investors on matters of corporate governance affecting the public companies in which they invest. They play a critical role in not only supplying capital to the stock market but also in directing the corporate management of listed businesses.[16]

This trend towards "common ownership" of U.S. public companies by a small group of major stockholders extends to the U.S. banking industry. In their seminal work in antitrust economics, Professors Azar, Schmalz and Raina observe a high degree of common ownership in the largest six U.S. banks. They note that ownership concentration in the banking industry – meaning, the extent of common ownership and how extensively banks own shares in each other – correlates with higher prices for certain banking products.[17] More broadly, Azar, Schmalz, Tecu and Professor Elhauge, outline the range of possible anti-competitive effects of

[13] The holdings of Fidelity Investments are usually listed under the name of FMR LLC. In addition, the holdings include those of subsidiaries of these major shareholders.

[14] *For discussion*, John Morley & Quinn Curtis, *Taking Exit Rights Seriously: Why Why Governance and Fee Litigation Don't Work in Mutual Funds*, 120 YALE L. J. 84, 87, 92-94 (2010) (noting that the mutual fund industry as a whole held assets of around $11 trillion and comprised 20% of U.S. financial assets and retirement savings).

[15] *See for example*, VANGUARD, OUR CLIENTS, https://about.vanguard.com/our-clients/. Fund managers like Vanguard hold capital within any number of specialized funds organized under the larger umbrella of the "fund brand" such as Vanguard or Fidelity. For analysis and discussion, Morley & Curtis, *supra* note [ ], 92-93. On why funds are structured in a way to legally separate the fund from those that manage this fund see, John Morley, *The Separation of Funds and Managers: A Theory of Investment Fund Structure and Regulation*, 123 YALE L. J. 1228 (2014).

[16] *See in particular*, Jose Azar, Martin C. Schmalz & Isabel Tecu, Jose Azar, Martin C. Schmalz & Isabel Tecu, *Anti-Competitive Effects of Common Ownership*, Ross School of Business Working Paper Number 1235 (July 2016), 1-4 (noting the influence of these investors in potentially incentivizing anti-competitive effects in airline companies; Einer Elhauge, *Horizontal Shareholding*, 129 HARV. L. REV. 1267(2016) (providing an anti-trust critique of common ownership, focusing on the airline industry).

[17] Jose Azar, Sahil Raina & Martin Schmalz, *Ultimate Ownership and Bank Ownership* (July 2016), 46-47, tabl. I, 2-5, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2710252.

common ownership and the the distributive impact that these can exert on the wider economy.[18]

This Article extends this work into banking regulation. It highlights the challenge that common ownership creates for theory and practice that looks to equity capital as protective safeguard in financial markets. Common ownership extends deep into the U.S. financial system. Focusing on the Federal Reserve's June 2016 list of 33 bank and financial holding companies considered important enough to merit regular stress testing, I examine those whose holding companies are publically listed, headquartered in the U.S. and primarily regulated by U.S. state and federal authorities.[19] Of the 25 bank and financial holding companies that meet these criteria, I compile ownership data from proxy statements (for years 2011 and 2016) that identifies investors that own more than 5% of a company's common stock. From this list of 25 qualifying holding companies, 22 list both Vanguard and BlackRock as owners of more than 5% of their stock in their 2016 proxy statements. State Street Global appears in the 2016 proxy statements of eight companies, Fidelity Investments in seven and Berkshire Hathaway and T. Rowe Price are each listed four times.[20] Intriguingly, in the 2011 Proxy Statements, the percentage stakes of these common owners was a great deal lower. Not only were some key banks without any blockholders at all in 2010/11 (unlike in 2016 when all had a blockholder) but BlackRock, Vanguard, State Street and T. Rowe Price were present to a much lower degree. Whereas Vanguard appeared 22 times in the ownership list in 2016, it was a blockholder at just a single bank in 2010/11.

The high degree of common ownership across financial firms upends conventional assumptions underpinning their regulation. First, it upsets the accepted consensus that equity can function as the main buffer

[18] Azar, Schmalz & Tecu, *supra* note [ ]; Elhauge, *supra* note [ ]. For example, Professor Elhauge examines common ownership to discuss the implications of this phenomenon on questions of pervasive high executive compensation, cash hoarding at U.S. corporations and how these issues impact deeper questions of income inequality. Elhauge, *supra* note [ ], 1272,

[19] Federal Reserve stress tests subject banks to simulated doomsday scenarios to determine whether or not they are able to withstand critical shocks. The Fed focuses on stress testing the most systemically significant banking firms in the U.S. financial system. For details on the Fed's approach and methodological parameters on stress tests, BOARD OF GOVERNORS OF THE FEDERAL RESERVE, COMPREHENSIVE CAPITAL ANALYSIS AND REVIEW 2016: ASSESSMENT FRAMEWORK AND RESULTS (June 2016). Out of the 33 banks that the Fed stress tested in June 2016 as part of the Comprehensive Capital Analysis and Review (CCAR) program, I do not look at banks whose main base of operations and primary regulators are outside of the U.S. On this basis, out of the 33 companies subject to Federal Reserve stress tests, I do not look at BancWest Corporation, BBVA Compass Bancshares, BMO Financial Corp., Deutsche Bank, HSBC North America Holdings, MUFG Americas Holdings and Santander Holdings USA. I also do not look at TD U.S. Holdings LLC as this company is not publically traded.

[20] *See Appendix A*, *infra* Part [ ]. When referring to BlackRock or Vanguard, investments are made by BlackRock or Vanguard funds that are organized and managed within the umbrella of the larger fund brand. See, Curtis & Morley, *supra* note [ ]; Morley, *supra* note [ ]. Fidelity Investments is listed as *FMR LLC*.

against risk-taking by firms in today's markets. The post-crisis stipulation that banks build thicker cushions of equity, while obviously desirable, creates a strong dependence on access to deep pools of capital. Nowhere are these pools more plentiful than those held by fund and asset managers like BlackRock, Fidelity, State Street and Vanguard. BlackRock alone manages around $4.9 trillion dollars in assets – more than any other investor and reportedly more than all other hedge funds and private equity funds put together.[21] Vanguard manages around $3.5 trillion in assets globally and Fidelity around $2.06 trillion.[22] With banks needing a much higher level of equity investment post-crisis – and a small group of funds capable of supplying it – regulation inadvertently encourages the creation of thick linkages between the financial system and major fund managers. Importantly, asset managers like BlackRock, Vanguard and Fidelity do not put their own money on the line. Rather, they invest the capital of everyday personal and corporate savers. For example, around a third of Blackrock's business derives from helping clients save for their retirement or college and higher education.[23] This arrangement helps keep the risks off the books of these asset managers.[24] However, through their allocative decision-making, it transfers the risk of investing in the equity underlying much of the financial system into the real economy.

This economic interrelation between everyday savers and financial markets poses a problem for the goal of ensuring that fallout from collapsing financial firms does not bleed into the broader economy. When banking shares lose value – as took place with Deutsche Bank in October 2016 – the portfolios of major blockholder investors are in line to take the hardest hit. Where blockholders are BlackRock or Vanguard, and thus represent the accrued wealth of millions of homes and businesses, the goal of using capital buffers as a firewall between markets and the economy can prove illusory. Indeed, real economic ripple-effects from bank failures are likely to be felt especially deeply. BlackRock and Vanguard hold more than 5% common equity in the 22 out of the 25 bank holding companies studied here. With financial markets endemically vulnerable to panics[25] and the risk of problems in one firm spreading to others, the value of equity buffers may diminish rapidly across several financial firms at once. To the extent that firms must then raise further equity to make up for the

[21] THE ECONOMIST, THE RISE OF BLACKROCK (Dec. 13, 2013); THE ECONOMIST, THE MONOLITH AND THE MARKETS (Dec. 7, 2013); BLACKROCK, ABOUT US, https://www.blackrock.com/corporate/en-us/about-us (June 2016)

[22] VANGUARD, WHO WE ARE: FAST FACTS, https://about.vanguard.com/who-we-are/fast-facts/ (June 2016); FIDELITY, FIDELITY BY THE NUMBERS: CORPORATE STATISTICS, https://www.fidelity.com/about-fidelity/fidelity-by-numbers/corporate-statistics (June 2016).

[23] THE ECONOMIST, THE MONOLITH AND THE MARKETS (Dec. 7, 2013).

[24] THE ECONOMIST, THE MONOLITH AND THE MARKETS (Dec. 7, 2013).

[25] *For excellent discussion*, RICKS, *supra* note [ ], 102-130.

capital that is lost through write-downs, blockholders can see not only the value of their portfolios shrink but also their shareholder power diluted by further capital raising.

Relatedly, this presence of large asset managers as equity holders in financial firms complicates post-crisis regulatory efforts designed to allow these firms to fail in an orderly fashion. Reforms introduced in the Dodd-Frank Act seek to eliminate the risk of "too big to fail" firms by establishing processes that can wind down large, complex firms in a way that does not place the rest of the financial system in danger.[26] Key to this design is the creation of Title II's Orderly Liquidation Authority (OLA).[27] Under this mechanism, federal regulators assume control of a failing bank holding company, transfer its assets and short-term liabilities to a new, bridge institution and wipe out the equity of the old holding company.[28] This means that the holding company's capital buffers are used to pay off creditors and to inject available resources into the new bridge company. If the process works designed, it should leave the original holding company shareholders with nothing.[29] Where the likes of Vanguard, Fidelity or BlackRock constitute a sizable portion of a bank holding company's equity buffer, the design of the orderly liquidation mechanism appears problematic and costly. Importantly, as noted above, recourse to equity buffers to pay off short-term creditors and to fund the bridge bank's operations, can ultimately erode the wealth of real economic actors.

Rather than provide a source of reassurance, then, orderly liquidation may instead exacerbate the real economic fallout resulting from a banking collapse. Bank shareholders be reluctant to push for help from regulators in a timely fashion, knowing that they will be wiped out in the event an orderly wind-down is triggered.[30] Further, the likely impact of the wind-down on real-world mom-and-pop savers might itself make orderly

[26] John F. Bovenzi, Randall D. Guynn, and Thomas H. Jackson, *Too Big to Fail: The Path to a Solution* (Washington, DC: Bipartisan Policy Center, May 2013.)

[27] The Dodd Frank Wall Street Reform and Consumer Protection Act Pub.L. 111–203 H.R. 4173 §202(a); §206 (shareholders are last to be paid out and are thus wiped out).

[28] *See e.g.*, David Skeel, *Single Point of Entry and the Bankruptcy Alternative*, Faculty Scholarship Paper 949 (2014), 2-3.

[29] The Dodd Frank Act, §206.

[30] It should be noted that commentators have remarked on various drawbacks of Dodd-Frank's Orderly Liquidation Authority. For perspectives, Thomas H. Jackson et al., *Resolution of Failed Financial Institutions: Orderly Liquidation Authority and a New Chapter 11* (April 25, 2011) (proposing that a new Chapter 14 of the Bankruptcy Code be drawn up to offer an alternative to the involuntary OLA process). On management responses to the incentives set up by the OLA, see, pages 1-5-1-6. For an early discussion of approaches to resolving large, failing firms and the Bankruptcy Code, Edward R. Morrison, *Is the Bankruptcy Code an Adequate Mechanism for Resolving the Distress of Systemically Important Institutions*, Columbia Law and Economics Working Paper Number 362 (2009). On using bankruptcy rules to facilitate the use of single point of entry under the OLA, Edward J. Janger & John A.E. Pottow, *Implementing Symmetric Treatment of Financial Contracts in Bankruptcy and Bank Resolution*, Michigan Law and Economics Research Paper No.16-020 (March 2016) (examining the operation of the exemptions from the automatic stay for derivatives trades).

liquidation an unappealing policy choice. It is generally understood that, as its owners, shareholders must pay the ultimate price for a company's risky behavior and be wiped out.[31] But the fact of common ownership in banking, representing, in part, the capital of "blameless," passive savers, unsettles this logic. In other words, post-crisis regulation champions deeper equity reserves and orderly liquidation with the goal of averting future taxpayer-funded bailouts of troubled financial firms. But when this equity funding is provided in part by savers acting through the offices of the large fund managers, the cost of supporting financial firms can still fall on a swath of the investing public. With the private wealth of U.S. savers vulnerable to dissipation through the orderly liquidation process, it is worth asking whether triggering it can ever really be politically and economically feasible. If the answer to this inquiry is no or at least equivocal, it seems premature to suggest that the financial system is now well insulated against the threat of large, taxpayer-funded bailouts.

Secondly, with equity buffers and the OLA offering uncertain protection, common ownership forces re-examination of the role that bank shareholders play in promoting safety and soundness through governance. Bank governance is, by its nature, complex and expensive – and prone to seeing risky behavior by shareholders. In the conventional account, bank shareholders possess incentives to behave in a risky manner owing to the availability of various sources of state support (e.g. deposit insurance, emergency loans or bailouts). Because banks can count on these promised protections, their owners can afford to take risks more cheaply than other firms.[32] Shareholders can achieve higher returns by taking bigger risks; the downside is absorbed first by creditors and finally cushioned by the availability of emergency state assistance.[33] At first glance, for common owners invested across financial system, the play of these distorted incentives may be powerful with the potential to generate vast gains. However, there may be another side to this story. Importantly, asset managers like BlackRock generally look after other people's money – and not their own. While this means they do not suffer losses directly, their motivations to pursue profits may also be lessened. Still, the absence of

[31] This is reflected in the Absolute Priority Rule in bankruptcy, where shareholders only get paid when all other creditor claims are satisfied. There is enormous literature on the Rule, discussions and criticisms of its approach. For discussion, see, for example, Douglas J. Baird & Donald S. Bernstein, *Absolute Priority, Valuation Uncertainty and the Reorganization Bargain,* 115 YALE L. J. 1930 (2006) (*examining the viability of the Absolute Priority Rule and the conditions prompting deviations from the Rule)*; Douglas G. Baird & Robert K. Rasmussen, *Control Rights, Priority Rights, and the Conceptual Foundations of Corporate Reorganizations*, Vanderbilt University Law School Law and Economics Research Paper No. 01-5 (2001) (noting the drawbacks of a strict adherence to absolute priority and proposing "relative priority").

[32] *See discussion infra* Part [ ].

[33] *See discussion infra* Part [ ].

skin in the game can result in common owners being overly passive in their monitoring. They might overlook risks building within the system. And, they may be too willing to go along with more engaged, aggressive activists whose actions may be good for one firm but perhaps not always for the system as a whole. Taken as a whole, the dominance of common owners within banking – and the challenge this creates for a successful wind-down of a distressed institution – raises the stakes for common owners as monitors in financial markets. This Article proceeds in five Parts. Part I analyzes the role of equity as protective safeguard against risk in financial markets. Part II describes common ownership in the banking sector and examines their governance practices in corporate life. In this Part, I present results from a study of ownership data of the major U.S. banking conglomerates and market infrastructure providers. Parts III and IV examine the implications of common ownership for corporate governance and banking regulation and concludes by noting their role in more deeply interlinking financial markets and wealth within the real economy. Part V concludes.

I. THE PRIMACY OF EQUITY IN BANK REGULATION

Banks are risky. By design, banks are uniquely vulnerable to spiraling losses and and rapid collapse.[34] Yet, they are also essential to a well-functioning economy. Traditionally seen, by taking capital from those that have it to spare and loaning it out to those that can use it for growth, banks occupy a special place as creatures of private wealth creation and providers of a public good.[35] This simultaneous tension between banks as both risky and economically necessary has given rise to an elaborate body

[34] *See, for example*, RICKS, *supra* note [[], 79-80 (noting the tendency of account holders to redeem when it looks likely that others might do the same).

[35] STEPHEN G. CECHETTI, MONEY, BANKING AND FINANCIAL MARKETS 38-41 (2008) (noting that a salient feature of banking and financial intermediation lies in taking "surplus units" of capital and loaning it to those that have "deficit units" of need for this money); Gerald Corrigan, *Are Banks Special? A Revisitation*, Fed. Res. Bank of Minneapolis (Mar. 1, 2000); Pauline Skypala, *The Reality Gap in the Role of Banks*, FIN. TIMES, Jun. 15, 2015 (describing the traditional model of banking of banks as intermediaries between savers and borrowers, facilitating credit and money creation). However, this traditional conception of banking is highly simplified and commentators have identified complexities in this model and described various models of banking. For example, commentators note that banks also create deposits when they provide loans and expand the money supply. Professors Omarova and Hockett have also reframed the understanding of banks as intermediaries by focusing on banks as publically franchised to dispense the full faith and credit of the U.S. through the financial system. For more, Zoltan Jakab & Michael Kumhof, *Banks are not Intermediaries of Loanable Capital – and Why This Matters*, Bank of England Working Paper Number 529 (May 2015); Saule T. Omarova and Robert C. Hockett, *The Finance Franchise*, CORNELL L. REV. (*forthcoming*, 2017). See also, RICKS, *supra* note [[], 79-80 (on the deposit-making function of banks, rather than just as deposit takers).

of law designed to make them safer and less prone to crises. Central banks offer distressed banks ready access to emergency loans; depositors are discouraged from panicking by the promise that the value of their deposits is protected; and regulation requires banks to make sure that they pay for the risks they assume by allocating a reserve of funds – or bank capital – that they can dip into in case of need.[36] This Part examines the core risks that banks create for financial markets and focuses on the role of capital to safeguard against their spread. Its descriptive aim lies in highlighting the reliance that regulatory policy places on equity as the most desirable type of capital that banks should keep to absorb losses. This dependence is expansive, extending to cover how banks to should pay for their risk-taking as well as in allocating losses to shareholders in case a bank eventually fails. In anchoring financial markets to equity capital, this Part draws into relief the significance of bank shareholders as a protective safeguard in markets.

A. The Puzzle of Bank Regulation

The centrality of banks for modern economies is matched by the risks they create for the markets they serve. Instability lies at the core of how banks function.

1. Basics of Bank Function

At their most fundamental, banks help to manage the flow of capital in the economy. They create deposits for those that wish to save money. This means that banks agree to hold the savings of a person or business. In modern banking, this arrangement takes the form of an on-demand liability on the bank's books. A depositor *loans* its funds to the bank (a liability for the bank) and the bank promises to make these funds immediately available on-demand whenever a depositor wants.

Banks also make loans to those that need capital from time to time. Aspiring homebuyers wish to take out a mortgage to fund their purchase. Businesses might borrow in the short-term to pay employees or take out a longer-term loan to finance a project. By smoothing out the capital needs

[36] For a summary of the regulatory subsidies accorded to banks, see, Prasad Krishnamurthy, *Regulating Capital,* 4 HARV. BUS. L. REV. 1, 22-23 (2014) (detailing the distortive impact of deposit insurance and lender-of-last-resort funding on the cost of debt funding for banks).

of homes and businesses, banks can encourage a more efficient flow of credit and money. Homebuyers do not need to save until such time as they have all the cash they need to buy a property – they can take out a loan instead; businesses do not need to keep large amounts of cash to make payroll – so long as they can generate the cash flows needed in future to pay off a loan. If a lender believes that its borrowers are sufficiently creditworthy to make payments on loans over a period of time, banks can bridge funding needs and encourage a productive use of capital.

This ability to manage the cash needs of economic actors helps explain why the deposit taking and lending functions are combined within the single institution of a bank (rather than separated under two institutions that either take deposits or make loans). According to Professors Diamond and Rajan, combining these two functions in a bank makes sense when seen from the point of view of the cash (or "liquidity") needs of depositors and borrowers. Depositors with cash might not know when they will need money: investing it in the shares or bonds of a company might not realize cash when they wish to have it. On the other side, borrowers might not know when they will need to raise cash and may not be able to tap into the securities markets at this uncertain future date. By performing both the deposit-taking and lending role, banks can promise depositors access to their cash whenever they want – and offer borrowers the assurance of being able to raise money whenever the timing is most opportune.[37]

The interaction between the deposit-taking and loan-making functions of banks are still complex from the standpoint of banking theory. Conventionally, scholars have historically posited a "linear" relationship between the amount of deposits held by a bank and the loans that the bank then makes.[38] Put most simply, banks use the depositor capital on their books to lend and loan out what receive from depositors. This very direct interaction between deposits and loans has resulted in banks being branded as essential "intermediaries" of capital, facilitating its transfer between those that have saved capital and those that need to borrow it.

However, this relationship is a more nuanced than generally expressed by the basic "intermediary" model. For example, as Professors

[37] Douglas W. Diamond & Raghuram G. Rajan, *Liquidity Risk, Liquidity Creation and Financial Fragility: A Theory of Banking*, NBER Working Paper 7430 (1999) (Diamond and Rajan posit that the fragile capital structure underlying banks is necessary for them to perform their social function of mediating liquidity needs cheaply. If investors (depositors) always needed to have direct assurance from borrowers that they could immediately access cash, they would demand tough control rights from a borrower that could provide this reassurance. This transfer of control rights from borrowers to depositors is socially costly and may not be optimal from the point of view of governance.

[38] John G. Gurley & Edward S. Shaw, *Financial Aspects of American Development*, 45 AM. ECON. REV. 515, 520-21 (1955); John G. Gurley & Edward S. Shaw, *Financial Intermediaries and the Saving-Investment Process*, 11 J. FIN. 257, 258-59 (1956); James Tobin, *Commercial Banks as Creators of Money*, Cowles Foundation Discussion Papers, No. 159. (1963). For discussion, Jakab & Kumhof, *supra* note [ ], 2-3; Paul Krugman, *Commercial Banks as Creators of Money*, N.Y. TIMES, Aug. 24, 2013.

Jakab and Kumhof observe, banks also create deposits when they lend money to a borrower.[39] That is, when a bank makes a loan to a business, it opens an account for that business and "deposits" the loan funds in that account ready for the borrower's use. Banks do not simply take a saver's money and lend it on, debiting money from the saver's account and adding it to the books of the borrower. Rather, capital moves with greater complexity. Banks do not debit a saver; but rather "create" money by depositing loan funds in a new account for a borrower. Also, in issuing a new loan, a bank acquires an asset on its balance sheet – a set of rights that entitle the bank to future cash flows from the borrower.[40]

The point is simply this. Banks can expansively create assets and liabilities on their balance sheets. They do not need to show a direct debt from a saver to to a credit on the borrower's books. Instead, banks simply generate a new deposit entry on their ledger and add a corresponding asset to reflect a new source of revenue. As Jakab, Kumhof and Poszar note, without some positive constraint from regulation or the market placing a cost on their abilities to create money and new assets, banks can run up enormous balance sheets within the ecology of the financial markets.[41]

The Monitoring Function of Banks: Banks perform broader economic functions beyond just offering deposits and loan financing.[42] As Professors Diamond and Dybvig posit, banks are especially effective as delegated monitors on behalf of the depositors that – at least by conventional account – provide a key source of bank financing.[43] It is easy to see why banks are particularly helpful overseers. For one, the borrower-lender relationship provides a source of rich, thickly detailed information

[39] Jakab & Kumhof, *supra* note [ ].

[40] See also, Charles Goodhart, *Whatever Became of Money Aggregates*, Peston Lecture in Honor of Lord Peston, Feb. 28, 2007 (noting the traditional reliance on the theory of banks as intermediates of capital and suggesting a better model as one where banks create money through lending and the creation of deposits). See also, Omarova & Hockett, *supra* note [ ] (pointing to the "franchise" model where banks are franchised to distribute financing ultimately backstopped by the State).

[41] Jakab & Kumhof, *supra* note [ ]; Zoltan Poszar, Shadow Banking, Working Paper (2014).

[42] Douglas W. Diamond & Phillip H. Dybvig, *Bank Runs, Deposit Insurance, and Liquidity*, 91 J. POL. ECON. 401 (1983); Douglas W. Diamond, *Financial Intermediation and Delegated Monitoring*, 51 REV. FIN. STUD. 393 (1984).

[43] *See generally* Douglas G. Baird & Robert K. Rasmussen, *Private Debt and the Missing Lever of Corporate Governance*, 154 U. PA. L. REV. 1209 (2006) (noting that lenders play a powerful role in corporate governance); George G. Triantis & Ronald J. Daniels, *The Role of Debt in Interactive Corporate Governance*, 83 CALIF. L. REV. 1073 (1995) (highlighting the potency of lender signaling for controlling managerial slack); Michael R. Roberts & Amir Sufi, *Control Rights and Capital Structure: An Empirical Investigation*, 4 J. FIN. 1657, 1661-1662 (2009) (showing that lender interventions in governance can have positive economic benefits); Frederick Tung, *Leverage in the Board Room: The Unsung Influence of Private Lenders in Corporate Governance*, 57 UCLA L. REV. 115, 119-120; 150–53 (2009 (noting that lenders often receive more information than corporate directors); Charles Whitehead, *The Evolution of Debt: Covenants, the Credit Market, and Corporate Governance*, 34 J. CORP. L. 641, 650 (2009). On the agency costs of delegated monitoring, Saul Levmore, *Monitors and Freeriders in Commercial and Corporate Settings*, 92 YALE L.J. 49, 67 (1982).

throughout the life of the loan.[44] These informational insights are also backed by real power. Loan documents contain terms and conditions, comprising representations, covenants and warranties that constrain borrower behavior, limit its investment activity and assure its on-going creditworthiness. With the ability to reduce or cut credit to a borrower – or recourse to bankruptcy as a last resort, lenders possess deep disciplinary influence throughout the lending relationship.[45]

This monitoring function can prove beneficial for efficient credit allocation. Banks possess expertise in understanding how likely a borrower might be to default.[46] A finely tuned sense of how risky a borrower is, its future cash flows, industry and the health of the market can more exactly calibrate the price of credit, as reflected in interest rate and fees. With detailed surveillance, lenders can make sounder decisions about whether to lend, when to lend and how much to charge the borrower.[47] Moreover, such delegated lender monitoring can reduce the overall transaction costs attached to extending credit. Because lenders take a granular look at a borrower's financial health, other monitors (e.g. depositors, a borrower's shareholders or market analysts) do not have to do so. Instead they can save themselves the time and money and free-ride off the lender's efforts.[48] When this monitoring works well, there is alignment between the lender's interest to be repaid and the societal goal of ensuring that those deserving of capital receive it with fewest transaction costs. [49]

Provision of Financial Services: The essential place of banks at the center of deposit-taking and lending activity – with the informational advantages it provides – has supported an expansion in the financial services that banks offer. Beyond just taking deposits and providing loans, banks can harness their position, expertise and access to cheap funding to provide a range of financial services in the economy.

The universal banking model – where banks are providers of a broad spectrum of financial services – has become the norm in the United States and in Europe.[50] Through networks of subsidiaries, affiliates and

[44] Tung, *supra* note [ ], 150-53.

[45] Baird & Rasmussen, *supra* note [ ], 1212-1215.

[46] Diamond, *supra* note [ ].

[47] George G. Triantis, *Secured Debt Under Conditions of Imperfect Information*, 21 J. LEGAL STUD. 225, 230–43 (1992) (examining the benefits and costs of lender monitoring).

[48] Diamond, *supra* note [ ].

[49] Diamond, *supra* note [ ]. Henry T.C. Hu & Bernard Black, *Debt, Equity and Hybrid Decoupling: Governance and Systemic Risk Implications*, 14 EUR. FIN. MGMT. 663, 667–82 (2008) (examining the significance of properly aligned lender incentives towards debt governance); Yesha Yadav, *The Case for a Market in Debt Governance*, 67 VAND. L. REV. 101 (2014).

[50] Asli Demirgüç-Kunt & Harry Huizinga, *Bank Activity and Funding Strategies: The Impact on Risk and Return*, European Banking Center Discussion Paper No. 2009–01 (2009), 2-4; Saule T. Omarova, *The Merchants of Wall Street*, 98 MINN. L. Rev. 265 (2013) (discussing the role of commercial banks in commodities trading and warehousing). In the United States, under the Bank Holding Company Act 1956, the commercial banking and investment banking operations of finance were kept separate, with bank

branches, banking groups routinely include providers of key functions like: financial advice, trading services to help keep securities running, securities underwriting, insurance, payments services (e.g. by issuing credit cards), specialist lending to other financial firms and so on. Banking firms can also use their money to trade for themselves, putting their own capital on the line to invest in the markets.[51] A full analysis of the diversified services portfolio of modern banking groups is outside the scope of this Article. However, it is worth underlining that banks have dramatically expanded their offerings far beyond the basic model of financial intermediation that undergirds their core function.

It is easy to see why banks have been particularly adept at broadening the scope of activities that are now usual for them to perform. Diamond and Rajan examined why deposit taking and lending constitute compatible and complementary functions for promoting efficient credit and cash management in an economy. In modern banking, however, this question is decidedly more complicated and geared towards probing the limits of what other financial services banks might provide safely and efficiently. A key advantage that banking firms enjoy lies in their access to funding, such as deposit funds, the ability to borrow from other financial firms as well as the assurance of accessing funds from the Federal Reserve and protection for retail deposits.[52] Scholars have observed that larger banks enjoy lower funding costs because of an implicit expectation that

holding companies restricted to performing activities that were within the ambit of the "business of banking." However, owing to an incremental set of changes and finally the Gramm-Leach-Bliley Act 1999, some bank holding companies could, if also able to be eligible as financial services holding companies, could perform a series of financial services through subsidiaries. Bank Holding Company Act of 1956, Pub. L. No. 84-511, § 4, 70 Stat. 133, 135-37 (1956); 12 U.S.C. §§371c, 371c-1.;12 U.S.C. §§ 1841-1843 (2012). For excellent discussion of the history of the gradual expansion of the scope of "the business of banking" as well as the expansion in the range of services offered by banking firms, Saule T. Omarova, *From Gramm-Leach-Bliley to Dodd-Frank: The Unfulfilled Promise of Section 23A of the Federal Reserve Act*, 89 NC. L. Rev. 1683 (2011).

[51] Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No.111–203, § 619, 24 Stat.1376 (2010) (Dodd-Frank Act). Dodd-Frank Act § 619(h)(1), 124 Stat. at 1629 (codified at 12 U.S.C.§ 1851); Dodd-Frank Act § 619(h)(4), 124 Stat. at 1630. The Dodd-Frank Act prohibits banks from "proprietary trading" which provides a partial check on the bank's ability to utilize its own funds for making investments. It does not prohibit all aspects of proprietary trading, but defines the prohibition to catch "short term" transactions, and allows for exceptions such as in the case of underwrxiting or market-making. For a thorough analysis of the Volcker Rule and its effects, Darrell Duffie, *Market Making and the Volcker Rule*, Working Paper (2012), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1990472&rec=1&srcabs=1925431&alg=1&pos=2 (discussing the implications of the Volcker Rule for market making activities for banks); Kimberly D. Krawiec, *Don't Screw 'Joe the Plumber,'* The Sausage Making of Financial Reform, 55 Az. L Rev. 53 (2013); Charles K. Whitehead, *Volcker Rule and Evolving Financial Markets*, 1 HARV. BUS. L. REV. 39 (2013) (discussing the impact of the Volcker Rule on the growth of shadow banking – the likely update of proprietary trading by non-bank institutions).

[52] Demirgüç-Kunt & Huizinga, *supra* note [ ], 2-6. The authors investigate the impact of a diversified banking approaches and how deposit, non-deposit and wholesale funding from other financial firms impact a bank's risk-return profile.

regulators will not let such big banks collapse and renege on their debts.[53] With this ready access to funds, banks can offer financial services at lower costs to themselves than a non-bank. Broadly, if banks can privately access cheap finance and use this money to support and sell products at a higher price, they can turn a profit. Put more simplistically, the cheaper their own funding costs, the greater the scope that banks have to compete on the range of services and products that they might be able to offer.[54]

Banks also enjoy informational advantages in providing this array of different financial services. As scholars have noted, lenders gain insights through their relationships with borrowers, not just from Main Street but also Wall Street financial firms that need funds. This information can often extend beyond "hard" data to encompass "softer," more textured and qualitative knowledge acquired through repeated interactions and relationship-building.[55] Informational reserves may also be bolstered by a bank's depositor business where depositors might provide a source of custom for the provision of financial services and products.[56] How banks acquire and utilize information is, of course, complex. For example, banks that lend money on a very short-term basis may not invest in the same level of due diligence as they would in the case of a longer-term debt facility. Or, those that take a great deal of security to manage their risk may similarly be more insensitive to information.[57] But

[53] The literature in this area is extensive. See for example, Andrew G. Haldane, *The $100 Billion Dollar Question*, BIS Review, no. 40/2010. (2010), http://www.bis.org/review/r100406d.pdf (noting that banks appear to show differences in "support ratings" or the perception that banks are likely to receive state support on account of size and market share); Asli Demirgüç-Kunt & Harry Huizinga, Are Banks Too Big to Fail or Too Big to Save? International Evidence from Equity Prices and CDS Spreads, World Bank Policy Research Working Paper no. 5360 (2010)(showing that CDS spreads are lower for larger banks); Joao A.C. Santos, *Evidence from the Bond Market on Banks' Too-Big-to-Fail Subsidy*, FRBNY Economic Policy Review 29 (December 2014) (noting that bond spreads appeared to be smaller for larger banks. Professor Santos' study of bond spreads between 1985-2009 suggests that larger banks can often see a much lower cost of funding versus smaller banks and non-bank firms). But note that the Government Accountability Office notes that the extent of the funding advantage for larger firms may be growing smaller, *Government Accountability Office, Large Bank Holding Companies: Expectations of Government Support*, GAO-14-621, 11-15 (2014).

[54] *But see*, Azar, Raina and Schmalz, *supra* note [ ] (noting that common ownership is encouraging anti-competitive behavior by banks in offering more expensive products to customers. However, cheaper funding costs for banks can enable them to theoretically use this funding to offer a range of financial services, though anti-competitive behavior may encourage banks to seek out oligopolistic rents.

[55] *See e.g.*, Brigitte Godbillion-Camus & Christophe J. Godlewski, *Credit Risk Management in Banks: Hard Information, Soft Information and Manipulation*, Working Paper (2005), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=882027 Victoria Ivashina & Zheng Sun, *Institutional Stock Trading on Loan Market Information* 5-6 (Feb. 3, 2010) (unpublished manuscript), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=972044 (noting that institutional lending institutions appear to make strategic stock purchases in borrower stock). It should be noted that very short-term debt in the money markets may require lenders to be less intensive about acquiring information and may be more information-insensitive. Bengt Holmstrom, *Understanding Debt in the Financial System*, BIS Working Paper Number 479 (Jan. 2015).

[56] *See for example*, Jonnelle Marte and Renae Merle, *It Goes Well Beyond Wells Fargo': Concerns Grow over Sales Tactics in Banking Industry*, WASH. POST, Sept. 16 2016.

[57] Holmstrom, *supra* note [ ], 2-7. On the short term money markets, RICKS, *supra* note [ ].

banks are uniquely positioned – as lenders and as issuers of deposits – to access a swath of information across a swath of people, businesses and financial firms. Added to the cheaper funding that banks can access, they are well positioned to use these benefits to diversify and extend the basic intermediary model to provide a range of financial services.

Whether banks should be involved so extensively in the provision of financial services remains a deeply controversial question.[58] This Article does not enter into this debate. Rather, it points to two key economic conditions – cheaper financing and access to information – that have made it possible for banking firms to adopt a universal model with relative ease.[59] That major U.S. banking firms have functionally grown to assume a much larger role in financial markets is uncontestable. Over the last two decades, U.S. law and market practice has gradually permitted commercial banks to move beyond basic deposit-taking and lending, to engage with the commercial sector and to offer financial services expansively.[60] Also, the 2008 Financial Crisis saw the big investment banks, Lehman Brothers, Goldman Sachs, Merrill Lynch, Morgan Stanley and Bear Stearns collapse, become commercial banks or join existing banking groups.[61] As a result of these transformations, the U.S. is home to some of the largest banking groups internationally including Bank of America, Citigroup, J.P. Morgan Chase and Wells Fargo that specialize in offering a range of services of which deposit taking and lending constitute just one (usually less profitable) part.[62] For example, in the third quarter of 2016, major U.S. banking groups saw dramatic revenue gains, owing not to the usual banking functions, but rather because of their role as dealers in global bond markets.[63] Indeed, in the case of J.P Morgan, its community and consumer

[58] For a historical overview, cross-country comparison and outline of the key policy trade-offs of applying the universal banking model to U.S. banks, Bernard Shull. *The Separation of Banking and Commerce in the United States: an Examination of Principal Issues*, OCC Economics Working Paper 1999-1, 17-20 (1999) (showing that the separation between banking and commerce had been eroding throughout the 1970s and 1980s); See also, Demirgüç-Kunt & Huizinga, *supra* note [ ], 2-6 (noting the costs and benefits of universal banking, the advantages of diversification *versus* the risks); Ricardo T. Fernholz & Christoffer Koch, *Why are Big Banks Getting Bigger*, Federal Reserve Bank of Dallas Working Paper 1604 (Feb. 2016) (noting that expansion of banking services into the non-banking area has helped reduce idiosyncratic volatilities in particular asset groups); Adam J. Levitin, *Safe Banking: Finance and Democracy*, 83 U. CHI. L. REV. 387 (2016) (advocating for narrow banking, where banks take deposits and invest this cash in safe assets); Omarova, *supra* note [ ].

[59] Demirgüç-Kunt & Huizinga, *supra* note [ ], 2-4.

[60] Bank Holding Company Act of 1956, Pub. L. No. 84-511, § 4, 70 Stat. 133, 135-37 (1956); 12 U.S.C. §§371c, 371c-1.;12 U.S.C. §§ 1841-1843 (2012). For a history, Omarova, *supra* note [ ].

[61] Patrick Kingsley, Financial Crisis: Timeline, GUARDIAN, 7 August 2012, https://www.theguardian.com/business/2012/aug/07/credit-crunch-boom-bust-timeline.

[62] *See for example*, Beverly J. Hirtle and Kevin J. Stiroh, *The Return to Retail and the Performance of U.S. Banks*, Federal Reserve Bank of New York Staff Reports, no. 233 (2005) (noting that retail banking operations are usually less volatile but less profitable for banks).

[63] Put briefly, dealers help keep the market running smoothly by mediating trades between buyers and sellers as well as standing ready to buy and sell securities with their own money to keep the markets trading smoothly. This function ensures that markets have liquidity and not suffer from sudden,

banking unit saw profits fall by 16%, with provisions made for credit losses of $1.29 billion, up from $389 million in 2015.[64]

2. The Problem of Banking Design

As Diamond and Rajan conclude, instability constitutes a feature, rather than a bug, of the banking system. According to this view, banks consolidate deposit taking and lending within a single institution to maintain the flow of cash and credit in the economy. Banks mediate temporal fluctuations in demand and supply of cash. Depositors must get their money on-demand; borrowers should be able to access credit when they might want it to finance long and short-term projects. The need to manage these dual tasks – to deliver depositor money on demand and to also finance longer-term loans to borrowers – creates a fundamental and inevitable instability at the heart of banking.[65] If depositors all need their money back at once, then banks cannot continue lending. And because they have to immediately pay depositors back, banks might have to call-in the loans they have made. If banks must call in these loans without notice, borrowers who depend on this capital can lose needed funds for their growth and productivity.[66] The cause of this instability links to two key features of bank function: (i) a temporal mismatch in issuing demand deposits and also investing in longer-term borrower debt; and (ii) the potential for potentially irrational panics to trigger sudden depositor demand for a return of their cash.[67]

Banking scholars have devoted extensive study to this instability problem. Crucially, Professors Diamond and Dybvig point to panic as the major challenge of predicting bank runs and their seriousness. Depositors

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abnormal price spikes when there is a rush or large demand for securities. For a discussion of how dealer operations, Yesha Yadav, *Insider Trading and Market Structure,* 63. UCLA L. REV. 968 (2016), 981-988.

[64] Hugh Son, JPMorgan *Earnings Beat Estimates on Bond-Trading Revenue*, BLOOMBERG, Oct. 14, 2016, http://www.bloomberg.com/news/articles/2016-10-14/jpmorgan-posts-6-3-billion-profit-as-bond-trading-revenue-rises. See also, Olivia Oran & Sweta Singh, *Morgan Stanley Profit Jumps on Bond Trading Comeback*, REUTERS, Oct. 19, 2016, http://www.reuters.com/article/us-morgan-stanley-results-idUSKCN12J16C; Dakin Campbell, *Goldman Sachs Bond-Trading Engine Revs Up to Beat Estimates*, BLOOMBERG, Oct. 18, 2016, http://www.bloomberg.com/news/articles/2016-10-18/goldman-sachs-profit-rises-47-as-bond-trading-outperforms (it should be noted that Goldman Sachs, traditionally an investment bank without commercial banking operations before 2008, recently opened an on-line retail banking and lending operation). For discussion, Martin Neil et al., *The Big Four Banks: The Evolution of the Banking Sector*, BROOKINGS, May 26, 2015.

[65] Diamond & Rajan, *supra* note [ ].

[66] Diamond & Rajan, *supra* note [ ].

[67] Douglas W. Diamond & Phillip H. Dybvig, *Bank Runs, Deposit Insurance, and Liquidity*, 91 J. POL. ECON. 401 (1983); V.V. Chari & Ravi Jagannathan, *Banking Panics, Information, and Rational Expectations Equilibrium*, 43 J. FIN. 749 (1988)

do not know if they are going to get their money back if a bank looks like it is in trouble. Those that are first in line will be paid; and those that are slower may face uncertainties as to whether their money is safe. This dynamic can prompt depositors to engage in anticipatory panicked withdrawals, only to beat other depositors to the door at the smallest sign of trouble. Depositors might be impervious to information. Even if information exists to correct a rumor, depositors might still wish to get their money out. Worse, depositors might well conflate problems at one bank as affecting every bank and rush to claim their money across multiple institutions. Such systemic panics create enormous costs for the market - too big for any single firm to control and too large to contain without calling in loans and selling assets at distressed prices.[68]

Regulators have controlled these doomsday scenarios by providing insurance to customers to protect deposits (up to $250,000 per account) and by giving banks access to emergency funding from the Fed.[69] Also, the fact of banks being large and diversified might be seen as providing protection against a collapse caused by large-scale depositor flight. If banks are able to derive revenue from multiple business lines, then depositors may be less anxious if one or other of the were to fail: others sources of revenue would cushion the blow.

However, as leading scholars point out, instability in the financial system has not disappeared on account of depositor insurance or the ability of banks to tap into emergency loans from the Fed.[70] Far from it. Banks and non-bank financial institutions too need to deposit their cash and borrow when they wish to finance investments. Just as on Main Street, the financial system depends on the ability of firms to "deposit" their cash with a firm and to be able to borrow for longer-term investments. As Professor Ricks explains, financial markets depend on a form of "shadow banking," whereby firms issue short-term "deposits" to other financial

[68] Diamond & Dybvig, *supra* note [ ].

[69] The Federal Deposit Insurance Corporation (FDIC) provides deposit insurance to protect $250,000 per customer and account. FEDERAL DEPOSIT INSURANCE COMMISSION, HOW ARE MY DEPOSITS INSURED, https://www.fdic.gov/deposit/covered/categories.html. It has been widely noted that this safety net has prevented runs successfully in U.S. banking markets.

[70] For discussion, Zoltan Pozsar et al., *Shadow Banking*, Federal Reserve Bank of New York Report 458 (2012); Gary Gorton, *Slapped in the Face by the Invisible Hand: Banking and the Panic of 2007*, Federal Reserve Bank of Atlanta 2009 Financial Markets Conference, 2-4 (May 9, 2009) ("Since 1934 when deposit insurance was adopted, until the current panic – a span of almost 75years there had been no banking panics."); Morgan Ricks, *Shadow Banking and Financial Regulation*, Columbia Law and Economics Working Paper No. 370, 3-6 (2010). On the repo market, Viktoria Baklanova et al., *Reference Guide to the U.S. Repo and Securities Lending Markets*, Federal Reserve Bank of New York Report 740 (Dec. 2015) (describing the function of the repo market that functions as a key source of maturity transformation in U.S. financial and securities markets). On runs in the repo market, see, Manmohan Singh and James Aitken, *The (Sizable) Role of Re-hypothecation in the Shadow Banking System*, IMF Working Paper 10/72 (2010); Gary Gorton & Andrew Metrick, *Securitized Banking and the Run on the Repo*, 104 J. FIN. ECON. 425 (2012).

firms and then use these funds to invest in longer-term facilities – creating the kind of temporal mismatch seen in everyday banking.[71] But unlike traditional banking, this "shadow banking" system is not backstopped by government guarantees and insurance.

This type of spiraling catastrophe in shadow banking system is not theoretical. As Ricks analyzes, it was blamed for amplifying the intensity of the 2008 Financial Crisis and for necessitating the massive, deployment of the Fed's resources to restore function to the financial system. To give some idea of scale, at peak size, the uninsured "shadow banking" system totaled liabilities of around $11 trillion in 2007 – compared to just under $5 trillion in the insured banking market.[72]

To summarize, banking firms have grown expansively to offer a broad range of financial services and to play a dominant role in everyday economic life. The dangers of banking are well-known. Chiefly, banks are inherently vulnerable to runs that raise the chances of collapse and resulting social costs as intermediation slows. While federal insurance has essentially limited such runs in regulated banking, banks and other financial firms are still at risk of runs in the shadow banking market. Banks can suffer a loss of catastrophic liquidity. And as their asset-values fall, their balance sheets can quickly weaken. If cash is short and a bank's balance sheet is struggling, creditors may not get paid and losses can spill out into the financial system as a whole.

B. Banks and Capital Regulation

Bank regulation confronts a series of tensions. First, major banks mediate an array of ever-expanding economic relationships, fostering reliance on their operations. Secondly, reflecting this importance, regulation offers banks an explicit safety net in the form of deposit insurance and access to emergency Fed funding. As seen during the Financial Crisis, firms have also received *ad hoc* implicit support to deal with liquidity runs within the shadow banking system.[73] Because of their significance as well as the explicit and implicit public safety net, large banks seem to enjoy reduced funding costs, such that further growth can be more easily fueled by low-cost borrowing.[74] Ultimately, these dynamics

[71] For example, in a typical repo transaction, a This is a highly simplified account of the shadow banking system. For a seminal analysis of how shadow banking works, its key risks and approaches to, RICKS, *supra* note [ ].

[72] Ricks, *supra* note [ ], 10-11.

[73] Ricks, *supra* note [ ].

[74] *See sources cited supra* note [ ].

create well-recognized bad incentives. An explicit or implicit safety net can motivate risk-taking, incentivizing less careful lending by banks or expansion into riskier areas of the market.[75] Creditors too may be encouraged to lend more freely to a large bank, knowing they will be paid off by regulators in a bailout.[76]

1. The Rationale for Capital Regulation

Regulatory policy has responded to these tensions, in crucial part, by regulating how individual banks design their capital structure relative to the risks they take on.[77] Regulation seeks to control how banks fund themselves and how this funding structure impacts whether a bank can deal with the risks of instabilities that are an essential part of banking. How much banks borrow, what kinds of securities they invest in, how much unencumbered cash they have and their reliance on equity capital are the preserve of public policy, not private decision making. The mix of debt-cash-equity in any bank's capital structure is subject to careful regulation to determine whether it can help a bank withstand shocks and prevent costly externalities in the event of bank failure. Relying on capital regulation to oversee individual banks constitutes a touchstone of the framework designed to maintain safety and soundness. Indeed, as Professor Tarullo has written, regulating whether a bank's capital structure is adequate to the risks it assumes has come to be "the most important" type of regulation for maintaining financial system safety.[78]

The Starting Point: Banks have an especially unusually capital structure by the fact of their function.[79] Bank deposits constitute loans to a

[75] Diamond & Dybvig, *supra* note [ ], 416-417.

[76] Levitin, *supra* note [ ].

[77] Clearly, capital regulation is a central but by no means the only policy tool available to regulators. For example, bank regulation may target what kinds of activities a bank is qualified to perform. Activity-based restrictions underpin proposals to return banks to narrow banking or to Glass-Steagall Acr type restrictions that policed the separation between banking and commercial activity. See, Levitin, *Fairness*, *supra* note [ ] (justifying a narrow banking approach); Omarova, *supra* note [ ] (tracing the erosion of the Glass-Steagall Act and the role of banks in commodity markets); Shull, *supra* note [ ] (discussing historical attempts to regulate banking through structural restrictions and as well as geographical restrictions on banking activity through the Riegel-Neal Act. Additionally, regulators might tailor how they supervise banks to better control the risks that banks take on, such as through more consolidation supervision for larger banks. For discussion, Krishnamurthy, *supra* note [ ], 3-4 (noting supervision by the Financial Stability Oversight Council as a regulatory tool).

[78] (*now*, Federal Reserve Governor) DANIEL K. TARULLO, BANKING ON BASEL 15 (AUG. 2008)("…capital adequacy requirements have become the most important type of regulation designed to protect bank safety and soundness.")

[79] The axiomatic Modigliani-Miller theorem in corporate finance states that the mix of debt-and-equity within a firm does not affect the firm's fundamental value. In the absence of transaction costs like taxation, legal enforceability and so on, whether a company finances itself using debt or equity should

bank that must be repayable on demand. Because a key source of bank funds represents a loan to the bank, bank capital structure is naturally leveraged, in that it is already dependent on debt. Unlike a normal company that might be entirely funded by its shareholders, banks are creatures of debt as a constituting part of their capital structure. The risk of this debt is controlled, in part, by the availability of deposit insurance.[80]

Counterintuitively, banks make money from the debt they extend to others: the loans they make to borrowers and the debt they invest in through bond investments. These assets generate profits through interest repayments. They can also generate losses. If a bank makes overly-risky loans, then borrowers may not repay. If these losses look like they might imperil the bank's future, then depositors can move quickly to recover their deposits and cause the bank to fail.[81]

Buffers of extra capital provide protection for the inevitable instability of a bank's special capital structure and the chance that a run might cause immediate insolvency.[82] As Professor Tarullo notes, capital buffers offer protection against the rapid insolvency of a bank on account of expected losses caused by bad loans. They also provide comfort to those that lend money to banks and that may have greater confidence in being repaid. A reserve of capital should thus help reduce the costs that banks pay to borrow money.[83]

The difficulty lies in calculating how much capital a bank should keep and what assets should count as capital for the sake of the safety buffer. If banks must set aside some capital as part of their activities, they are being required to internalize costs as part of their business. If a bank perceives these costs as being overly high, it might lend less or sell off existing loans to reduce the risks on its books. Reduced lending or a sell-off of loans might work to dampen the flow of credit and hurt economic activity. Conversely, if the buffer only includes low-quality assets (like junk bonds or volatile currencies) then the safety it offers is illusory. In such cases, the costs that a bank does internalize are insufficient to reflect

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not impact its value. Scholars have long debated whether the Modigliani-Miller theorem applies in the case of banking firms. Bluntly put, if it does apply, then increasing bank equity should come at little cost to overall bank profitability. Conversely, if it does not apply, there is an argument for thinking about these varying costs in determining regulatory requirements for bank capital. This Article does not get into the debate of whether the theorem should apply to banks or what the optimal mix of debt-equity should be for capital regulation. For a discussion of the literature, Franco Modigliani & Merton H. Miller, *The Cost of Capital, Corporation Finance and the Theory of Investment*, 48 AM. ECON. REV. 261 (1958); Sofiane Aboura & Emmanuel Lepinnette, *Do Banks Satisfy the Modigliani-Miller Theorem,* Working Paper (Feb. 2015), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2348608.

[80] *See sources cited supra* note [ ].

[81] Michael R. King, *The Cost of Equity for Global Banks: A CAPM Perspective from 1990 to 2009*, BIS Quarterly Review 59 (Sept. 2009).

[82] TARULLO, *supra* note [ ], 16-18.

[83] TARULLO, *supra* note [ ], 16-18.

the risks it takes. A bad capital buffer can transfer the risks of a dangerous bank onto the public purse (that must pay depositors through insurance) as well as to the bank's creditors who are not repaid on what they are owed.

2. The Turn to Equity in Capital Regulation

Global regulators have long agreed on common standards on how much capital international banks must keep and what kind of capital ought to be included within the buffer.[84] Since the late 1980s, policymakers have developed and signed onto the series of Basel Capital Accords that establish the method by which capital must be calculated and the composition of the capital buffer.[85] Most recently, this effort has culminated in the Basel III accord, formulated as part of post-Crisis reform and implemented into U.S. law through the Dodd-Frank Act.[86] Scholars have written extensively about the Basel Accords and their effectiveness.[87] This Article does not revisit these debates and discussions. Rather, it identifies an understudied yet significant shift within international capital regulation towards a much deeper reliance on common equity as an essential part of the protective buffer safeguarding financial markets post-Crisis. Below, I briefly describe in overview the basic regulatory approach to calculating bank capital and the shift towards emphasizing higher volumes of shareholder equity. This focus on shareholder capital aligns with concurrent efforts by regulators to ensure that banks are structured to be wound-down without costs to the financial system. As equity buffers are required to grow thicker, their protective cushion should absorb losses and ensure that creditors have confidence that they will get repaid.

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[84] [Cite to Stavros' Paper on capital reg and discussion]

[85] TARULLO, *supra* note [ ] (for a history of the Basel rulemaking process and the rationales driving the creation of Basel I and Basel II Capital Accords and the benefits and drawbacks of the Basel approach. On international rulemaking and the "legal" character of international regulatory accords, Christopher J. Brummer, *Soft Law and the Global Financial System: Rule Making in the 21st* Century (2015); Christopher J. Brummer, *Minilateralism: How Trade Alliances, Soft Law and Financial Engineering Are Redefining Economic Statecraf*t (2014); Stavros Gadinis, *Three Pathways to Global Standards: Private, Regulatory, and Ministry Networks*,109 AM. J. INT'L L. 1(2015); Pierre-Hugues Verdier, The Political Economy of International Financial Regulation, 88 IND. L. J. 1405 (2012) (analyzing the objectives of international financial regulation and assessing its successes and shortcomings in the framing of its core objectives); Anne-Marie Slaughter & David T. Zaring, *Networking Goes International: An Update*, Washington & Lee Legal Studies Paper No. 2007-12 (2007) (noting the role of international networks in implementing regulatory agreements).

[86] Section 171, Dodd-Frank Act 2010; FEDERAL RESERVE BOARD OF GOVERNORS, BASEL III IMPLEMENTATION, . http://www.federalreserve.gov/bankinforeg/basel/USImplementation.htm.

[87] TARULLO, *supra* note [ ]; HEIDI M. SCHOONER & MICHAEL W. TAYLOR, GLOBAL BANK REGULATION: PRINCIPLES AND POLICIES (2010).

Calculating Capital: Somewhat counterintuitively, regulators do not look to a bank's liabilities (i.e. deposits) when working out how much capital it should keep – these are underwritten by the public safety net.[88] Rather, they look to a bank's assets – the loans that the bank makes. These represent the source of a bank's profits but also the source of risk as bad lending decisions can push a bank towards default.

By and large, international regulators are agreed on how to work out the riskiness of bank assets and the capital that banks then need to keep. To quantify the riskiness of assets, regulation assigns "a risk rating" to different types of loan. A loan to a developed country, for example, should be much less risky than a loan to a start-up company; credit to a top-rated company is likely less risky than one to a country teetering on the edge of default.[89] The amount of capital that a bank should keep can be determined by reference to this risk-rating and risk-weighting. For example, a $100,000 loan to a top-rated company might be rated at a risk rate of 20%. Applying the 20% risk-rating, the loan might be seen as having a notional risk-weighted value of $20,000 – or, in blunt terms, its "riskiness." The amount of capital that a bank sets aside can be determined as a percentage of the overall "riskiness" on the bank's balance sheet.

In the case of both Basel I and Basel II, regulators asked that banks set aside capital equal to 8% of all risk-weighted assets on their books. And of this 8%, 4% was required to comprise of so-called Tier 1 (that is, the safest) capital, that is, fully paid up common equity and disclosed deserves – and the rest of it could be made by Tier 2 capital – a much wider category of capital that could include less safe but nevertheless viable types of assets like preferred stock or non-disclosed reserves.[90] Taking the above example, the $100,000 loan, risk-weighted at $20,000, would need a bank to keep $1,600 in capital cost, of which $800 must be in the form of fully-paid up equity or disclosed reserves.

The first two iterations of the Basel Accords have come in for strident critique – not surprising give their failure to prevent the Financial Crisis 2008. In short, the Accords did not work. And capital buffers proved insufficient. As Professor Acharya observes, the six U.S. firms suffering the largest write-downs of their assets saw around $696 billion worth of

[88] This was not always the case. From 1900-1930s, regulators examined the capital-deposit ratio, YAIR E. ORGLER & BENJAMIN WOLKOWITZ, BANK CAPITAL (1977); TARULLO, *supra* note [ ] 29-30.

[89] This methodology reflects the Basel II foundational Internal Ratings Based approach, which puts more weight on the credit ratings for particular borrowers, whether they be countries or companies. The Basel I method focuses on whether a borrower is a corporate or a sovereign in determining what risk weighting to apply to a borrower. In Basel I, corporates generally receive a 100% risk weighting, whereas countries would receive a risk weighting of 0% if they were part of the OECD group of countries. For a discussion of methodology, TARULLO, *supra* note [ ], 55-60.

[90] TARULLO, *supra* note [ ], 55-60.

losses between March 2007-June 2010. Between June 2007-December 2008, the market value of these six firms was down, on average, by 88%.[91]

Turning to Equity: Post-Crisis financial regulation has turned to equity as the solution to the cascade of firm collapses witnessed throughout 2007-2008. Commentators have underscored the insufficiency of capital cushions as a chief cause of the accelerated, panicked demise of once-venerable institutions like Bear Stearns and Lehman Brothers.[92] As is now well established, despite having capital cushions in excess of the Basel 1 and II minimum (8% Tier 1 and Tier 2 combined), financial institutions invested in large volumes of bad mortgage-backed securities and took on off-balance sheet liabilities that were far too large to be sustained by their capital safety buffer.[93]

Understandably, then, scholars and policymakers have looked to mandate thicker cushions of Tier 1 common equity as the appropriate response for dealing with the threat of future bank runs and rapid loss of balance sheet value. In a series of prominent writings, Professors Admati, deMarzo Hellwing and Pfleiderer have advocated for deep and plentiful common equity cushions as the main channel to fund bank operations – rather than using the traditional mechanism of deposits and debt. They point to past epochs of banking practice when equity routinely funded 40-50% of bank business. While the authors stop short of proposing hard benchmarks for the right amount of common equity to be deployed, it is clear that modern-day levels of shareholder equity seem woefully inadequate.[94] They are far from alone. Professors Hanson, Kashyap and Stein, for example, propose the creation of deep counter-cyclical capital buffers that banks build up in good times to maintain their businesses in bad times when downturns deplete the strength of the balance sheet. Crucially, they highlight the significance of good quality capital – not just

[91] Viral V. Acharya, *The Dodd-Frank Act and Basel III Intentions, Unintended Consequences, Transition Risks, and Lessons for Emerging Markets*, Working Paper (October 2012), https://www.adb.org/sites/default/files/publication/156247/adbi-wp392.pdf. See also, Allen N. Berger et al., *How Do Large Banking Organizations Manage Their Capital Ratios?* Working Paper, http://fic.wharton.upenn.edu/fic/papers/08/0809.pdf (noting that large U.S. bank holding companies were keeping much higher levels of capital than the requirements under Basel I and Basel II).

[92] Scott Strah, Jennifer Hynes, and Sanders Shaffer, *The Impact of the Recent Financial Crisis on the Capital Positions of Large U.S. Financial Institutions: An Empirical Analysis*, Working Paper (Jul. 2013) (noting that the capital cushions of major banks depleted rapidly during the Crisis). See also, Acharya, *supra* note [ ].

[93] *See for example*, Acharya, *supra* note [ ]. Pozsar et al., *supra* note [ ].

[94] Anat R. Admati et al., *Fallacies, Irrelevant Facts and Myths in the Discussion of Capital Regulation: Why Bank Equity Is Not Expensive*, Stanford Graduate Sch. of Bus., Research Paper No. 2065 (2011); Anat R. Admati et al., *The Leverage Ratchet Effect, Rock Center for Corporate Governance at Stanford University Working Paper No*. 146 (Oct. 2016) (noting the tendency of shareholders to push for leverage-driven growth; ANAT R. ADMATI & MARTIN F. HELLWIG, THE BANKERS' NEW CLOTHES: WHAT'S WRONG WITH BANKING AND WHAT TO DO ABOUT (2013) (noting that 19th century banking relied on shareholder funding to drive lending business, rather than just deposits).

more of it – as essential, singling out common equity as the major bulwark against crisis spreading within the system.[95] Pure common equity – rather than preferred stock or even long-term debt – gives banks the best chance of surviving a fallout. The reserve of funds is readily available, without any commitment to set aside cash for creditors or preferred shareholders. Moreover, this buffer of funds – far from being expensive for banks – can reduce their riskiness and funding costs. Rather than being a drag on their profitability, as might be assumed at first glance, a reserve of equity can reassure funding-providers, sufficient to dynamically lower costs and improve the long-term viability of banking firms.[96]

Policymakers, too, have emphasized common equity in post-Crisis reform – though at much lower levels than proposed by Admati et al.

In its third iteration, Basel III imposes higher required levels of common equity for banks, with extra safety buffers and counter-cyclical capital charges mandated for the largest, most systemically significant global banks. Tellingly, Basel III introduces a new category of gold-plated capital – the Common Equity Tier 1 (or CET 1) that focuses on common shares, the share premium attached to equity as well as retained earnings.[97] Preferred stock is not included within this calculation.[98] In addition to formalizing common equity as the top-tier capital type, Basel III requires an increase in the Tier 1 and CET 1 buffers for banks. Rather than keep to a thin 4% Tier 1 buffer, Basel III requires that common equity (CET1) alone fund a minimum reserve of 4.5% of risk-weighted assets (RWA) and a capital conservation buffer of 2.5%. Large global banks may also be asked to hold 0%-0.25% CET as part of a countercyclical capital buffer and another 0%-2.5% CET as a charge to account for the risk created by

[95] Samuel G. Hanson, Anil K Kashyap, and Jeremy C. Stein, *A Macroprudential, Approach to Financial Regulation*, 25 J. ECON. PERSP. 3, 7-9 (2011); See also, Oliver Hart & Luigi Zingales, *A New Capital Regulation for Large Financial Institutions*, 13 AM. L. ECON. REV. 453 (2011) (proposing a new methodology for calculating bank capital that requires banks to maintain equity and long-term debt levels at a high enough level that the credit-default prices on junior long-term bank debt stays above a pre-set level. If this CDS prices rises, banks must issue new equity to reflect the added risk). There remain criticisms of the view that higher capital requirements are necessarily the answer to solve banking crisis. For example, commentators note that the proposals do not fully account for the potential reduction in lending that may follow and a lack of clarity with respect to the objective of bank regulation – saving banks from a crisis or ensuring they are positioned to continue working and lending. For discussion, Krishnamurthy, 4-6; Hal S. Scott, *Reducing Systemic Risk Through Reform of Capital Regulation*, 13 J. INTL. ECON. L. 763 (2010).

[96] Admati et al., *Fallacies, supra* note [ ], 13-19; Hanson, Kashyap & Stein, *supra* note [ ], 17-21 (noting that the impact of higher equity is marginal for bank funding costs because bank riskiness should decrease because of more equity).

[97] Basel III specifies additional criteria as to what counts as CET 1, notably, qualifying minority ownership interests in consolidated depository institutions as well as deductions, such as for goodwill, to seek out a focus on tangible common equity. For discussion, Davis Polk, *U.S. Basel III Final Rule: Visual Memorandum*, July 2013.

[98] Pricewaterhouse Coopers, *Risk & Capital Management under Basel III* (Feb. 2011), 5-6. It should be noted that non-cumulative, perpetual preferred stock is grandfathered into the category of Tier 1 but not CET 1 capital.

their size and stature. When finally implemented, Basel III should thus cause the largest banking firms to retain a minimum of 12% capital in the form of common equity at the upper end.[99] On top of this, Basel III expects banks to keep at least 1.5% of RWA in the form of general Tier 1 assets and a further 2% in the form of Tier 2 assets.[100]

It is notable that the Federal Reserve mandates higher-than-Basel CET 1 charges for eight U.S. banking groups designated as being systemically important for global markets (G-SIFI charge).[101] Rather than charge its banks the Basel III-maximum of 2.5% CET 1 for being large and important, the Fed's rule permits a higher maximum of between 1%-4.5% CET1 capital for its largest and most impactful constituents. Of the eight designated U.S. banks, JP Morgan is set to eventually incur the maximum 4.5% CET1 G-SIFI charge with others paying incrementally lower charges depending on their size and profile. In preparation for this ramping-up of demand for equity, major U.S. banking groups are well on their way to raising the equity necessary to support their business.[102]

Winding-Down Large Banks: Ultimately, capital regulation helps ensure that banks can sustain losses and fail without imperiling the rest of the system. As seen in the chaotic aftermath following the collapse of Lehman Brothers, failing financial firms can cause others around them to risk falling into a similar predicament.[103] Containing the collapse through capital buffers to absorb losses and orderly liquidation to manage the failure, can dampen panic, prevent fire-selling and preserve asset values.

Post-Crisis reform relies on sound capital buffers to secure the orderly resolution of failing firms. Under the Dodd-Frank's Act Orderly Liquidation Authority (OLA), a center-piece of post-2008 regulatory architecture, thick capital buffers are a precondition for the proper functioning of the OLA mechanism. Scholars have written insightfully about the effectiveness of the OLA and whether it offers superior protection than that already provided for under Chapters 11 and 7 of the Bankruptcy Code.[104] This Article does not re-visit these debates. Rather its

[99] Pricewaterhouse Coopers, *Risk & Capital Management under Basel III* (Feb. 2011), 5-6.

[100] Davis Polk, *U.S. Basel III Final Rule: Visual Memorandum*, July 2013.

[101] These banks are Bank of America, Bank of New York Mellon, Citigroup, Goldman Sachs, Citigroup, Morgan Stanley, State Street and Wells Fargo. Board of Governors of the Federal Reserve System, Press Release, July 20, 2015, https://www.federalreserve.gov/newsevents/press/bcreg/20150720a.htm.

[102] Pricewaterhouse Coopers, *First-Take: Key Points from the Fed's Final G-SIB Surcharge Rule* (July 22, 2015), http://www.pwc.com/us/en/financial-services/regulatory-services/publications/assets/final-g-sib-surcharge-rule.pdf .

[103] RICKS, *supra* note [ ]; Janger & Pottow, *supra* note [ ]; Morrison, *supra* note [ ].

[104] *See, in particular*, Morrison, *supra* note [ ]; Ayotte & Skeel, *supra* note [ ]. See also, Edward R. Morrison & Joerg Riegel, *Financial Contracts and the New Bankruptcy Code: Insulating Markets from Bankrupt Debtors and Bankruptcy Judges*, Columbia Law and Economics Working Paper No. 291 (2006) (an early pre-Crisis examination of the operation of the safe harbors for derivatives contracts under the Bankruptcy Code); Mark J. Roe, *The Derivatives Market's Payment Priorities as Financial Crisis*

aim in briefly describing the function of the OLA is to underscore the critical place of common equity in its design. Through the new OLA, equity reserves are essential both to absorbing bank losses and to funding the wind-down operations of a failing bank until such times as its assets can be sold and restructured.[105]

The central innovation underlying the OLA lies in the Single Point of Entry (the SPOE) as the functional hinge for the reorganization of a large and complex financial institution. In the event of distress, rather than declare entire networks of subsidiaries and affiliates as being formally in bankruptcy, only the holding company is placed into an FDIC-guided reorganization and wind-down.[106] In short, the holding company becomes the "single point of entry" that permits an entire corporate group of financial firms to be wound down and restructured. By placing just the holding company into bankruptcy, subsidiaries and affiliates can continue their operations and not lose value by virtue of a collapse and sell-off of their assets. In seeking to preserve this going concern value for the firm as a whole, the OLA is designed to contain costly externalities from bleeding into the system. Other financial firms can continue to do business with the troubled firm. Asset values may be maintained. Sudden runs from the prospect of an immediate insolvency can be forestalled by the assurance that business will continue as normal.

This goal of maintaining normalcy notwithstanding, the FDIC is tasked with gradually transferring the assets and operations of the financial firm into a new, purpose-built entity set up for the task – NewCo. The bankrupt holding company is left holding long-term unsecured debt and equity, while the NewCo takes a transfer of assets, short-term liabilities as well as the long-term secured debt of the holding company. With a stronger and healthier balance sheet, the NewCo can borrow from the U.S. Treasury without placing the taxpayer at risk of not being paid back.[107] Over time, the NewCo can restructure assets, sell them off and allow some of the subsidiaries to be shut down or be spun-off. From being a large and complex institution, the SPOE can aim for the gradual and controlled simplification of a bank's operations, while ensuring that the market is not deeply impacted by the fall of one of its key players.[108]

Accelerator, 63 STAN L. REV. 539 (2011)(noting the role of derivatives safe harbors under the Code in potentially amplifying risk-taking in the financial system).

[105] Dodd-Frank Act §§ 212(a), 212(c), 204(a) & 206(5) ("creditors and shareholders must bear all losses in connection with the liquidation of a covered financial company.")

[106] Dodd-Frank Act §§ 202(a) (the process is commenced after agreement between the FDIC, the US Treasury and the Federal Reserve).

[107] Skeel, *supra* note [ ], 2-3.

[108] The SPOE design has faced numerous criticisms, such as whether or not its actually workable in practice and how it might operate in the event of a subsidiary insolvency, rather than one in which the holding company can be placed in a receivership. For discussion, Skeel, *supra* note [ ]; Derrick

Critical to this design is the role of the equity in the operations of the SPOE. The Dodd-Frank is clear in forcing equity to pay for the workout and wind-down of the holding company.[109] Equity is the last to be paid as part of the OLA priority scheme. To the extent that any value remains in the holding company, it is expected to provide continuity funding for the NewCo. For example, equity can be used to repay lingering longer-term unsecured creditors through equity security-for-claims exchanges that give creditors equity in the NewCo. In all cases, however, it is clear that existing equity faces an extinction event if the OLA is invoked to wind down a large and complex financial institution.

In sum, post-Crisis consensus makes common equity the foundation on which to ground safer and more resilient financial institutions. Recognizing the inherent riskiness of regular and shadow banks, common equity provides a source of ready-to-use capital. It offers a signal of a bank's robustness and buffers it against losses. Crucially, under Basel III and the Dodd-Frank Act's OLA, common equity constitutes the essential pre-condition for an orderly winding-up of a complex financial institution. Indeed, for a cohort of influential scholars and policymakers, the problem with today's financial system lies not in the fact of this reliance, but rather in its in its lack of ambition. In other words, existing demands for equity in financial regulation do not go far enough.

II. WHO ARE THE EQUITY SUPPLIERS?

With increased demands for common equity, capital markets have assumed enormous significance in supplying the resources needed to keep financial markets working. Despite this importance, however, surprisingly little attention has gone into constructing a picture of who supplies this capital in practice.[110] With bank equity investors assuming an essential role in maintaining financial market function, filling in this gap is significant for understanding who holds the ultimate default risk of financial markets as a whole and how efficiently they can bear this burden.

This Part describes the ownership patterns of the largest, publically traded U.S. banks. These banks are part of the list of 33 U.S. and foreign

Cephas & Dimia Fogam, *FDIC Issues 'Single Point of Entry' Resolution Strategy*, Weil, Gotshal & Manges Latest Thinking (March 24, 2014), http://www.weil.com/articles/fdic-issues-single-point-of-entry-resolution-strategy; Wilmarth, *supra* note [ ].

[109] Dodd-Frank Act §§ 206(a); 210(b).

[110] Azar, Schmalz & Raina, *supra* note [ ] (noting high common ownership in banking from the perspective of antitrust policy); Elhauge, *supra* note [ ].

holding companies subject to the Federal Reserve's stress tests.[111] I look at shareholders of over 5% of the common equity of these holding companies (blockholders), as listed in their proxy statements for 2011 and 2016.

This survey shows that the ownership of the largest U.S. bank and financial holding companies is heavily weighted in the hands of a small cohort of asset management companies: BlackRock, Vanguard, Fidelity, State Street and T. Rowe Price. Additionally, Mr. Warren Buffet's investment firm, Berkshire Hathaway, features in this shortlist of the major owners of a few top U.S. banks. This state of affairs is relatively novel. In the 2011 proxy statements of this same set of leading banks,[112] covering the period during which the Dodd-Frank Act was being negotiated and passed, bank ownership appeared less obviously reliant on the big asset managers for equity. While BlackRock was a large shareholder in about half of the surveyed banks in 2011 (as against 22 out of 25 banks in 2016), Vanguard appeared in the large shareholder list of just one bank (rising to 22 of 25 banks in 2016). Perhaps, this trend is to be expected. The asset management industry has witnessed impressive growth in recent years, increasing the money and assets entrusted to their care. Still, while the causal links are complex, major asset management firms now feature as repeat owners of banks post-Crisis, coinciding with the need of banks to shore up their equity capital bases.

This Part begins by describing the role of the major asset managers like Vanguard, Fidelity, State Street or BlackRock. It offers a primer on their industry and the general modalities by which these firms exercise governance power. Finally, I set out the results of the survey, showcasing the rise of common ownership in banking between 2011-2016.

A. A Primer on Asset Management

What is asset management? Asset managers look after and invest the wealth of savers using a variety of skills and strategies. Instead of individuals setting aside a portion of their monthly wages to invest personally, they can pay a professional asset manager a fee to do so on

[111] Board of Governors of the Federal Reserve, Press Release (June 29, 2016), https://www.federalreserve.gov/newsevents/press/bcreg/20160629a.htm.

[112] This 2011 list does not include Citizens Financial Group, which was a full-owned subsidiary of the United Kingdom's Royal Bank of Scotland until 2015, when RBOS sold its stake in Citizens. For discussion, Elizabeth Dexheimer, *RBS Raises $2.6 Billion Selling Citizens Financial Shares*, BLOOMBERG, Oct 29, 2015.

their behalf.[113] By pooling the money and assets of millions of savers – both retail and corporate – asset managers can cultivate expertise and market power to make productive investments in capital, currency and other markets.

The kinds of products that asset managers offer their customers are varied and designed to cater to different investment objectives and risk appetites. For example, mutual funds represent the quintessential savings and money management product. Mutual funds pool savings and use this money to invest in diversified portfolios of stocks, bonds and securities. Mutual fund clients can usually redeem the value of their investments by cashing in the "shares" that mutual funds issue to them, representing their particular entitlement within the fund.[114] Depending on the fund, investors can choose between those that offer a more "active" trading strategy and those that are passive. In the case of active management, mangers promise expertise in picking-and-choosing specific stocks or other securities to generate returns for the fund.[115] For passive funds, by contrast, the value of the pool is benchmarked to the performance of a reference basket of securities (like a selected group of stocks in the S&P 500).[116] In any event, as a product critical to the long-term economic well-being of tens of millions of mom-and-pop and corporate savers, mutual funds are subject to an array of regulation under the Investment Company Act 1940 (ICA) and by the Securities and Exchange Commission (SEC).[117] As such, within the parameters laid out by the ICA and overseen by the SEC, asset management companies can offer customers mutual fund products, specifying strategy, likely riskiness and redemption terms. The likes of Vanguard, Fidelity, BlackRock and State Street Global have emerged as specialist mutual fund management companies, offering their customers a choice of funds within which to place their savings.[118]

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[113] For a more detailed description and analysis of fund organization, see, Morley, *supra* note [ ] (noting the significance of the separation of funds and managers as the defining feature investment pools. Morley goes on to discuss the governance implications of this separation).

[114] Closed-end mutual funds, in contrast to open-ended mutual funds, do not permit their customers to freely redeem their investment and cash out. Morley, *supra* note [ ], 1234.

[115] FIDELITY, WHAT IS A MUTUAL FUND?, https://www.fidelity.com/learning-center/investment-products/mutual-funds/what-are-mutual-funds.

[116] For example, exchange-traded funds or ETFs usually provide passive management strategies where the value of the fund tracks an underlying index. William A. Birdthistle, *The Fortunes and Foibles of Exchange-Traded Funds: A Positive Market Response to the Problems of Mutual Funds*, 33 DEL. J. CORP. L. 69, 73-85 (2008) (discussing ETFs and their role in the securities market); Andrew Osterland, *Investors Pouring Billions into Passively Managed Funds*, CNBC, 27 June 2016, (noting that in 2015-6, actively managed funds saw a dramatic exit of $308 billion, while passive funds like ETFs saw $375 billion in inflows).

[117] Morley, *supra* note [ ], 1233-1236; FIDELITY, WHAT IS A MUTUAL FUND?, https://www.fidelity.com/learning-center/investment-products/mutual-funds/what-are-mutual-funds.

[118] For a ranking of top-20 asset managers, Willis Towers Watson, The World's 500 Largest Asset Managers – Year end 2014 (Nov. 2, 2015), https://www.towerswatson.com/en/Insights/IC-Types/Survey-Research-Results/2015/11/The-worlds-500-largest-asset-managers-year-end-2014.

In addition to mutual funds, asset mangers include hedge funds and private equity funds. These firms also pool assets for investment. However, by limiting themselves to a cohort of wealthy investors, hedge funds and private equity funds face a less exacting regulatory environment than mutual funds that expressly cater to a much wider swath of the public. Allowed to deploy a range of strategies, including those that may be too risky for mutual funds, hedge funds and private equity houses can provide asset management for institutions as well as wealthier investors with a higher risk tolerance.[119]

As of December 2014, the value of assets in U.S. investment pools came to around $25.8 trillion.[120] This included $13.1 trillion in the U.S. mutual fund industry as well as $3.4 trillion in hedge funds.[121] These numbers, however, tell just a part of the story.

Most strikingly, mutual funds, especially, have fostered thick connections between the wealth of Main Street homes and businesses and the fortunes of global capital markets. According to the Investment Company Institute (ICI), year-end statistics for 2015 showed that an extraordinary swath of U.S. household wealth was entrusted to the management of mutual funds. In all, 44.1% of all U.S. households owned shares in mutual funds, totaling around 54.9 million householders. In the U.S., 93.1 million individuals owned shares in mutual funds. Understandably, the baby boomer generation, edging closer to retirement, constitutes the demographic with the largest share of mutual fund assets, though younger generations are investing earlier than generations past.[122] Rather than directly buying and selling securities to save for retirement or college, then, households now rely on investment companies to manage and grow their long-term savings on their behalf. For example, U.S. households held around 9.6% of their financial assets in 401(k) retirement accounts in 2015, with mutual funds managing 54% of assets in 401(k) plans (up from 26% in 1995). Mutual funds also manage 48% of individual retirement accounts (IRAs), comprising around 10.5% of

[119] This is not to suggest that hedge funds and private equity funds are not subject to securities regulation. While oversight under the ICA is lowered, owing to a smaller, wealthier clientele, hedge funds remain subject, *inter alia*, to the usual prohibitions against fraud, insider trading, market manipulation and disruption in their trading activities as well as other regulations with respect to how they trade, client funds, disclosure practices. *See e.g.*, Securities and Exchange Commission, Investor Bulletin: Hedge Funds, https://www.sec.gov/investor/alerts/ib_hedgefunds.pdf.

[120] This figure excludes assets in money market mutual funds. Financial Stability Oversight Council, Update on Review of Asset Management Products and Activities, 3-4, https://www.treasury.gov/initiatives/fsoc/news/Documents/FSOC%20Update%20on%20Review%20of%20Asset%20Management%20Products%20and%20Activities.pdf. For private funds see, SEC Division of Investment Management, Risk and Examinations Office, Private Fund Statistics, Fourth Calendar Quarter 2014 (Dec. 30, 2015).

[121] Financial Stability Oversight Council, *supra* note [ ].

[122] INVESTMENT COMPANY INSTITUTE, FACT BOOK (2016), 2, 9-14, 112-120. See also, INVESTMENT COMPANY INSTITUTE, PROFILE OF MUTUAL FUND SHAREHOLDERS 2008 (2009), 3-27.

household financial assets as well as an additional $6.8 trillion in assets outside of the retirement account context.[123] These figures point to a dramatic deepening in the relationship between American households and investment companies.[124] For example, whereas investment companies managed just 2% of all American household financial assets in 1980, they now oversee around 22% of such assets by year-end 2015.[125]

Importantly, mutual fund assets[126] – managed on behalf of U.S. homes and businesses – are critically important investors in the long-term future of corporate America. As the ICI reports, most mutual fund assets are invested for the long-term, with 56% of assets placed in long-term equity funds. Around 41% of the 56% of assets held in equity funds were invested in domestic U.S. corporations at year-end 2015.[127]

With their investment in U.S. and international corporate stocks and bonds, mutual funds – and the everyday savings they represent – are heavily implicated in the workings of the financial system. Investment funds provide a transmission channel to communicate the risk and rewards of financial markets into real economy. This story is, of course, simplified. For example, mutual and other investment funds usually diversify how they invest fund assets, balancing risks by placing investments in different types of security, currencies and markets to buffer against large and concentrated shocks.[128] Still, most broadly, a vivid example of this interconnection can be seen in the impact of the 2008 Financial Crisis on the value of mutual fund assets. At the end of 2008, mutual funds managed $10.3 trillion in assets, a decrease of almost $2.6 trillion from just the year before, with some investors pulling their investments and cashing out as the value of their holdings fell. With the near 40% decline in stock prices over 2008, U.S. equity funds found themselves suddenly poorer, leaving

[123] INVESTMENT COMPANY INSTITUTE, FACT BOOK (2016), 11-13.

[124] E.g. those managing 401(k) defined benefit plans or individual retirement accounts.

[125] INVESTMENT COMPANY INSTITUTE, FACT BOOK (2016), 11-13. Under the ICI's definition of investment companies, these holdings include assets in exchange-traded funds (ETFs), unit investment trust funds, closed-end funds and mutual funds.

[126] This figure includes assets held by mutual funds and exchange-traded funds.

[127] INVESTMENT COMPANY INSTITUTE, FACT BOOK (2016), 8-9. These figures include assets in Exchange-Traded Funds or ETFs, a generally more passive type of investment vehicle that tracks the performance of underlying indices. For discussion, Morley, *supra* note [ ], 1235-6; Birdthistle, *supra* note [ ], 71-75.

[128] INVESTMENT COMPANY INSTITUTE & SECURITIES INDUSTRY AND FINANCIAL MARKETS ASSOCIATION (SIFMA), EQUITY AND BOND OWNERSHIP IN AMERICA (2008), 30-36; Jill E. Fisch & Tess Wilkinson-Ryan, 162 PA. L. REV. 605 (2014) (noting that investors can behave heuristic tendencies towards "naïve diversification" in their choice of investment) On run-risks, Qi Chen, Itay Goldstein & Wei Jiang, *Pay-Off Complementarities and Financial Fragility: Evidence from Mutual Fund Outflows*, 97 J. FIN. ECON. 239 (2010). But see, Financial Stability Oversight Council, *supra* note [ ], 6-12 (noting various liquidity and redemption risks that can affect mutual funds despite diversification, including discussion of spillover effects as mutual fund shareholders redeem their shares).

households facing profound uncertainty about the future of their 401(k)s and other savings.[129]

The rise of asset management companies in banking: A defining phenomenon of corporate governance and securities market regulation today lies in the dramatic growth of large asset managers as intermediaries of capital. As Professor Luigi Zingales observes, capital markets have experienced a sharp shift towards a near-complete institutionalization of the investor base. Whereas only around 10% of all stock market investors in the 1930s were institutions, this figure has risen to over 70% today. Indeed, Zingales observes that those that find themselves in the position of investing individually do so because they have received stock options through employment or are corporate insiders. As described above, households are investing ever-larger proportions of their financial assets in savings funds and delegating their personal investment decisions to professional managers.[130] Reflecting and responding to these changing investment habits, asset managers have grown to provide the savings products that homes, businesses and financial markets depend on for growing private and aggregate economic wealth. In other words, asset management companies like BlackRock, Vanguard or Fidelity offer facilities like the mutual funds that households and businesses use to save and manage their financial assets. In administering these large pools of savings, asset managers make decisions about how and where to invest the enormous amount of capital entrusted to their care. In return, they earn management and advisory fees.[131] As Morley writes, individual mutual funds are usually members of much larger networks of "fund families" organized, managed and advised under the "brand" of an asset manager like Vanguard, Fidelity or BlackRock.[132]

A number of financial firms offer fund management services for retail and business customers.[133] From this group, BlackRock, Vanguard,

[129] INVESTMENT COMPANY INSTITUTE, FACT BOOK (2009), 8-9 (it is worth noting that, while equity funds suffered losses, there were inflows into fixed-income (debt) orientated funds during the Crisis).

[130] Luigi Zingales, *The Future of Securities Regulation,* Chicago Booth School of Business Working Paper No. 08-27 (2009), 2, 13; Paul G. Mahoney, *The Political Economy of the Securities Act of 1933*, 30 J. LEG. STUD. (2001) (noting the incidence of information-insensitivity and exuberance driving poor investor decision-making); Clifford G. Holderness, *The Myth of Diffuse Ownership in the United States*, 22 REV. FIN. STUD. 1377, 1388 (2010) (noting that almost 90% of S&P 500 companies include institutional blockholders as part of the ownership structure); Jeffrey N. Gordon, *Employees, Pensions, and the New Economic Order*, 97 COLUM. L. REV. 1519, 1530-50 (1997) (examining the role and influence of pension funds on capital markets and governance); Steve Thel, *The Original Conception of Rule 10b*, 42 STAN L. REV. 385, 390-410 (1990) (describing the growth of U.S. securities markets from largely unsophisticated origins, with investors motivated by quick and easy returns). See also, INVESTMENT COMPANY INSTITUTE, FACT BOOK (2016), 11-13.

[131] Morley, *supra* note [ ], 1231-33.

[132] Morley, *supra* note [ ], 1232.

[133] Willis Towers Watson, *supra* note [ ].

Fidelity, State Street and T. Rowe Price have – relatively recently – emerged as important actors within banking. Specifically, as described more fully below, these asset managers have utilized the capital under charge to invest in the equity of large U.S. bank holding companies.

In many ways, it is understandable that asset managers are flexing their economic power in the banking industry. For a start, controlling trillions of dollars-worth of assets, asset managers invest widely across the spectrum of American public companies. This is maybe most evident in the case of BlackRock – the largest asset manager in the world.[134] Founded in 1988, the firm has expanded rapidly in its short history to hold a most significant place in economic life. In 2015, BlackRock reported managing assets worth in the order of $4.64 trillion, up from $3.5 trillion in 2011.[135] $2.5 trillion out of this $4.64 trillion in assets-under-management (AUM) are invested in equity-based investments around the world, though the firm also invests extensively in fixed-income (i.e. debt) securities like bonds, as well as in commodities, real property and other investment funds.[136]

While smaller than BlackRock, asset managers like Fidelity, Vanguard, State Street Global and T. Rowe Price also control trillions of dollars' worth of capital. Vanguard, the second-largest U.S. asset manager after BlackRock, administered around $3.5 trillion in assets in 2015, State Street Global oversaw around $2.45 trillion in AUM, Fidelity with $1.98 trillion in global AUM and T. Rowe Price manages around $812.9 billion dollars in assets.[137]

Reflecting the institutionalization of securities markets, these asset managers constitute major providers of capital to everyday public companies on behalf of the household and corporate wealth they safeguard. BlackRock, in particular, appears to be a ubiquitous investor on Main Street. In the popular press, it is reported to be an investor in almost every single publically-traded company in the U.S., and perhaps also globally.[138] But BlackRock is far from alone. As Professor Einer Elhauge notes, BlackRock, Vanguard, Fidelity, and State Street, together are holders of 80% of all stock in S&P 500 corporations.[139] From the lens of

[134] ECONOMIST, *supra* note [ ].

[135] BLACKROCK, ANNUAL REPORT 2015, 2-3; BLACKROCK, ANNUAL REPORT 2011, 10-11. BlackRock notes that growth in the value of assets under management can be ascribed to inflows of news assets, growth in the value of securities already held as well as, *inter alia*, acquisitions.

[136] BLACKROCK, ANNUAL REPORT 2015, 2-3. Around $1.25 trillion of AUM is invested in fixed income assets. See also, ECONOMIST, BLACKROCK, THE MONOLITH AND THE MARKETS, Dec. 13, 2013.

[137] THE NORTHERN TRUST, ASSET MANAGEMENT RANKING HIGHLIGHTS (2015), https://www.northerntrust.com/documents/white-papers/asset-management/rankings-investmgr.pdf; T. ROWE PRICE, https://www3.troweprice.com/usis/corporate/en/about.html.

[138] ECONOMIST, *supra* note [ ].

[139] Elhauge, *supra* note [ ], 1268-1269. For an early discussion, David Gilo, *The Anti-Competitive Effects of Passive Investment*, 99 MICH. L. REV. 1 (2000) (noting the anticompetitive costs of passive investors across leading companies).

antitrust policy, he powerfully critiques the pernicious, anti-competitive impact of this "horizontal shareholding" on the quality and prices of services offered by U.S. companies.[140]

In this context, it should be unsurprising that the largest asset managers – custodians of the deepest pools of capital in the global economy – should invest within the banking industry. BlackRock and others invest across the spectrum of industries – technology, pharmaceuticals, transportation and infrastructure – creating a diverse portfolio of holdings across their fund families.[141] Why should banking and financial services, in particular, be excluded from this list? Indeed, if asset managers offer funds that simply track an index, like the S&P 100, then large banking firms cannot be easily left out of the portfolio. And if finance is profit-generating, failing to take advantage of such investments might even be viewed as breaking a promise to clients that pay fees to professional managers to actively choose lucrative stocks.

As I set out below, the results of bank holding ownership data from proxy statements for the years 2011 and 2016, points an increasing concentration of the top asset managers in the banking industry. In 2015/6, across the 25 publically traded U.S. bank holding companies designated as sufficiently large and important as to warrant regular stress-testing by the Fed, 22 out out of the 25 firms included both Vanguard and BlackRock as owners of more than 5% of common stock. State Street Global featured as a large shareholder (more than 5% in common stock) in eight firms; Fidelity in seven and T. Rowe in four bank holding companies. In all, BlackRock constituted the most prolific large shareholder, featuring in 23 of the 25 banks studied, with Vanguard close behind in 22 banks.

This dominant presence in bank equity, however, has not been a constant feature in the industry. Since 2010/2011, these five big asset managers have increased their percentage ownership of bank equity. Surveying 24 firms in the proxy statements 2011,[142] only 10 bank holding companies listed BlackRock as a large shareholder; seven included Fidelity; State Street and Vanguard appeared as block shareholders in only one bank each. Interestingly, in contrast to bank equity bases in 2015/6, proxy statements from 2011 revealed several leading bank holding companies, such as Bank of America or PNC Financial, as having no large blockholders at all. In 2015/6, both banks had three large blockholders each, including both Vanguard and BlackRock.

[140] *See sources cited supra* note [ ].

[141] ECONOMIST, BLACKROCK, THE MONOLITH AND THE MARKETS, Dec. 13, 2013, Table.

[142] Citizens Financial, featured in the 2016 list, was a wholly-owned subsidiary of the Royal Bank of Scotland (UK) until 2015. See sources cited *supra* note [ ].

The reasons driving this increase in the higher equity holdings of asset management firms in bank holding companies in 2015/6 are no doubt complex and merit empirical study in their own right. For example, it is possible that the fund management industry may have undergone consolidation in these years, with the largest management companies growing their share of the market by acquiring smaller players (and their stakes). I do not make any claim here as to any particular explanatory or causal account to elaborate on the underpinnings of this trend.

Still, it is clear that these five big asset managers – and the funds they represent – constitute critical providers of equity capital to the biggest, most systemically salient U.S. banks in today's banking industry. This leaves a small cohort of companies managing the funds that hold the residual risk (as equity holders) in the biggest, most important providers of financial services in the economy. Perhaps more importantly, as key owners of bank holding companies, they also possess enormous voting and governance power to exercise more routine control of financial firms.

Brief overview of governance trends in asset management: The institutionalization of capital markets raises questions about how blockholders exercise the governance power acquired through their equity interest. As Professors Gilson and Gordon write, the preeminence of blockholders in the modern American corporation has diminished the descriptive power of the Berle-Means public company and its usual governance deficits. As Berle-Means famously observed, the Anglo-American corporation is characterized by a dispersed base of shareholders and a resulting agency conflict between managers and the shareholder-owners on whose behalf they run the company.[143] By this account, a fragmented group of shareholders is poorly motivated to exercise oversight, leaving managers able to extract rents from their position.[144]

Gilson and Gordon point to a new dynamic that now overlays the conflicted relationship between shareholders and managers. Mutual funds and other investment funds constitute the major investors in public companies. As intermediaries for a vast array of savers, large mutual and other funds in corporate governance import a new, more complex interplay of conflicts. The shareholder-manager conflict is still present. In addition, however, Gilson and Gordon also highlight tension between mutual fund

[143] Ronald J. Gilson & Jeffrey N. Gordon, *The Agency Costs of Agency Capitalism,* 113 COLUM. L. REV. 863, 874 (2013). ADOLF A. BERLE & GARDINER C. MEANS, THE MODERN CORPORATION AND PRIVATE PROPERTY 40–75, 110-115 (1967); John C. Coffee, Jr., *The Rise of Dispersed Ownership: The Roles of Law and the State in the Separation of Ownership and Control*, 111 YALE L. J. 1 (2001) (examining the interaction between corporate governance and the quality of capital markets). On greater concentration in capital markets and a survey of the implications for the Berle-Means model of corporate ownership, see also, Ronald J. Gilson, *Controlling Shareholders and Corporate Governance: Complicating the Comparative Taxonomy*, 119 HARV. L. REV. 1641 (2006)

[144] BERLE & MEANS, *supra* note [ ], 110-115.

managers and their savers. In other words, managers possess limited incentives to agitate on behalf of their savers to exercise sound and active governance of the companies in which saver-wealth has been invested.[145]

At first glance, this dynamic seems counter-intuitive. Fund providers – by dint of their sheer size and the capital they provide – possess enormous power to agitate for positive governance outcomes and to reduce the agency conflict between shareholders and managers. Rather than face an uninformed grouping of easily-manipulated dispersed investors, managers must now contend with expert, experienced and well-resourced fund providers far less vulnerable to managerial opportunism and rent-seeking. Further, fund managers like Vanguard and BlackRock possess real legal clout. Even though individual funds within a "fund family" might each own a small portion of the equity in a company, the exercise of voting rights usually occurs at the level of the fund family as a singular firm. That is, individual fund mangers deploy their voting power jointly as one fund, rather than as a collection of smaller funds, such that they all vote the same way on governance proposals.[146]

Scholars have devoted considerable attention to better understanding the governance practices of mutual and savings funds and whether these contribute to growing corporate value. While this literature is too extensive to be discussed here, a few broad findings are worth noting. First, though the evidence should point to a highly motivated and effective group of active investors, it has tended instead to be much more mixed and equivocal in its conclusions. To some degree, this makes sense. Blockholders can agitate for change. But they can also exit their investments. The option to cash out and liquidate their holdings in case of dissatisfaction offers a ready exit that acts as a brake on enthusiastic engagement in governance. Where interventions might require effort, expense and time, exercising the option to sell one's shares and exit can seem like a more efficient use of fund capital.[147]

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[145] Gilson & Gordon, *supra* note [ ]. On the separation between funds and managers that might give rise to the conflict, Morley, *supra* note [ ].

[146] Elhauge, *supra* note [ ], 1268; Azar, Schmalz & Tecu, supra note[ ], 34-35. Angela Morgan et al., *Mutual Funds as Monitors: Evidence from Mutual Fund Voting*, 17 J. CORP. FIN. 914 (2011) (noting that, on management-sponsored proposals, individual firms are likely to vote the same way within the fund family 97.6% of the time; on shareholder-sponsored proposals, there may be greater deviation between funds within the same family. The authors find a greater overall divergence in co-ordination between funds in the same family than other studies); Burton Rothberg & Steven Lilien, *Mutual Funds and Proxy Voting: New Evidence on Corporate Governance*, 1 J. BUS. TECH. L. 157 (2007) (noting an almost 98% commonality in fund votes between fund families).

[147] Amar Bhide, *The Hidden Costs of Stock Market Liquidity*, 34 J. FIN. ECON. 31 (1991) (noting the option of "exit" as a check on active governance by mutual funds); John C. Coffee, *Liquidity versus Control: The Institutional Investor as Corporate Monitor*, 91 COLUM. L. REV. 1277 (1991) (monitoring by institutions is diminished where high liquidity enables exit); On the "Wall Street Walk," see, Anat Admati & Paul Pfleiderer, *The "Wall Street Walk" and Shareholder Activism: Exit as Form of Voice*, REV. FIN. STUD. But see, Pierre Colin-DuFresne & Vyacheslav Fos, *Moral Hazard, Informed Trading and Stock*

Perhaps unsurprisingly, scholars have noted a strategic passivity in how mutual funds utilize their resources for governance.[148] Historically, they have tended to not to play an active role in corporate oversight. With the costs of agitation, increasing legal complexity as well as diversification across their portfolios – limiting the gains from an intervention – mutual funds have widely been seen as playing a backseat role in governance.[149]

Still, this apparent disengagement, however, appears to be more nuanced than simple passiveness in all cases. Notably, in one large study of mutual fund interventions, scholars reported that mutual funds generally supported propositions seen as enhancing shareholder wealth, voting on board, compensation, and "key" corporate governance measures. Their voting can be influential. Shareholder proposals achieve greater success when supported by mutual fund affirmation.[150] Intriguingly, one recent study pointed to the influential role of "voice" in corporate governance by institutional investors like mutual funds. Rather than engage in public acts of activism – such as voting and visible agitation – institutions may instead engage in backstage interventions. That is, rather than making open displays of their activity, funds may use their power and knowledge to make changes through private engagement with management.[151]

These areas of greater activism notwithstanding, the picture of large fund managers as highly engaged investors appears much less emphatic than might be assumed given their size and preeminence. Gordon and Gilson's agency costs might provide one explanation as to why. In particular, they note, mutual funds have little incentive to diligent, active agitators in corporate governance – indeed, rationally, they have grounds to be apathetic. For one, they earn their management fees largely regardless of outcome. And unless they are also invested in their own funds, they do not gain when the funds' investments rise in value; nor do

Prices, Working Paper (2014) (suggesting that liquidity enables the formation of blocks of shareholders and thus encourages corporate governance interventions). The decision about "exit" and "voice" comes in decision-making comes from the seminal work of Albert O. Hirschman, ALBERT O. HIRSCHMAN, EXIT, VOICE, AND LOYALTY (1970).

[148] For example, some have observed a reliance on advisory firms that provide recommendations to institutional shareholders about how to vote. Proxy firms like Institutional Shareholder Services (ISS), for example, advise shareholders on how best to vote on proposals. Stephen Choi, Jill Fisch & Marcel Kahan, *The Power of Proxy Advisors: Myth or Reality?* 59 EMORY L. J. 869 (2010); James Cotter, Alan Palmiter & Randall Thomas, *ISS Recommendations and Mutual Fund Voting on Proxy Proposals*, 55 VILL. L. REV. 1, 2-3 (2010)("We find that mutual funds tend to vote in line with ISS recommendations across the board…mutual funds vote consistently with ISS recommendations more often than do all shareholders.").

[149] Cotter et al., *supra* note [ ], 9-12 (noting that higher legal compliance costs as well as more cynical incentives to curry favor with employer thrifts may have motivated the historically passive governance role played by mutual funds).

[150] Morgan et al., *supra* note [ ].

[151] Joseph A. McCahery et al., *Behind the Scenes: The Corporate Governance Preferences of Institutional Investors*, Working Paper (2015).

they bear the losses. Only investors in these funds reap the rewards if the stocks perform well. They also absorb the costs when allocation decisions go wrong. Put simply, fund managers lack sufficient skin in the game to behave in the manner of highly engaged, activist investors – benefiting when more aggressive investors like hedge funds take a lead in monitoring and moving for interventions.[152]

As discussed in the following Part, the behavior of asset managers in corporate governance has assumed enormous significance for financial markets as they gain dominance as blockholders at major U.S. banks. As shown in the survey results below, BlackRock, Vanguard, State Street, Fidelity and T. Rowe Price hold large blocks of equity in banking firms in 2015, increasing their involvement in this industry over the last five years.

B. Bank Equity Investors: Survey Results

This Table sets out the percentage ownership interests of shareholders with over 5% of equity in publically traded U.S. bank holding companies subject to the Fed's stress tests for systemically important banks. The information here is taken from the Proxy Statements for years 2016 (Table A) and for 2011 (Table B) for each of these companies. For simplicity, I include information on the five asset managers that appear as blockholders for more than four bank holding companies. It should be noted that investment firms like Berkshire Hathaway also hold a number of important investments (e.g. in Amex, Bank of America and Wells Fargo). Further, numerous asset managers also hold block stakes in U.S. banks but less frequently than those included in Table A. For completeness, in Appendix A to this Article, I set out a full list of all the current blockholders in U.S. banks for years 2015/6 and 2010/11.

Table A – Ownership Data on Large Blockholders from 2016 Proxy Statements

Bank Holding Company	% BlackRock	% Vanguard	% Fidelity (FMR LLC)	% State Street	% T. Rowe Price
Ally Financial					
Amex					

[152] Gilson & Gordon, *supra* note [ ].

Bank of America	5.7	5.7			
Bank of NY Mellon	5.90	5.49			5.20
BB&T	5.4	5.73			
Capital One	6.12	5.68	5.23		
Citigroup	6.8	5.5			
Citizens Financial	6.14	6.65			
Comerica	5.7	8.3	7.70		
Discover	7.6	5.88			
Fifth Third Bank	5.8	5.9		5.5	
Goldman Sachs	6.37	5.22		5.23	
Huntingdon Bank	5.80	8.96	7.18	6.22	
JP Morgan	6.4	5.9			
KeyCorp	8.87	8.7		5.93	
M&T Group	6.20	7.94	6.14		
Morgan Stanley	5.30			7.10	6.70
Northern Trust	5.50	5.40			6.30
PNC Financial	5.10	6.00			
Regions Bank	7.10	8.44	8.95	5.70	
State Street	5.10	5.40			7.10
Sun Trust	11.07	5.62	5.99	4.99	
US Bancorp	6.55	5.30	5.09		
Wells Fargo	5.60	5.40			
Zions Bank	5.10	8.22		6.10	

Table B – Ownership Data on Large Blockholders from 2011 Proxy Statements

Bank Holding Company	% BlackRock	% Vanguard	% Fidelity (FMR	% State Street	% T. Rowe Price

			LLC)		
Ally Financial (**N/A Ally became a public company in 2014**)					
Amex					
Bank of America **No Blockholders**					
Bank of NY Mellon	5.16				
BB&T **No Blockholders**					
Capital One	6.25				
Citigroup **No Blockholders**					
Citizens Financial **N/A –fully-owned subsidiary of the U.K.'s Royal Bank of Scotland**					
Comerica	5.58		9.166		
Discover	6.32	5.12	9.87		
Fifth Third Bank **No Blockholders**					
Goldman					

Sachs					
Huntingdon Bank	6.41		13.998		
JP Morgan	5.52				
KeyCorp	7.4		5.4		
M&T Group					
Morgan Stanley	5.44			10.59	
Northern Trust					
PNC Financial **No Blockholders**					
Regions Bank			8.666		
State Street					
Sun Trust	5.29		6.63		
US Bancorp	5.14				
Wells Fargo					
Zions Bank			9.41		

III. COMMON OWNERSHIP AND CORPORATE GOVERNANCE

This Part examines the implications of common ownership for banking and financial regulation. While asset managers constitute major shareholders in everyday companies and across sectors, banking presents a unique set of risks. Unlike airline or technology companies, banking relies on leverage for the very fact of its operation. Critically, the maturity mismatch underlying banking and shadow banking institutions – where short-term deposit liabilities fund longer-term loans – create a systemic risk of runs, insufficient cash-on-hand and fire-sales. Post-Crisis regulation mandates banks to build thicker reserves of common equity to buffer against these losses and to prevent crises from spreading into the economy. As shown in this Article, this equity is supplied, heavily, by a small cohort of asset managers whose funds are invested across the largest and most systemic U.S. bank holding companies today.

This Part explores the implications common ownership in banking from two standpoints. First, from the *ex ante* perspective, the governance

practices of asset managers have taken on enormous significance in controlling and managing financial risks. As detailed in Part II, large fund managers have historically assumed a passive posture in corporate life. By many measures, the banking industry presents an even greater challenge. Information opacity can be high. And the temptation to engage in, or at least tolerate, debt-driven profit-seeking is compelling.[153]

The picture is not all bleak, however. Common owners may be able to reduce their private costs of governance for banks. Particularly for BlackRock and Vanguard, invested across a number of banks, costs may be lowered if asset managers can gain information about and supervise across a cross-section of firms.[154] Further, intervention at a single banking firm may be beneficial if desirable reforms can be similarly adopted across others. The stakes are, of course, high. From the *ex post* perspective, the fact of a small number of asset managers holding the residual default risk at top banking firms tests the post-2008 firewall separating banks from the real economy. Owing to the involvement of asset managers in bank equity, deterioration in bank quality directly risks the value of household and corporate savings. If financial losses may be too deeply felt within ordinary homes and businesses, regulators will have to think even harder before letting banks fail.

A. Implications for Corporate Governance

Scholars are increasingly recognizing the significance of corporate governance in financial regulation.[155] But governance is expensive and its outcomes uncertain. Not only must shareholders deploy resources on research, advisors and action, but their hard work may fail to yield results

[153] Richard Squire, *Shareholder Opportunism in a World of Risky Debt*, 123 HARV. L. REV. 1151, 1182-1185 (2010) (arguing that shareholders have incentives to take correlated risks where their interests are likely to get wiped out and where they can make high gains from debt-driven upside); See also, Richard Squire, *Strategic Liability in the Corporate Group*, 78 U. CHI. L. REV. 605, 608-620 (2011). On opportunistic contracting by shareholders to avoid the consequences of bankruptcy, Anthony J. Casey, *The New Corporate Web*, 124 YALE L. J. 1280 (2014) (on the automatic stay).

[154] Certainly, antitrust scholars may be uncomfortable with greater surveillance and control by common owners across multiple competing firms. Further, there are also concerns from the securities law perspective if information from one firm is used to trade in the securities of another.

[155] See notably, Steven L. Schwarcz, *Rethinking Corporate Governance for a Bondholder Financed, Systemically Risky World*, WM. MARY. L. REV. (*forthcoming*) (arguing for a greater duty to bondholders in financial institutions); Steven L. Schwarcz, *Regulating Corporate Governance in the Public Interest: The Case of Systemic Risk*, Keynote Address, National Business Law Scholars Conference (NBLSC), The University of Chicago Law School June 23, 2016; Steven L. Schwarcz, *Too Big to Fool: Moral Hazard, Bailouts, and Corporate Responsibility*, Working Paper (2016). See also, David Min, *Re-aligning Bank Governance*, Working Paper (on file with the author).

or may generate returns only slowly.[156] As Gilson and Gordon write, the costs and uncertainties of monitoring and agitation may breed a rational apathy on the part of institutional intermediaries like mutual funds – where skin in the game on the part of fund managers may be lacking. Others like activist hedge funds or creditors may step into the breach.[157] But in the absence of strong governance, corporate managers will enjoy slack to take risks, chase private benefits at company expense and misallocate capital.

1. High Costs of Governance

Owing to their capital structure and public role, banks present a more complex set of costs and incentives for shareholders seeking to engage in governance, deepening yet further the risk of investor passivity.

Decision Costs: For a start, the basic transaction costs of shareholder governance trend high for banks and financial institutions. As Professors Mehran and Molineux point out, a dissection of these costs must begin with a more fundamental inquiry facing those that seek to govern a large and complex financial institution: namely, what does a well-governed financial firm look like? By most accounts, banks cannot simply maximize shareholder value, as the standard corporate law treatise might suggest. To do so, would cause bank managers to place an unduly high value on risk-taking and maximizing credit for shareholder returns. As seen in the 2008 Crisis, the price tag for such risk-taking can extend into the trillions of dollars, highlighting misalignments between shareholder and public interests.[158] At the same time, a purely narrow, risk-shedding view of private banks also fails to fully capture the multiplicity of functions that modern financial firms are expected to perform. Extending the supply of credit, advising, making a market in securities, developing providing payments and other market infrastructure, constitute mainstay functions in modern banking and financial markets.[159] Even if some consensus may be gleaned by the congressional mandate to

[156] Cotter et al., *supra* note [ ]; Choi et al., *supra* note [ ].

[157] Gilson & Gordon, *supra* note [ ]. On creditor governance, see for example, Douglas G. Baird & Robert K. Rasmussen, *Private Debt and the Missing Lever of Corporate Governance*, 154 U. PA. L. REV. 1209 (2006).

[158] Hamid Mehran & Lindsey Mollineux, *Corporate Governance of Financial Institutions*, Federal Reserve Bank of New York Staff Reports, no. 539, 11-14 (2012).

[159] For an explication of narrow banks, Levitin, *supra* note [ ]; See also, *Morgan P. Ricks, Safety First? The Deceptive Allure of Full Reserve Banking*, 83 U. CHI. L. REV. 357 (2016) (noting the challenges for narrow banking for fiscal management and monetary policy); Mehran & Mollineux, *supra* note [ ].

end "too big to fail" or to reduce future bailouts under Dodd-Frank, the meaning of these objectives remains notoriously unclear and debatable.[160]

Within these recognized internal tensions in financial regulation, institutional shareholders can face challenges in conceiving of and implementing governance ideas. Given competing conceptions of what constitutes the proper balance between profit-seeking and controlling externalities, shareholders can disagree on the right courses of action to take. To the extent that there is disagreement and divergence between institutional shareholders, co-ordination costs can increase and so too the threshold at which an engaged actor is willing to intervene. That is, if the costs start to mount and the pay-offs erode in consequence, the motivation to remain a rationally apathetic investor becomes more compelling. Indeed, institutional shareholders – like mutual funds – routinely disagree with one another (and, occasionally, within the fund families themselves) in everyday, non-banking contexts.[161] To take just one study of 24 of the largest mutual funds, the authors found agreement among them on certain key issues, but divergence on others. While these large fund families agreed on themes like opposition to antitakeover strategies, greater variation existed on other topics such as compensation and the degree of deference to be accorded to management.[162] These more "ordinary" corporate law controversies continue to affect the usual operations of the banking company. However, added to their resolution are considerations about how they might impact the riskiness of the banking institution and the externalities it generates for the financial system. For instance, the issue of executive compensation for bankers exemplifies the complex layers of decision-making at the intersection of corporate governance and financial regulation. Following the Crisis, policymakers fingered lucrative pay packets as a contributing cause of the risk-taking and problem

[160] *See for example*, Ben S. Bernanke, *Ending "Too Big to Fail:" What's the Right Approach?* Brookings Research Paper, May 13, 2016 https://www.brookings.edu/blog/ben-bernanke/2016/05/13/ending-too-big-to-fail-whats-the-right-approach/; *Neel Kashkari, Lessons from the Crisis: Ending Too Big to Fail*, February 16, 2016 (advocating for a greater focus on breaking up large banks); HAL SCOTT, CONNECTEDNESS AND CONTAGION: PROTECTING THE FINANCIAL SYSTEM FROM PANICS (2016) (noting the importance of interconnectedness rather than "bigness" in thinking about systemic risks).

[161] On disagreement between fund families see, Morgan, *supra* note [ ].

[162] Burton Rothberg & Steven Lilien, *Mutual Funds and Proxy Voting: New evidence on Corporate Governance*, Working Paper (2006) (this paper noted large amount of consensus within fund families that tended to vote their proxies as a block. However, it also noted variations between funds as to deference to management. In this study, for example, the authors noted that the five largest funds tended to vote against management 17% of the time on average – the highest being Vanguard (29%) and the lowest being T. Rowe Price (8%). For a literature review of the practices of mutual fund voting patterns, see for example, Morgan, *supra* note [ ].

innovations that caused the collapse.[163] In taking these lessons into account post-2008, shareholders must now examine the merits of compensation packages from the conventional corporate law lens, as ever. But, in addition, this scrutiny includes greater deliberation about how internal policies affect the bank's behavior as a risk-agent in the market.[164] Still, putting this mandate into practice is not easy. What specific kinds of risk-taking should be rewarded and also punished? How should pay packets be structured to serve an optimal balance between risk-taking and safeguarding markets? Ultimately, this inquiry (and others) distills down to deeply contentious questions about what banks can and should do. Given these more fundamental questions remain unanswered and subject to debate, decision costs for bank corporate governance are likely to be high.

Information Costs: High information costs permeate the exercise of bank corporate governance, deepening the challenges faced by institutional investors and adding to the decision costs described above. Large banking and financial institutions present especially steep knowledge gaps for those seeking to exert control levers.

First, monitors must wrestle with informational complexity inherent to the organizational structure of financial institutions as well their activities. That large and complex firms defy a clear understanding of their workings has become something of a truism after the Crisis.[165] Organizationally, brand-name financial and bank holding companies comprise sprawling networks of domestic and international subsidiaries, affiliates and branches. When Lehman failed in 2008, its collapse implicated 209 subsidiaries in 21 countries that were party to 900,000 derivatives contracts and subject to $1.2 trillion in creditor claims.[166] Regulatory efforts in its wake have sought to simplify organizational structures. For example, large banks must now provide regulators with a self-styled "living will," designed to provide a roadmap through a simulated bankruptcy of the firm. Such measures have certainly forced a reckoning with the costs of organizational complexity. In its living will,

[163] Board of Governors of the Federal Reserve System, Incentive Compensation Practices: A Report on the Horizontal Review of Practices at Large Banking Organizations, October 2011, https://www.federalreserve.gov/publications/other-reports/incentive-compensation-report-201110.htm.

[164] *See for example*, Lucian A. Bebchuk & Holger Spamann, *Regulating Bankers' Pay*, 98 GEO. L. J. 247 (2010) (noting the link between high pay at banks and risk-taking in the 2008 financial crisis); Randall S. Thomas et al., Dodd-Frank's Say on Pay: Will it Lead to a Greater Role for Shareholders in Corporate Governance? 97 CORNELL. L. REV. 1213 (2012) (discussing the implications of the Dodd-Frank Act's "say-on-pay" proposals for shareholder's input into executive compensation packages at banking institutions).

[165] Mehran & Mollineux, *supra* note [ ], 3-5.

[166] Michael J. Fleming & Asani Sarkar, *The Failure Resolution of Lehman Brothers*, Federal Reserve Bank of New York Policy Review, 175-176 (2014).

Bank of America claims 19 material entities pertinent to its resolution.[167] But problems remain. Some banks in 2016, notably Bank of New York Mellon and State Street, showcased continued shortcomings in dealing with issues relating to their organizational structures, pointing to ongoing risks of over-complexity.[168]

Beyond this, however, gaining insight into bank activities, business lines and asset can still prove a challenge despite concerted efforts in recent years to simplify organizational structures.[169] Even with the added regulatory load following Dodd-Frank, the U.S. largest banks have grown steadily in size, as measured by the value of their assets. Together, Bank of America, Citigroup, Wells Fargo, JP Morgan Chase and Goldman Sachs held around $8.6 trillion in assets in 2011, equivalent then to 56% of the U.S. economy and up by 43% from 2008.[170] In 2016, this figure had risen to approximately $9 trillion, slowing since 2011 certainly, but nevertheless evidencing bank balance sheets of enormous heft and likely opacity.[171]

It seems arguable, at least, that the activity and asset compositions of the largest U.S. banks pose high investigatory hurdles for shareholders seeking to exercise their monitoring and governance power. To understand a bank's default risk, capital base as well the overall viability of its business, shareholders confront an especially resource-intensive task necessitating specialization and access to information. This is not to suggest that large institutions are not a match for the task. In one early study, for example, Professor Flannery notes that investors were able to price equity securities of a banking firm about as well as they did for a non-banking one.[172] But it is undeniable that the difficulties of valuing opaque and often illiquid assets like loans make studying banks and their riskiness an especially difficult task. To take another (pre-Crisis) illustration specifically geared towards measuring default risk, the authors noted that ratings by Moody's and Standard and Poor's differed most from each other when examining banks and insurers. The higher the proportion of a bank's assets were focused on loans, the more these ratings

[167] The definition of material entities for the living wills resolution provision is narrower and may not have applied to the 209 subsidiaries that were subject to the Lehman Brothers bankruptcy in 2008. In other words, today's banks may have a greater number of subsidiaries whose operations are not considered sufficiently material to be included within the resolution plan. On the definition of material entity, FDIC, Rules and Regulations, Resolution Plans, § 381.2(j).

[168] Ryan Tracy, *Regulators Reject 'Living Wills' of Five Big U.S. Banks*, WALL ST. J., April 12, 2013.

[169] *See also*, the Volcker Rule that was designed to reduce proprietary trading by bank as well as to limit direct bank sponsoring of hedge funds. Dodd-Frank Act, Section 619; For discussion, see, Whitehead, *supra* note [ ].

[170] David J. Lynch, *Big Banks, Now Even Too Bigger to Fail*, BLOOMBERG, April 19, 2012.

[171] The figures for 2016 were taken from the living wills submitted by these five biggest banks to regulators as part of their compliance obligations under the Dodd-Frank Act.

[172] Mark J. Flannery & Joel Houston, *The Value of a Government Monitor for U.S. Banking Firms*, 31 J. MONEY, CREDIT AND BANKING 14 (1999).

diverged.[173] And as made abundantly clear during the Crisis, valuing credit risk is a tricky proposition with increasing financial innovation.[174]

Secondly, acquiring reserves of information is neither easy nor always cheap in matters concerning the safety of banking institutions.[175] In contrast to securities regulation, that hews tightly to a regulatory model that emphasizes disclosure and transparency, banking has traditionally – and for good reason – favored a more circumspect approach.

As a helping hand to investors seeking out information on public companies, securities rules establish a detailed regime for ensuring that markets receive a regular flow of materially important information.[176] With companies themselves required to reveal this information, investors do not have to taken on the costs of research or of negotiating for access to key corporate data. Through this mechanism, investors freely receive a regular flow of financial statements, audited accounts, a narrative on management, corporate structure, risk factors and prospective plans.[177]

Banks are different – facing the perennial risk that any sort of bad news might compel depositors and short-term creditors to withdraw their funds and leave it struggling in a position of needing taxpayer assistance. If bank holding companies are publically traded, they must supply the same flow of corporate data to the market like everyone else and be subject to the market discipline that this disclosure implies. However, key bank data can often be held back from the public domain. Particularly when information develops out of bank supervisory assessments like stress tests, its dissemination might trigger the very crisis that regulators are working to avert. While this approach is gradually changing – with more information being made available by regulators (e.g. some stress test results) – public policy has traditionally dictated that fuller data about the inner healthfulness of banks be kept deliberately veiled.[178]

These high information costs can dampen the incentives of institutions to exercise tight, exacting governance. Where acquiring knowledge on the deeper workings of banking institutions is likely to be

[173] Donald Morgan, *Judging the Risks of Banks: What Makes Banks Opaque*, Federal Reserve Bank of New York Staff Report 98-04 (1998).

[174] *See for example*, Adam Ashcraft & Till Scheurmann, Understanding the Securitization of Sub-Prime Credit, Federal Reserve Bank of New York Staff Report 318 (2008).

[175] Mehran & Mollineux, *supra* note [ ].

[176] John C. Coffee, Jr., *Market Failure and the Economic Case for a Mandatory Disclosure System*, 70 VA. L. REV. 717, 720–35 (1984); Merritt B. Fox et al., *Law, Share Price Accuracy and Economic Performance: The New Evidence*, 102 MICH. L. REV. 331, 339–41 (2003); Zohar Goshen & Gideon Parchomovsky, *On Insider Trading, Markets, and "Negative" Property Rights in Information*, 87 VA. L. REV. 1229 (2001); On market efficiency, Eugene F. Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 J. FIN. 383 (1970) (the seminal article arguing that market prices capture available information in prices).

[177] Securities and Exchange Commission, Form-10-K, https://www.sec.gov/answers/form10k.htm.

[178] Mehran & Mollineux, *supra* note [ ].

expensive – as it almost certainly will be – investors will wish to have assurance of a payoff that is greater than what they invest. Further, investors will also need to spend money on executing intervention, raising further the threshold at which they might action their intelligence. Particularly for larger, more complex banks, presenting a mix of decision, implementation as well as information costs, rational apathy is likely to present a most efficient course of action even for well-resourced investors.

2. Investor Apathy as a Function of Bank Regulation

Gilson and Gordon posit that large asset managers – such as mutual fund providers – are rationally apathetic about corporate governance. Because they earn a fee for their management, they do not experience the full downside costs when the fund loses value; they also do not enjoy the gains when the fund makes money. Beyond fees, which may be higher if managers pursue active rather than passive management, asset managers can also gain when more savers give them business. However, without a real stake in the fate of their fund portfolios, managers may rationally be reticent in exercising diligent oversight.[179]

The design of bank regulation hardens this rational apathy. To stave off the threat of a damaging bank run as well as to prevent its contagion from spreading to other parts of the economy, banks benefit from a number of support mechanisms: (i) deposit insurance; (ii) emergency credit from the Fed and potential implicit guarantees of assistance; and (iii) extensive oversight at the state and federal level. While such assistance can come at high taxpayer expense, its gains are evidenced by the assurance of a safer, less panic-prone financial system.

Commentators, however, have recognized the potential of such state guarantees to distort the private incentives of market participants to be diligent in how they transact with a bank. Management may take higher risks with borrowed (depositor) capital, knowing that the state will guarantee these savings.[180] Because banks enjoy an implicit guarantee from the Fed as well as deposit protection, they may charge less for the credit they extend; and depositors may entrust their cash to riskier banks as they will be covered by insurance.[181]

[179] Gilson & Gordon, *supra* note [ ].

[180] MICHAEL BARR ET AL., FINANCIAL REGULATION: LAW AND POLICY (2016), 239-250; Diamond & Dyvbig, *supra* note [ ].

[181] Diamond & Dyvbig, *supra* note [ ].

Importantly, from the standpoint of governance, this interplay of distorted incentives can make institutional shareholders less interested in exercising governance. For a start, banks face oversight from a network of public regulators, tasked with ensuring their safety and soundness. With the taxpayer investing in bank surveillance – indeed, to guard against the residual interest of shareholders being imperiled through bank failure – it makes little sense for shareholders to invest in further monitoring and intervention. With less complete reserves of information on opaque and complex institutions, relying on public oversight offers a more efficient and more effective solution to the problem of bank supervision.

Indeed, the provision of public oversight as well as the availability of various sources of support protects shareholder interests from being eroded by a sudden bank collapse. A liquidity crunch – that might otherwise reduce have reduced shareholder capital to naught – might yet be salvaged by emergency assistance from the Federal Reserve. With cash available to pay off immediate short-term obligations, the bank gains a reprieve to recover its value and to deal with panic. Further, such injections of liquidity can help a bank to keep its assets on the balance sheet rather than to sell them in an attempt to make up for the cash shortfall. With a stronger balance sheet – still able to offer means to generate future revenue – shareholders can feel more confident of retaining on-going value in their capital.

In other words, the provision of express and implicit state support through deposit insurance, emergency credit as well as an extensive supervisory apparatus can further limit the interest of investors to govern diligently. Added to the high information, co-ordination and decision-costs, this leaves investors with little reason to pursue a policy of strict private oversight and diligence. Indeed, with banks tightly regulated and key corporate governance decisions subject to a riskiness health-check, the scope of investor action is further curtailed by the possibility of regulatory sanction. Ideas about mergers, the design of corporate structure or possible areas of future business are necessarily subject to sign-off by bank regulators seeking to maintain safety and soundness.[182] Even if investors are willing to intervene, they face the chance that their actions might receive scrutiny from public regulators.

The issue of rational apathy, then, may be pervasive for bank institutional investors at largest banks where the scale of information

[182] Board of Governors of the Federal Reserve System. Concentration Limits on Large Financial Companies, 12 CFR Part 251 (Nov. 14. 2014) (this rule limits banks to merge that might create a single bank whose liabilities would be 10% or more of all U.S. liabilities). On activity restrictions, see, Omarova, *supra* note [ ]; On living wills requiring sharper focus on simplifying corporate structure, see discussion *supra* Part [ ].

deficits, co-ordination problems and transactional difficulties are likely to be most daunting. Further, the biggest banks with the highest value of assets are also likely to be sufficiently significant as to merit the greatest energy and assistance from the Federal Reserve – as well as stricter supervision from regulators in normal times. To the extent that investors may wish to engage in governance, it would make sense to avoid the largest and most complex banks, particularly if institutional fund managers harbor weak private incentives for aggressive action.

Understanding of shareholder activism in banking remains fairly limited. But emerging evidence is telling. In the one study to have considered all documented instances of shareholder action in banking between 1994 and 2010, a few key findings emerge. Most importantly, bank holding companies do experience activism and intervention by shareholders – 334 banks experienced actions during the sample period. But not all banks were targeted equally. Rather, activists focused their attention on smaller banks, with high agency costs, suffering from low firm value, a lighter geographical footprint and showcasing growth potential. Activists largely sought to engage management and to suggest strategic changes (altering business lines, improvements in operational efficiency etc.) as well as to encourage banks to declare dividends.[183]

Anecdotally, instances of shareholder activism at the largest banks have tended to be much less frequent but growing in number. For the most part, the charge has been being led by a cohort of professional activist hedge funds, such as Trian Fund Management (that targeted State Street and Bank of New York Mellon) or Greenlight (that targeted Citizens Financial and CIT Corp). Asset managers like Vanguard and Fidelity - rather than spearheading from the front – have tended to follow the hedge funds that agitate with their own capital on the line.[184]

As Gilson and Gordon posit, the tendency for asset managers to be rationally apathetic but ready to free ride on the efforts of more activist hedge funds seems to find some support in the few cases of activism occurring at the largest banks. While the instances of such agitation remain few, their success at the most systemically significant firms suggests that the effects might extend across the financial system.

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[183] Raluca A. Roman, *Shareholder Activism in Banking*, The Federal Reserve Bank of Kansas City Research Working Paper RWP 15-09 (August 2015); The research on shareholder activism is extensive. See, for example, Alon Brav, Wei Jiang, Frank Partnoy & Randall Thomas, *Hedge Fund Activism, Corporate Governance, and Firm Performance*, 63 J. FIN. 1729, 1730 (2008) (showing the value-generative impact of hedge fund activists).

[184] Nathann Stovall, *Shareholder Activism Building in the Banking Industry*, Banking Exchange SNL Financial. Oct. 23, 2015; Tom Braithwaite, *U.S. Banks Can't Ignore Shareholder Activism*, FIN. TIMES, Oct. 29, 2012. In the case of State Street, for example, Trian tried to effect a change in management as well as to agitate for lower executive compensation and cost savings. For further discussion see *infra* Part [ ].

B. Common Ownership and Riskiness

The uniqueness of banks as well as the peculiarities of bank corporate governance raise questions about the place of common owners – BlackRock, Vanguard, Fidelity, State Street and T. Rowe Price – in financial regulation. Following the Crisis, the corporate governance of major firms has emerged as a critical aspect of any thinking around financial riskiness.[185] With common owners possessing vast economic and legal clout across the largest U.S. banks, their role necessarily assumes a systemic salience beyond that exercised by ordinary large investors in a non-financial industry. When seen against this backdrop, two observations are worth mentioning.

First, common ownership might foster incentives for these shareholders to encourage large-scale risk-taking. The conditions for such a pessimistic reading are ripe. For one, conventional theory suggests that shareholders are already motivated to be especially supportive of risk. As residual claimholders entitled to dividends upon a company's success and as the ultimate bearers of its default risk, shareholders can gain by encouraging a firm to take on riskier strategies. They win when a company performs profitably. If it loses, they are wiped out. Particularly, as a firm edges towards a collapse, these distortions can become sharper as shareholders and managers go for broke to seek out a big, saving win.[186] Indeed, the tendency to push for risk-fuelled profits may be more pronounced where the winnings can be made larger through leverage. Because banks can generally borrow relatively cheaply from the market, shareholders are well placed to push for greater risk-taking at the expense of a bank's creditors.[187] The gains can be bigger and creditor capital is placed at risk in the first instance. Indeed, if public regulators might step in with emergency liquidity, the fear of failure might diminish further. To the extent that banking firms might face low-profitability (perhaps owing to greater regulatory compliance costs or large sanctions penalties), the risk that shareholders push harder for gains is especially live.[188]

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[185] Douglas W. Diamond & Raghuram G. Rajan, *The Credit Crisis: Conjectures About Causes and Remedies*, NBER Working Paper No. w14739, 5-6 (2009).

[186] *See for example*, Squire, *supra* note [ ].

[187] Squire, *supra* note [ ].

[188] Natasha Sarin and Lawrence H. Summers, *Have Banks Gotten Safer*, Brookings Working Paper (Sept. 2016) (arguing that the franchise value of financial institutions has decreased since the pre-Crisis years).

From one perspective, common owners may be particularly susceptible to these incentives. The scope and scale of the gains on offer in banking are potentially vast. When invested across many or most of the biggest U.S. financial firms, access to credit, innovative financial engineering as well as international reach can permit high-dollar rewards to accrue and dividend declarations to be made. Moreover, the efforts needed to achieve these gains should be better borne by common owners. As blockholders with an enormous reserve of available capital for investment, common owners represent especially persuasive voices in the boardroom with experience and expertise to effect desired changes in governance. Through this lens, even though bank governance entails high expense, the pay-offs might seem tantalizing. Indeed, for shareholders like Vanguard and BlackRock, blockholders across 22 out of the 25 banks studied, the cost-benefit trade-off might well look like one worth pursuing. Rather than seeking out changes at every single one of their banks, it may be possible to encourage changes across many or most banks by taking action at one or two large institutions. With the possibility of a more system-wide impact across multiple firms as well as the chance that management might pursue pre-emptive changes before blockholders come calling, governance may provide real bang for the buck.

Nevertheless, this interpretation is strained when seen from the standpoint of the traditional investor apathy exhibited by mutual funds. In other words, without their own private money on the line, funds have little incentive to push for outsize risk-taking and to encourage banks to generate profits beyond what might be minimally expected by fund-holders. Where mutual funds are passively managed – their wins and losses benchmarked to the performance of the market – the drive to exhaust governance for pushing risk becomes even less pronounced. Mutual fund providers like BlackRock, Vanguard and Fidelity gain when people and businesses save with them. On this basis, they might gain if their valuations increase. But given these gains are more indirect and in light of the historical bias against aggressive action, past practice would suggest that the incentives to go for broke seem dampened by the fact that common holders manage other people's money.

Still, and secondly, this rational passivity may still constitute a source of riskiness in large banking institutions. Given this apathy may be more acute in the case of banks, a failure to supervise can result in risks going unchecked or poorly internalized in the behavior of common blockholders. Particularly if regulators fail to spot the build-up of risk, investor passiveness by common owners can exacerbate the seriousness of failures in oversight to permit the growth of risks within the financial system. As amply evidenced by the Crisis, where strong bank profits failed

to signal that credit risks building within the system were undervalued and deeply toxic for bank balance sheets, gaps in regulator oversight were not effectively filled by other monitors. Importantly, with common blockholders a presence across all of the largest U.S. bank holding companies in 2016, the absence of meaningfully active investor oversight will be deeply and widely felt.

Passivity by large common investors like Vanguard and Fidelity can also constitute a source of risk where their apathy leads them to unquestioningly follow more aggressive, activist players seeking governance changes. As Gilson and Gordon describe, activism in corporate life tends to follow the lead of activist hedge funds that seek a return on their (own) money by suggesting changes to a target's governance practices. This comes with the benefit that apathetic institutional investors can simply go along with these more engaged actors without having to privately expend efforts and capital.[189] Activists can purchase a small stake in a bank and use this share to agitate for change – with the block institutional investors (e.g. Vanguard) motivated to go along by offering affirmation to a strong and vocal shareholder advocate. As briefly noted above, Trian Partners, for example – an activist – has agitated to change the governance practices of State Street and Bank of New York Mellon, large U.S. banks that specialize in the safekeeping of financial assets. Trian purchased a 1.2% share in State Street in 2011 (rising to 3.3% before being sold off in 2013) and a 2.5% stake in BNY Mellon in 2014 (worth $1.05 billion at the time of purchase).[190] In the case of State Street, Trian published a 40-page list of State's Streets alleged problems and pushed for steps for management to cut operating costs and increase revenue. For example, one of Trian's proposals suggested State Street spinning off its asset management arm – State Street Global Advisors – to take advantage of the revenue gains this sale might present. While this latter proposal fell by the wayside, State Street's share price did climb markedly and Trian sold at a profit in 2013.[191]

A lot of controversy surrounds the question of whether hedge fund activists are a benefit or burden to corporate governance.[192] It is not the aim of this Article to take any position on this issue. The point is simply that activist advances in banks can implicate concerns of financial risk and externalities even while their workings might suggest improvements at a

[189] Gilson & Gordon, *supra* note [ ].

[190] David Benoit & Saabira Chaudhuri, *Peltz's Trian Plants its Flag in BNY Mellon*, WALL ST. J., Jun. 30, 2014.

[191] Benoit & Chaudhuri, *supra* note [ ].

[192] Margaret Collins, *Peltz's Trian Sold State Street Shares in Third Quarter*, BLOOMBERG, Nov. 14, 2013.

firm. Where governance interventions may be misguided or fail to bear fruit, the effects might harm bank creditors, other firms as well as common blockholders (rather, their funds) whose portfolios lose value as bank health starts to deteriorate. For example, cost-cutting measures might involve shedding internal supervisory and compliance staff, increasing the workload on those left behind – or hiring less qualified individuals to fill the same positions. Spin-offs and sales may ultimately be systemically costly if an acquirer becomes overly unwieldy or takes on too much credit to pay for the purchase. Indeed, Professor Roman's study on shareholder activism in banking pointed to its potential to introduce riskiness into the financial system by creating pressure on management to produce higher shareholder returns – at a cost to the financial system as a whole.[193]

Passivity by common owners, then, may fail to catch instances of potentially damaging activism. Even though strategic passivity might follow the normal pattern of behavior for an institutional investor on Main Street, it can come with costs on Wall Street. Where the interests of an activist may be focused on a single firm for a determined horizon of time, that of Vanguard, Fidelity or BlackRock is broader and extends across the system of banks as a whole. While an activist agenda may be beneficial at one bank, its pursuit may result in an increase of risk at others, placing the longer-term value of their funds at risk of erosion.

C. Common Ownership and Risk Mitigation

On a number of measures, common owners in banking like Vanguard or BlackRock might in fact be equipped to exercise good governance. For a start, the usual costs of performing corporate governance in banking should be lower for those invested widely. Information costs – which are particularly high in banking given the opacity of loan assets and the challenges of valuing them – are a barrier for ordinary shareholders seeking to govern. But for blockholders in multiple banks, the costs of acquiring and analyzing information should fall. As critical providers of capital, blockholders can convincingly negotiate with management to garner better insights about how a bank is run (e.g. by seeking out a board seat). Beyond this, their efforts in privately acquiring knowledge about banks and the industry can pay-off in being applicable to the many firms where they are invested. Instead of investigating a single firm and its industry, a blockholder like Vanguard can apply insights about

[193] Roman, *supra* note [ ] (interestingly, Roman notes that the increased riskiness was not pronounced during a crisis – but rather ex ante in normal times).

the industry as a whole to better understand individual firms in which it invests. This greater cost efficiency in curing some of the informational deficits bank holders face give repeat blockholders a stronger reserve of insight from which to push informed governance ideas.

Indeed, by being able to cast an industry-wide eye across the financial market, blockholders provide a partial private fix to the concern that capital regulation is not sufficiently tailored to deal with system-wide risks. As Professor Acharya observes, capital reserves at individual banks may be too shallow to match the hit of a system-wide cascade of problems.[194] Similarly, Professor Scott points to the problem of market-wide interconnection between firms as an amplifying catalyst for the spread of contagion across financial markets.[195] And, indeed, as the Crisis made clear, financial firms showed themselves vulnerable to correlated risk-taking (e.g. all investing in real-estate referenced securities) that deepened the intensity of the hit as asset values fell simultaneously.[196] The current design of capital cushions takes some steps to deal with the problem of systemic risks, such as by imposing a special surcharge on the largest banks to give them an extra buffer of protection. How effectively these buffers will work, however, ultimately depends on the type, seriousness and correlative power of the risks in the system.

Common owners like Vanguard and BlackRock can arguably offer a wider, more "systemic" lens to better analyze the risks accumulating within financial markets writ large. As blockholders across nearly all the major banks, common owners possess information and clout. Most importantly, to the extent that systemic risks accumulate, their funds will lose value across multiple banks, such that there should be a strong business case for fund managers to invest in this research.

Finally, asset managers like Vanguard and BlackRock should harbor fewer problematic incentives to use their information, access and power in damaging ways. As discussed above, conventional theory holds that shareholders may be driven to encourage risk-taking as a way to generate higher revenues and reap personal dividends. Whereas ordinary shareholders might be expected to conform to such behavior, asset managers could show greater moderation. Just as rational apathy drives inaction, limited personal interests on the part of asset managers might also dis-incentivize excess zeal in pursuing profit at all costs. Further, asset

[194] Viral Acharya, *A Theory of Systemic Risk and Design of Prudential Bank Regulation*, Working Paper (2001).

[195] Scott, *supra* note [ ].

[196] Indeed, this problem of correlated risk-taking in finance is discussed in detail by Vanguard in Vanguard, *Dynamic correlations: The Implications for Portfolio Construction*, Vanguard (April 2012), http://www.vanguard.com/pdf/s130.pdf; Marko Kolanovic, *Rise of Cross-Asset Correlations*, JP Morgan (May 16, 2011), https://www.cboe.com/institutional/jpmcrossassetcorrelations.pdf.

managers – particularly large institutions like Vanguard or BlackRock – are likely to hold a diverse set of investments, such as the bonds that banks issue. This diversification should further temper and moderate the motivation of large asset managers to maintain a risk-seeking posture vis-à-vis banks. Such theorizing is necessarily speculative. And antitrust scholars highlight the possibility for potentially rent-seeking conduct facilitated by common ownership. Notwithstanding, in financial regulation, common blockholders may constitute a less risk-seeking monitor than conventional shareholders with their own money on the line.

[add summary]

IV. EXTENSIONS AND IMPLICATIONS

This Part surveys some concluding implications examining the rise of common ownership in financial regulation. With major blockholders – Blackrock, Vanguard, Fidelity, State Street Global and T. Rowe Price – holding enormous equity stakes in banking system, they have at once become the ultimate risk-bearers and entrusted overseers of the financial system. It is not clear whether this extensive entanglement between asset management and financial services was intended. As of 2011, the role of these major blockholders was – at least in terms of their percentage ownership of the big U.S. banks – much less than it is today. However, just as financial regulation has turned to equity in the wake of crisis, the identities of those who supply this equity appear to have been overlooked. This should provide room for pause. As surveyed below, perhaps without realizing, financial services reform in the wake of 2008 appears to have inadvertently deepened the linkages between ordinary savings and the fluctuations of the financial markets. In so doing, these thicker linkages create enormous reliance on the ability of asset managers to perform their duties of diligent vigilance and governance. And in case they fail, their status as vast repositories of U.S. (and global) wealth should foster reluctance in using new regulatory tools to wind-down problem banks.

A. Linking Finance and the Real Economy

The rise of asset managers as common owners at the largest U.S. banks builds thicker interconnections between finance and the real economy of homes and businesses. This outcome appears near antithetical to the avowed policy objectives of post-2008 that have sought on multiple

fronts to insulate the economy from the catastrophic real effects of bank failure. Under Dodd-Frank, banks must pay for risk-taking by keeping higher levels of equity capital, abide by activity restrictions under the Volcker Rule and not expect an easy bailout in case of trouble.[197] These measures should work – in theory – to reduce risk taking and prevent taxpayers from having to pay-off the creditors of a failing bank as a means of preventing runs and system-wide contagion. However, with asset managers playing a much stronger role as providers of equity capital to banks, it is at least debatable whether the aspirations of the law are now aligned with the reality of its implementation.

As argued in this Article, a central accomplishment of financial reform post-Crisis has been to force banks to capitalize their balance sheets with a much stronger focus on equity. With the U.S. implementation of Basel III fully underway, banks have responded by thickening equity cushions to reflect a higher demand for common tier 1 equity and the bank's size and footprint within the financial system.

As shown in the 2016 proxy statements for the major U.S. banks, this equity capital appears to be supplied to a system-wide degree by the major asset managers – BlackRock and Vanguard as well as Fidelity, State Street Global and T. Rowe Price. As providers of funds that constitute repositories for swath of American savings and wealth, pools of fund capital have, over the last 5 years or so, been invested to increasing degrees as common equity into the U.S. banking system. In so doing, the equity buffer designated by legislation as the necessary firewall against bank failure appears to be sourced from the funds that hold vast quantities of American household and corporate wealth. To the extent that some or more of these funds may be repositories for retirement or college savings, their deployment as the last layer to buffer financial risk creates a close tie between the economic future of Americans and the health of markets. And, with increasing portions of household financial assets invested in 401(k)s and IRAs, the exposure of individual homes and businesses to markets movement, including those to banking stock, may be hard to diversify.

That asset managers might invest heavily in bank stock should not be surprising – or perhaps even that worrying. Banks have needed capital ever since 2010. Asset managers like BlackRock constitute the largest private pools of available capital. Moreover, fund investments in bank stocks (e.g. as part of a portfolio investing in S&P 100 companies) are likely to be diversified across industries. Further, fund families may invest

[197] WHITE HOUSE, WALL STREET REFORM: THE DODD-FRANK ACT, https://www.whitehouse.gov/economy/middle-class/dodd-frank-wall-street-reform.

across a varying portfolio of assets and risk-types, boosting the ability of funds and their investors to withstand a shock in one or other industry.

This Article does not examine how funds like mutual funds might be subject to a run in response to a bank crisis when fund-holders demand their money back all at once. That is a topic for another paper. Taken broadly – and speculatively – however, there may still be reasons for caution in simply assuming that exposure to bank stocks poses a low risk for homes and businesses because of diversification.

Crucially, banks occupy an essential place in public life. As set out in Part I, this significance explains why banks are heavily regulated and why they benefit from subsidized borrowing, deposit insurance and emergency assistance. The degree of this dependence was most fully revealed by the federal response to the Crisis, an effort to stave off not just financial but also economic collapse. In other words, the centrality of banks means that their failure might negatively impact other industries and sectors beyond simply the bank itself. Interconnection with other financial firms explains on-going worry about systemic risk still being a live concern, notwithstanding steps taken by stronger capital rules or the Volcker Rule to simplify banks.[198] Outside of finance, even with reforms, bank collapses are likely to result in a more restricted flow of credit to companies and various sectors of the economy.[199] In other words, diversification may only go so far. A fund that is invested in a diversified portfolio of bank equity as well as others might expect to suffer a double blow. The value of its investments in bank equity will plunge – or perhaps even be wiped out as legislation envisions (on which, more below). But the value of its holdings in sectors dependent on bank services might also take a hit. As detailed in Part II, the mutual fund sector as a whole saw a flight to redeem in the months after the Crisis as savers sought to take their money out in response to heavy stock market losses.[200]

Moreover, it is questionable whether diversification by asset managers provides sufficient protection to overcome the exposure generated by increased holdings of bank stock at the largest U.S. banks. Since 2011, asset managers represent a greater ownership share at the largest U.S banks – Vanguard, for example, has grown from being a blockholder in just one bank in 2011 to being one at 22 banks in 2015/6. Even with diversification, then, fund portfolios might be susceptible to

[198] Acharya, *supra* note [ ]; Scott, *supra* note [ ].

[199] *See for* e*xample*, Hibiki Ichiue and Frederic Lambert, *Post-crisis International Banking: An Analysis with New Regulatory Survey Data*, IMF Working Paper 16/88 (2016) (noting the decline of lending into the real economy following the Financial Crisis).

[200] *See discussion infra* [ ].

losses where the impact of system-wide financial risks are likely to be heavily felt at those firms whose equity funds a number of financial firms.

B. Resolution and Bailouts

A key aim of post-Crisis financial reform lies in ending the problem of "too big to fail." That is, banks should be capable of being wound down without placing the entire financial system in peril. Key to this innovation are the newly thicker equity buffers at banks whose value can be called on to absorb losses, pay-off short-term creditors and to fund a new future iteration of the recovered bank.[201]

With Vanguard, BlackRock, Fidelity (and others) supplying an arguably significant share of the equity to fund a bank's resolution, the real-world feasibility of this design might reasonably be called into question. When viewed as representing the pooled wealth of a swath of homes and businesses, relying heavily on these funds to supply the resources needed for bank resolution might seem like a pyrrhic victory. Though the need for direct taxpayer support through a bailout is reduced on its face, bank resolution still remains heavily dependent on tapping into the wealth of ordinary homes and businesses. When these funds lose value, shareholders at mutual and pension funds may be first in line to take a hit. Where the loss to retirement or college accounts is extensive, the robustness of the firewall between financial markets and the real economy may be revealed as flimsy just when the need for its robustness is greatest.

The deepening interconnection between bank resolution and the equity supplied by the large asset managers raises doubt about whether bailouts are really a thing of the past. If a major bank failure might trigger a resolution process – raising fears for the equity of Fidelity or Vanguard being wiped out – should an orderly liquidation be triggered? On the one hand, moving forward with resolution offers a private solution to deal with the banking crisis. The asset managers that invested in equity should have known about the possibility of failure. Moreover, the capital structure might include shareholders other than institutional asset managers, including executives and insiders of the bank in trouble. Putting a liquidation process in motion represents a reasoned response to punish those whose recklessness or oversight failures may have caused the crisis.

Despite this logic, unless Vanguard, Fidelity, State Street Global, T. Rowe Price or BlackRock are themselves invested in their own funds,

[201] *See discussion supra* Part [ ].

the losses accrue primarily to those whose savings are represented by the funds that invested in the failing bank. The likes of State Street Global or BlackRock will probably face outflows, reputational damage and a likely deep loss to to their share price or brand value, the direct loss strikes those who have entrusted their savings to the funds invested in the bank. On this basis, those facing the most direct losses are blameless for the shaky condition of the bank. Indeed, savers have little means or no to vote on governance proposals, to investigate the individual securities in which their fund is invested and to control how their capital is deployed.

On this logic, then, relying on equity supplied by asset managers to resolve a failing bank can directly transmit the risk of financial collapses into the real economy. To the extent that the fuller economic impact of the of a bank resolution may be unpredictable, disorderly or likely to result in extensive macro-economic disruptions, regulators may prefer instead to craft a bailout solution. A bailout might help regulators to more specifically allocate the losses across the bank's capital structure. Or, it might help absorb these shocks to prevent their spread across the financial market and economy. Indeed, because saver wealth is heavily implicated in bank equity, regulators may face constraints in how freely they can dilute bank equity (e.g. to re-capitalize a bank through a new issue or to extend capital by taking common or other type of stock). That is, policymakers' hands may be hamstrung in their actions where there may be a high percentage of saver wealth at risk in bank institutions.

[something to link to the importance of corporate governance?]

V. CONCLUSION

Ooops.