forthcoming 80 LAW AND CONTEMPORARY PROBLEMS ISSUE NO. 1 (Law & Markets symposium issue 2016)

Changing Law to Address Changing Markets: A Consequence-Based Analysis[1]

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Abstract: When should financial market changes drive legal changes? The inquiry is important for many reasons, including that a normative framework could guide what is now a politically reactive lawmaking process. This essay hypothesizes that the extent to which financial market changes should drive legal changes should depend on consequences: consequences of the market failures resulting from financial market changes, and consequences of changing the law to attempt to correct those market failures. After showing why this consequence-based analysis goes beyond traditional cost-benefit analysis, the essay tests the hypothesis under the literature on financial change and also by applying it to two cases, first analyzing how the change in corporate bond markets from holding-bonds-to-maturity to bond-trading should drive changes in corporate governance law and then analyzing how that bond-market change should drive changes in damages law.

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I. INTRODUCTION AND NORMATIVE FRAMEWORK

This essay examines the causal relationship between changes in markets for financial securities (hereinafter, "financial markets") and resulting changes in law. It thus engages the first part—the law following, not leading—of a much broader legal inquiry: "The controversy between those who believe that law should essentially follow, not lead, . . . and those who believe that law should be a determined agent in the creation of new norms . . . ."[3] The essay does not purport to resolve that controversy, merely to examine when the law should "follow" changes in financial markets.

To that end, Subpart A next describes why it is important to have a normative framework for determining when financial market changes—by which this essay means material changes in the structure of, or the behavior of participants in, financial markets[4]—should drive legal changes. Subpart B hypothesizes such a normative framework. Subpart C then explains the methodology for testing that hypothesis. Thereafter, Parts II, III, and IV of the essay apply that methodology.

A. A Normative Framework is Important

Remarkably, no normative framework for determining when financial market changes should drive legal changes currently exists. For many reasons, such a framework

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[3] WOLFGANG FRIEDMAN, LAW IN A CHANGING SOCIETY 3 (1959) (describing that broader inquiry as "one of the recurrent themes of the history of legal thought").

[4] A change in the structure of a financial market can be illustrated by a securities market that has been limited to securities trading among institutional investors changing to one in which securities are permitted to be publicly traded (and thus able to be traded to any investors). *Cf. infra* notes 37-38 (discussing a consequence-based analysis of such a market change). A change in the behavior of participants in a financial market can be illustrated by the bond-market change discussed *infra* note 48 and accompanying text.

would be important. Especially in the context of legislative and regulatory lawmaking,[5] politics can distort that causal relationship, resulting in over-reactive, under-reactive, or otherwise inefficient legal responses.[6] These reactions can be illustrated by enactment of the so-called Volcker Rule in response to the 2008-09 financial crisis (the "financial crisis")[7] and also, in a broad sense, by the cycle of market deregulation during economic booms and subsequent re-regulation following economic busts.

The Volcker Rule had its genesis in a proposal by former Federal Reserve Board chairman Paul Volcker to limit banks from trading in securities for their own account, which had become widespread after the repeal of the Glass-Steagall Act.[8] Enacted into law as part of the Dodd-Frank Act, the Volcker Rule bars banking entities and some systemically important non-bank financial firms from "'engag[ing] in proprietary trading' or 'acquir[ing] or retain[ing] any equity, partnership, or other ownership interest in sponsor[ing] a hedge fund or private equity fund.'"[9] Politicians and other proponents of the Rule "argue that [this] proprietary trading had distracted banks from their fiduciary duties to clients, as well as from their core function of 'safe[ly] and sound[ly providing]

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[5] This essay focuses primarily, though not exclusively, on legal changes resulting from legislative and regulatory lawmaking. *Compare infra* note 110 (observing that if corporate governance law should be changed to reflect the bond-market change, that legal change could result from legislative action or from judicial decisionmaking, but that an analysis of a similar legal change suggests that legislative action would be more effective) *with infra* note 152 (observing that if damages law should be changed to reflect the bond-market change, that legal change could result from legislative action or from judicial decisionmaking).

[6] *Cf*. Steven L. Schwarcz, *Regulating Financial Change: A Functional Approach*, 100 MINN. L. REV. 1441, 1447 (2016) (arguing, among other things, that policymakers and regulators are politically influenced and tend to focus on past risks, to ignore emerging problems, and also to respond to the media which can create distortions by emphasizing what journalists find accessible). [Are there other reasons a normative framework would be important? cite1]

[7] [Try to find an even more egregious example of political over- or under-reaction. cite1]

[8] Charles K. Whitehead, *The Volcker Rule and Evolving Financial Markets*, 1 HARV. BUS. L. REV. 39, 42–43 (2011). This trading change represented a material change in the behavior of participants in financial markets. *See supra* note 4 and accompanying text.

[9] Whitehead, *supra* note 8, at 40.

long-term credit to families and business enterprises.'"[10] This distraction, they contend, led to excess speculation by the banks and became a primary factor in causing the financial crisis.[11] There is little evidence, however—and even Volcker himself doubts—that proprietary trading by banks was a cause of the crisis.[12] Furthermore, the merits of the Volcker Rule remain controversial and untested.[13]

The market deregulation and re-regulation cycle more broadly illustrates political under- and over-reaction. During economic prosperity, lobbyists for the financial industry, as well as a "delight[ed] constituency," push politicians for deregulation,[14] which can under-protect markets. Once the bubble of prosperity inevitably bursts, "investor confidence in the integrity of the market and its institutions" dissipates[15] leading to "a public demand for new [over-protective] laws and regulations to punish [alleged] malfeasance in the market."[16] This cycle leads to "grossly inefficient" under-protective and over-protective laws.[17]

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[10] *Id.* at 43.
[11] *Id.* at 41.
[12] Chairman Volcker and U.S. Treasury Secretary Timothy Geithner both believe that proprietary trading by banks was not a major factor leading to the collapse of the financial system. *See id.* (quoting Chairman Volcker's statements that "'proprietary trading in commercial banks was not . . . central' to the crisis" and Secretary Geithner's testimony that "'most of the losses that were material . . . did not come from [proprietary trading] activities.'").
[13] *Regulating Financial Change*, *supra* note 5, at 1486. Indeed, some contend that the ultimate intention of the Volcker Rule's "was less to cure a particular cause of the financial crisis and more to champion the populist view that commercial banking should be separated from investment banking." Whitehead, *supra* note 8, at 41–42.
[14] Erik F. Gerding, *The Next Epidemic: Bubbles and the Growth and Decay of Securities Regulation*, 38 CONN. L. REV. 393, 418 & 421–22 (2006). Behavioral biases, especially the availability bias, also influence lawmakers. *Id.* at 422. "The availability bias means that, as time passes since the last financial crisis, regulators and policymakers discount the potential for new crises and the need for regulations to avert those crises. . . . Regulators and policymakers may also excessively and subconsciously discount the expected future costs of a burst bubble. Moreover, the election cycle means that the costs may be realized on another politician's watch." *Id.*
[15] *Id.*
[16] *Id.* at 423.
[17] *Id*.

A normative framework for determining when financial market changes should drive legal changes would help to counter these inefficiencies. I next hypothesize such a framework.

B. Hypothesizing a Normative Framework

At least in a financial context, the principal normative justification for lawmaking is to correct market failures.[18] Therefore, a change in financial markets should drive a change in law to the extent needed to correct market failures resulting from the market change. Even then, however, the law does not—and as explained below, probably should not—attempt to correct all market failures.[19]

The essay hypothesizes that the extent to which the law should attempt to correct financial market failures should depend on consequences: consequences of those market failures, and consequences of changing the law to attempt to correct them. The first step of this "consequence-based analysis" would therefore be to identify financial market failures and assess their consequences. The next step would therefore be to consider legal changes that could correct harmful market failures, examine the consequences of making those changes, and finally balance consequences to reach a course of action.[20]

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[18] *See, e.g.,* PAUL A. SAMUELSON & WILLIAM D. NORDHAUS, ECONOMICS 756 (15th ed. 1995); DAVID GOWLAND, THE REGULATION OF FINANCIAL MARKETS IN THE 1990S 21 (1990). This essay includes in that definition market failures that could have systemic consequences.

[19] [cite1-with example illustrating that the law should not attempt to correct all market failures. Among other reasons, any change in law might itself have unforeseen consequences, including costs.]

[20] I am not suggesting this balance as a "rigid formula to govern outcomes," merely as a guide for helping decisionmaking. *Cf.* Robert W. Hahn & Cass R. Sunstein, *A New Executive Order for Improving Federal Regulation? Deeper and Wider Cost-Benefit Analysis*, 150 U. PENN. L. REV. 1489, 1498 (2002) (arguing that cost-benefit analysis should not constitute such a rigid formula).

Although consequence-based analysis is more often used than articulated, Judge Posner believes that it underpins legal reasoning.[21] Indeed, he argues that legal reasoning may not even exist as an independent concept, and that consequences may be all that really matters.[22] Professor Cserne has formally defined consequence-based analysis:

> If in deciding case C, the decision-maker finds that there is a relevant rule R which has more than one plausible interpretation (X, Y, Z, . . .) the decision-maker is said to use a consequence-based argument if she justifies her decision for rule interpretation X (instead of rule-interpretation Y or Z) with the argument that rule-interpretation X will bring about consequences which are normatively superior to the consequences brought about by the alternative rule-interpretations.[23]

This definition states the obvious but also raises a critical but subtle question: In comparing consequences, how should one determine that certain consequences are normatively superior to other consequences? That depends, of course, on the choice of normative standards.

As Professor Cserne observes, practicality appears to limit that choice: "Real-world legal systems typically constrain [the] choice of normative standards."[24] Given that it focuses on financial markets, this essay constrains its choice of normative standards to economics. That allows consequences to be measured by economic costs and benefits, making it relatively feasible to determine whether certain consequences are normatively superior to other consequences. But that also calls into question how the essay's

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[21] RICHARD A. POSNER, LAW, PRAGMATISM, AND DEMOCRACY [cite] (2003). [Expand the discussion in the text above with additional legal and/or economic scholarship discussing consequence-based analysis or reasoning, including Neil MacCormack, *On Legal Decisions and Their Consequences: From Dewey to Dworkin*, 58 N.Y.U. L. REV. 239 (1983). cite1A]

[22] POSNER, *supra* note 21.

[23] Péter Cserne, *Consequence-Based Arguments in Legal Reasoning: A Jurisprudential Preface to Law and Economics*, *in* EFFICIENCY, SUSTAINABILITY, AND JUSTICE TO FUTURE GENERATIONS 31, 37 (Klaus Mathis, ed., 2011). Although Professor Cserne articulates his definition for adjudication, the definition logically should also apply to legislative and regulatory lawmaking because the latter need not consider such matters as stare decisis.

[24] *Id*. at 39.

consequence-based analysis differs from traditional cost-benefit analysis ("CBA"), which is widely used to assess the desirability of proposed regulation.[25]

The answer is that consequence-based analysis includes but goes beyond traditional CBA, addressing not only the "how" but also the "when" of regulation and, moreover, addressing the "how" more objectively than CBA. First consider why consequence-based analysis addresses not only the "how" but also the "when." Although CBA "has a variety of meanings and uses,"[26] its most common use is to assess the desirability of proposed regulation,[27] focusing on whether the benefits of implementing

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[25] *See, e.g.,* Cass R. Sunstein, *Financial Regulation and Cost-Benefit Analysis*, 124 YALE L.J. FORUM 263, 263 (2015) (explaining that "[c]ost-benefit analysis is best understood as a way for agencies to ensure that their decisions are informed"). The reliability of cost-benefit analysis for financial regulation, however, is a matter of intense debate within the scholarly community. *Compare id.* at 278 (concluding that "financial regulators, no less than regulators of other kinds, should assess both costs and benefits, and they should proceed only if the benefits justify the costs) *with* John H. Cochrane, *Challenges for Cost-Benefit Analysis of Financial Regulation*, 43 J. LEGAL STUD. S63, S101 (arguing that "it seems beyond hope that a congressionally mandated, formal cost-benefit analysis, conducted with an eye to judicial review, will consider, let alone quantify, [all relevant] costs."). *See also* John C. Coates IV, *Towards Better Cost-Benefit Analysis: An Essay on Regulatory Management*, 78 L. & CONTEMP. PROBS. 1, 1 (2015) (noting that "[c]ost-benefit analysis of financial regulation (CBA-FR) has emerged as an important topic in both policy and legal debates").

[26] RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 396 (6th ed. 2003).

[27] *See, e.g.*, BLACK'S LAW DICTIONARY (10th ed. 2014) (defining CBA as "An analytical technique that weighs the costs of a proposed decision . . . ."); BOUVIER LAW DICTIONARY 1151 (2011 Compact Edition, Stephen Michael Sheppard, General Editor) (observing that federal agency CBA for determining whether a new regulation is promulgated "must demonstrate that the benefits to society outweigh the costs that the regulation will impose"); WILLIAM F. FOX, UNDERSTANDING ADMINISTRATIVE LAW 177 (5th ed. 2010) (stating that "each [of] the different processes of analysis that sometimes fit[s] under the general umbrella of cost-benefit analysis . . . is an attempt to . . . get as much information and insight on a *proposed government action* as possible") (emphasis added); Maeve P. Carey, *Cost-Benefit and Other Analysis Requirements in the Rulemaking Process*, Congressional Research Service No. 7-5700/ R41974, at 1 (Dec. 9, 2014) ("Cost-benefit analysis, in [the federal rulemaking] context, involves the systematic identification of all of the costs and benefits associated with a forthcoming regulation"). Judge Posner describes this common use as the lowest level of generality in which CBA is used. *See* POSNER, *supra* note 26 (exemplifying it as "the use of the criterion of wealth maximization to evaluate government projects").

that regulation would exceed its costs.[28] By starting with a regulatory proposal, CBA does not engage the question of when regulation should be proposed to address a problem. In contrast, this essay's consequence-based analysis begins by engaging that question. It does that by identifying market failures resulting from changes in financial markets[29] and examining the consequences of those failures. If those consequences are significantly negative—for example, a market failure causes material harm—consequence-based analysis gets to the next step,[30] constituting the "how": considering legal changes that could correct the harmful failures, examining the consequences of making those changes, and finally balancing consequences to reach a course of action.[31]

Consequence-based analysis also addresses the "how" more objectively than CBA. Recall that CBA assesses the desirability of proposed regulation.[32] The very existence of a proposal, however, carries the possibility if not likelihood that the proposal will be biased. I have already discussed how politics can distort legal responses.[33] In addition, merely proposing a specific change can create a confirmation bias, making regulators apt to focus on evidence that confirms the proposal and to depreciate evidence in opposition.[34] Confirmation bias helps explain what is often identified as one of CBA's

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[28] *Cf*. Carey, *supra* note 27 (observing that a "proposed regulatory requirement is judged to pass the 'cost-benefit test' if the sum of its anticipated benefits outweighs, or otherwise justifies, the sum of its present and future costs in present value terms").

[29] CBA under Executive Order 12866 might appear to begin that way insofar as its first "principle of regulation" is that "each agency shall identify the problem that it intends to address (including, where applicable, the failures of private markets or public institutions that warrant new agency action) as well as assess the significance of that problem." Executive Order 12866, § 1(b)(1) (Sep. 30, 1993), *in* 58 Federal Register, Presidential Documents No. 190 (Oct. 4 1993). In practice, however, this principle has not been applied to require regulatory agencies to proactively systematize the identification of market failures.

[30] This essay's articulation of consequence-based analysis thus proposes, consistent with existing legal principles, that legal changes should be considered only to correct harmful market failures. *See supra* note 19 and accompanying text.

[31] *See supra* note 20 and accompanying text.

[32] *See supra* note 27 and accompanying text.

[33] *See supra* notes 5-17 and accompanying text.

[34] *Cf*. Frank Chittenden et al, *A Question of Perspective: Impact Assessment and the Perceived Costs and Benefits of New Regulations for SMEs*, 33 ENVIRON. & PLANNING:

main problems—that regulators only superficially consider alternatives.[35] In contrast, this essay's consequence-based analysis reduces that potential bias by not starting with any specific proposal.[36] In other words, to determine whether a given financial market change should drive a legal change, this essay does not a priori assume a proposed legal change.[37]

To illustrate these differences, compare Case 1 below which represents traditional CBA and Case 2 which represents consequence-based analysis. Both cases speculate a change in bond markets from (i) bonds being privately traded among institutional investors to (ii) bonds being publicly traded and thus becoming available for investment by individuals and other non-institutional investors. In Case 1 (traditional CBA), politicians respond to the market change by proposing new regulation requiring the appointment of a trustee for each bond issue,[38] who would act as an agent on behalf of investors. CBA would justify that regulation if its benefits would exceed its costs. The benefit would be the trustee's protection of non-institutional bondholders, which would solve the collective action problem that bondholders whose investments are relatively

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GOVERNMENT AND POLICY SMEs 9, 21 (2015) (finding in a CBA context that "the confirmation bias present in processes run by staff from the department charged with introducing a regulation[] can result in limited respect for each other's views"); Joseph W. Rand, *Understanding Why Good Lawyers Go Bad: Using Case Studies in Teaching Cognitive Bias in Legal Decision-Making*. 9 CLINICAL L. REV. 731, 748 (2003) (discussing confirmation bias in the context of starting with a regulation and then having to conduct studies to see if it is justified); Eva Jonas et al, *Confirmation Bias in Sequential Information Search After Preliminary Decisions: An Expansion of Dissonance Theoretical Research on Selective Exposure to Information*, 80 J. PERSONALITY & SOC. PSYCH. 557 (2001) (finding that confirmation bias is strengthened with the amount of time the decision-maker spends focusing on the proposal).

[35] [cite1 to source(s) identifying that as one of CBA's main problems]

[36] *See, e.g., infra* notes 124-133 and accompanying text (examining a range of changes to corporate governance law that could correct a corporate governance market failure). Hahn and Sunstein similarly favor an approach that first analyzes consequences: "Our claim is that we could have more successes, better successes, and fewer failures if we attempted to analyze the consequences first." Hahn & Sunstein, *supra* note 20, at 1500 n. 42.

[37] Another difference is that those consequences could, but need not, be expressed as monetized costs and benefits. *See infra* notes 45-46 and accompanying text.

[38] Cases 1 and 2 assume the Trust Indenture Act is not yet enacted.

small lack economic incentive to take individual action or to cooperate.[39] The cost would be the expense of appointing a trustee for each bond issue.

In Case 2 (which represents consequence-based analysis), one would first examine if the aforesaid market change creates a market failure. Assuming it would,[40] one would then examine the consequences of that market failure. Being individually unable to protect themselves, non-institutional bondholders would be under-protected. For illustrative purposes, assume that under-protection causes most non-institutional investors to refuse to invest in bonds, leaving the publicly traded bond market dominated by institutional investors.

Under these facts, the aggregate harm to the few non-institutional investors who, as a result of the market change, invest in bonds would be relatively small,[41] and any other harmful consequences of the market change would be minimal because of the continuing dominance of institutional investors. In that case, consequence-based analysis would not need to get to the next step. This is a pragmatic approach; a financial market change that creates a market failure which causes little harm should not justify a legal change to correct that failure, especially if the cost of making that legal change could be significant.

If, however, the examination of consequences showed that the market change would be more than minimally harmful, consequence-based analysis would get to the next step. Whereas CBA starts with specific proposed regulation,[42] the next step would

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[39] Steven L. Schwarcz & Gregory M. Sergi, *Bond Defaults and the Dilemma of the Indenture Trustee*, 59 ALA. L. REV. 1037, 1037-38 (2008).
[40] Such market failure being the same collective action problem discussed in Case 1, that non-institutional bondholders would be individually unable to protect themselves. *See supra* note 39 and accompanying text.
[41] That aggregate harm would be small precisely because so few non-institutional investors invest in bonds.
[42] *See supra* notes 33-27 and accompanying text. In Case 1, that specific proposed regulation is to require the appointment of a trustee for each bond issue. *See supra* note 38 and accompanying text.

not necessarily start with any specific proposal.[43] To that extent, consequence-based analysis should be more objective in comparing alternative approaches to correct the market failure.[44]

Consequence-based analysis can be broader than CBA in another way, too, although here the difference depends on how CBA is applied. In its most traditional application, CBA "requires the monetization of all benefits as well as of all costs for their comparison."[45] Consequence-based analysis does not necessarily assume that the relevant consequences can always be precisely measured.[46] Consequence-based analysis may therefore comport better than CBA with the messy reality of financial regulation.[47]

C. Testing the Hypothesis: Methodology

The remainder of this essay tests and develops its hypothesis. To that end, Part II next examines the hypothesis under the literature on financial change, comparing it to the views advanced thereunder on when market changes should drive legal changes. The essay thereafter applies the hypothesis to two test cases based on a recent financial market change in the corporate bond markets: the shift, described below, from investors

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[43] [Suggest a range of proposals, including but not limited to appointing a trustee for each bond issue. cite1. Also note that even traditional CBA is supposed to compare the proposed regulation to the status quo as well as possible alternatives, so the real difference is that traditional CBA is implicitly biased towards the proposal. cite1]
[44] *See supra* notes 36-37 and accompanying text.
[45] BOUVIER LAW DICTIONARY, *supra* note 27. *But cf.* Sunstein, *supra* note 25, at 264 (observing that cost-benefit analysis entails "an effort (1) to quantify the anticipated consequences of regulatory action and (2) to monetize those consequences in terms of benefits and costs, subject to (3) a feasibility constraint, which is meant to acknowledge that some consequences may be hard or impossible to quantify or monetize"); Office of Information and Regulatory Affairs (OIRA), *Regulatory Impact Analysis: A Primer* 3 (Aug. 15, 2011) ("When quantification of a particular benefit or cost is not possible, it should be described qualitatively.").
[46] [cite]
[47] *Cf.* BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, CALIBRATING THE GSIB SURCHARGE 13 (July 20, 2015) ("using cost-benefit analysis to directly calibrate firm-specific surcharges would require more precision in estimating the factors discussed above in the context of surcharges for individual firms than is now attainable").

(i) holding their bonds to maturity to (ii) trading their bonds by reselling them prior to maturity (hereinafter, the "bond-market change").[48]

Historically, most investors held their bonds to maturity.[49] They expected to receive their value through the periodic payment of principal and interest.[50] Today, however, most investors engage in bond trading.[51] In 2014, for example, the average daily trading volume of corporate bonds reached a record of $26.7 billion, a 50% increase from 2002's average trading volume of $17.8 billion.[52] That same year, the average turnover rate for corporate bonds, computed as bond trading volume as a percentage of total outstanding, was 85.7%.[53] That effectively means that the amount of bonds traded almost equaled the amount outstanding—a turnover rate approximately twice that of equity securities.[54]

The legal significance of the bond-market change is tied to its impact on investors. They now tend to view their bond investment decisions from a market-pricing

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[48] This essay does not purport to critique the merits of the bond-market change or of any other financial market change. As discussed, the essay's scope is limited to analyzing how financial market changes should drive legal changes—the law following, not leading. *See supra* note 3 and accompanying text. A critique of the merits of a financial market change would implicitly address whether law should correct an unmerited change—which is the different issue of the law leading, not following. *See id*.
[49] JANE W. D'ARISTA, THE EVOLUTION OF U.S. FINANCE 124 (1994).
[50] MAUREEN BURTON, REYNOLD NESIBA, & BRUCE BROWN, AN INTRODUCTION TO FINANCIAL MARKETS AND INSTITUTIONS 56 (2d ed. 2010).
[51] D'ARISTA, *supra* note 49, at [cite], and BURTON, NESIBA, & BROWN, *supra* note 50, at [cite].
[52] Statistics, SIFMA, available at http://www.sifma.org/research/statistics.aspx. Besides a slight dip in trading volume during the financial crisis, the volume of corporate bond trades has steadily increased. *Id*.
[53] *Id*. (calculating 85.7% as $26.7 billion average daily turnover rate for corporate bonds, times 252 trading days per year, divided by $7,845.3 billion corporate bonds outstanding).
[54] Itay Goldstein, Hao Jiang, & David T. Ng, *Investor Flows and Fragility in Corporate Bond Funds*, 8 (June 25, 2015) (unpublished manuscript, on file with author) (concluding that bond investors trade their securities more frequently than equity investors).

standpoint, based on trading price,[55] and are less likely to view those decisions from a periodic-payment standpoint.[56] Part III of the essay tests the hypothesis by examining whether the bond-market change and its impact on investors should drive a change in corporate governance law. Part IV of the essay tests the hypothesis by examining whether the bond-market change and its impact on investors should drive a change in damages law.

First, however, examine the hypothesis under the literature on financial change.

II. TESTING THE HYPOTHESIS UNDER THE LITERATURE ON FINANCIAL CHANGE

Relatively little has been written to specifically inform how changes in financial markets should drive changes in law. This Part therefore also reviews the literature on market changes generally driving legal changes. Begin, however, with the most general context—that of societal changes driving legal changes.[57]

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[55] Steven L. Schwarcz, *Compensating Market Value Losses: Rethinking the Theory of Damages in a Market Economy*, 63 FLA. L. REV. 1053, 1056-58 (2011) (arguing that viewing a bond only in terms of periodic payments of principal and interest is "formalistic" and "questionable"). The fact that bonds are traded over-the-counter in informal markets operated through computers of brokerage houses and banks (*see, e.g.*, ANNETTE THAU, THE BOND BOOK: EVERYTHING INVESTORS NEED TO KNOW ABOUT BONDS 7–8 (2d ed. 2001); NORMAN M. SCARBOROUGH, BUSINESS: GAINING THE COMPETITIVE EDGE 524 (1992)), as opposed to being traded in formal markets (such as the New York Stock Exchange or NASDAQ), should not change the analysis. De facto secondary markets can be as legitimate and important to commerce as de jure markets to the extent they facilitate the transfer of property from willing sellers to willing buyers. *Cf.* JAMES B. HERENDEEN, ISSUES IN ECONOMICS: AN INTRODUCTION 231–32 (2008) (arguing that de jure stock markets and de facto bond markets provide the same six key contributions to commerce: (1) converting illiquid assets into relatively liquid assets; (2) reducing the cost of funds to borrowers, especially long-term borrowers; (3) allowing for the separation of ownership and control; (4) permitting the separation of saving and investing decisions; (5) making possible a market for corporate control; and (6) facilitating the determination of a firm's value).

[56] *Cf. supra* note 50 (observing that investors who held their bonds to maturity expected to receive their value through the periodic payment of principal and interest).

[57] *See supra* note 3 and accompanying text.

Professor Friedman argues that the law "should [change] slowly, in response to clearly formulated social sentiment."[58] Professor Savigny would limit that even further: "Only when popular custom, in part articulated by lawyers, ha[s] fully evolved, could and should the legislature take action."[59] Friedman, however, believes that limitation is "too much out of tune with the basic condition of modern society to be a matter of serious discussion."[60] In that more general context, therefore, it appears that societal changes should drive legal changes only when there is at least some social consensus that the legal changes are justified.[61]

Financial market changes, however, tend to be much more technical and limited in audience than societal changes generally. Legal changes should not have to wait for a social consensus. Furthermore, financial markets (in contrast to society generally) regularly undergo significant changes.[62] As a result, inconsistencies can quickly develop between market reality and the law regulating the market. Professor Kane argues that some of these inconsistencies may even be intentional: "Legal categories and definitions will always lag financial realities because the regulated are more adept at taming and gaming changes in regulators' rules than the regulators are at understanding and adapting to financial innovation."[63] However inconsistencies develop between market reality and market regulation, they can create harm.[64] Subpart A below discusses the literature on changing regulatory law to control that harm.

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[58] FRIEDMAN, *supra* note 3.
[59] *Id*.
[60] *Id.* at 4.
[61] *Cf.* ALEXANDER M. BICKEL, THE MORALITY OF CONSENT 142 (1975) (concluding that values should be "provisionally held, []tested, and evolve within the legal order—derived from the morality of process, which is the morality of consent").
[62] *See* Charles K. Whitehead, *Reframing Financial Regulation*, 90 B.U. L. REV. 1, 21 (2010) (describing "how issues addressed by existing regulation have begun to appear in new settings that fall outside the traditional categories.").
[63] Edward J. Kane, Insurance Contracts and Derivatives That Substitute for Them: How and Where Should Their Systemic and Nonperformance Risks Be Regulated?, 21 (Mar. 27, 2014) (unpublished manuscript) (available at https://www2.bc.edu/edward-kane/Insurance%20Contracts%20and%20their%20Substitutes.pdf).
[64] *See infra* notes 74-90 and accompanying text.

Although less commonly examined in the literature, changes in market reality also have the potential to create harmful inconsistencies with law that does not purport to regulate the market (hereinafter, "non-regulatory" law). Because non-regulatory law can be tied to a specific market architecture, such as the "particular design and structure of financial firms, markets, and other related institutions" at the time the law is promulgated,[65] a change in that architecture could undermine that law's ability to continue correcting market failures for which it was originally designed. Subpart B below discusses the literature on changing non-regulatory law to correct market failures.

A. Changing Regulatory Law to Control Harm that Could Result from Change

Little has been written about the theory but much has been written about the practice of changing regulatory law to control harm that could result from market change.[66]

1. *Theory*. Most of the theoretical literature concerns how regulatory law should be changed to respond to market bubbles. Professor Gerding theorizes, for example, that a particular change in the behavior of participants in the securities market should drive a change in securities regulation. He argues that "when investors or market participants believe that the [securities] market will continue to rise," securities law can be undermined and therefore should be updated.[67] He is most concerned about market-price bubbles, which he contends exacerbate the behavioral biases of issuers and intermediaries, causing them to underestimate their expected liability under the securities laws, and also raise the costs of compliance with securities laws for market participants by increasing agency and information costs.[68] As a result, he proposes, regulators should

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[65] *Regulating Financial Change*, *supra* note 5, at 1442.
[66] [Continue searching for additional possible theory by reviewing the following sources: Katharina Pistor's scholarship; OXFORD HANDBOOK OF FINANCIAL REGULATION (2015); MICHAEL S. BARR, HOWELL E. JACKSON, & MARGARET E. TAHYAR, FINANCIAL REGULATION: LAW AND POLICY (Foundation Press, forthcoming Spring 2016). cite1A]
[67] Gerding, *supra* note 14, at 444–45.
[68] *Id.* at 432.

try to ascertain when those bubbles arise.[69] Others have similarly analyzed how regulatory law should be changed to respond to market bubbles.[70]

I have previously written about the theory of changing regulatory law to control harm that could result from market change, but from a different perspective than this essay. Because financial regulation is often tethered to the particular design and structure of financial firms, markets, and other related institutions at the time the regulation is promulgated,[71] such regulation will quickly become outmoded without ongoing monitoring and updating.[72] I therefore have argued that functional regulation, which focuses on the financial system's underlying and thus less time-dependent economic functions, should supplement traditional financial regulation.[73] Functional regulation, however, is beyond the scope of this essay, which focuses on more traditional regulation.

2. *Practice*. In contrast to theory, more has been written about the practice of changing regulatory law to control harm that could result from market change. Consider, for example, the advent of shadow banking—a loose term that refers to the increasing provision of financing outside of traditional banking channels, and thus without the need for traditional modes of bank intermediation between capital markets and the users of funds.[74] Shadow banking has been radically changing financial intermediation.[75] The move from traditional intermediaries to shadow banks for financial services began in the 1950s as regulators "loosen[ed] their interpretations of the Glass-Steagall Act and Bank

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[69] *Id*. at 444–45.
[70] [Insert those additional citations & consider how they inform this essay. cite1]
[71] *Regulating Financial Change*, *supra* note 5, at 1442.
[72] *Id*. at 1442-43.
[73] *Id*.
[74] Steven L. Schwarcz, *Regulating Shadow Banking*, 31 REV. BANKING & FIN. L. 619, 620 (2012).
[75] *See Regulating Financial Change*, *supra* note 5, at 1443 (observing that in 2008, "the pre-crisis financial regulatory framework, which assumed the dominance of bank-intermediated funding, failed to adequately address a collapsing financial system in which the majority of funding had become non-bank intermediated."); Whitehead, *supra* note 75, at 21–27 (outlining how shadow banking has remained outside the scope of traditional financial regulation).

Holding Company Act, largely in response to the banks' growing interest in offering new products and services."[76] Even as the shadow banking industry grew to hold assets in excess of $60 trillion by recent estimates,[77] the law was slow to change. Indeed, "traditional categories . . . continue[d] to frame how intermediaries are regulated."[78]

In practice, that use of traditional categories to regulate shadow banking was a problem for at least two reasons. First, those categories did not extend to firms that were not banks but performed many of the same intermediary functions that banks do, like securities firms, which leaves those firms without "a regulatory safety net."[79] Second, those categories allowed shadow banks to take advantage of regulatory arbitrage by avoiding many of the regulatory measures in place to ensure the safety of traditional intermediaries, for example minimum capital requirements.[80] Thus, while shadow banks were "subject to risks that mirror those historically faced by intermediaries," they were "subject to looser restrictions or none at all."[81]

Insider trading represents another area of the law that has been slow to react to market changes.[82] Specifically, that body of law has failed to address technological

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[76] Whitehead, *supra* note 75, at 21.
[77] *See* Philipp Halstrick, *Tighter Bank Rules Give Fillip to Shadow Banks*, REUTERS (Dec. 20, 2011, 4:17 AM), http://www.reuters.com/article/2011/12/20/uk-regulation-shadow-banking
-idUSLNE7BJ00T20111220. More recent estimates suggest an even higher number. *See* FIN. STABILITY BD., GLOBAL SHADOW BANKING MONITORING REPORT 3 (2012), http://www.financialstabilityboard.org/publications/
r_121118c.pdf (estimating shadow banking's worldwide assets as $67 trillion in 2011); Sheridan Prasso, *Shadow Banking*, BLOOMBERG (Mar. 31, 2015, 7:11 AM), http://www.bloomberg.com/quicktake/shadow-banking/ (reporting that the Financial Stability Board believes that shadow banking grew by $5 trillion $75 trillion in 2013).
[78] Whitehead, *supra* note 75, at 21.
[79] *Id.* at 25.
[80] *Id.* at 25–28.
[81] *Id.* at 38–39.
[82] Peter J. Henning, *Market Changes May Prompt New Definition of Insider Trading*, N.Y. TIMES (Nov. 4, 2015), http://www.nytimes.com/2015/11/05/business/dealbook/market-changes-may-prompt-new-definition-of-insider-trading.html?_r=0 ("The law of insider trading has not changed

changes that facilitate "the rise of exchange-traded index funds ['ETFs'] and the growth of high-frequency trading algorithms ['HFTs']," both of which limit certain information to "a technologically savvy few."[83] One commentator notes that ETFs "are not immune to trading on confidential information, and indeed may be even more vulnerable to manipulative conduct when they reflect just a sliver of the market."[84] Current insider trading law, however, likely does not reach that conduct because it requires the breach of a fiduciary duty.[85] Similarly, high-frequency traders, who rely upon minute price differences when buying and selling assets, are able to "cash[] in on information before other investors learn about it."[86]

Regulation has also been slow to respond to technological changes in markets that raise systemic concerns.[87] For example, "[t]echnology has facilitated electronic trading, which has contributed to a fundamental shift in underlying transaction structures in financial markets, displacing face-to-face trading and enabling new market participants to trade."[88] That shift has "contributed to the development of pervasive financial market networks," which allow for contagion to spread widely during times of crisis.[89] Professor Arewa argues that "require[s] system-wide regulation."[90]

B. Changing Non-Regulatory Law to Control Harm that Could Result from Change

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much since important Supreme Court rulings in the 1980s established a high bar for convictions.").

[83] *Id*.

[84] *Id*.

[85] *Id*.

[86] *Id*.

[87] *See, e.g.,* Olufunmilayo B. Arewa, *Financial Markets and Networks—Implications for Financial Market Regulation*, 78 U. CIN. L. REV. 613, 613 (2009) (describing that "[i]nnovations in technology and financial markets . . . are an increasingly important source of systemic risk" and that "[t]he systemic risk that arises from [those innovations] needs greater regulatory recognition").

[88] *Id.* at 614.

[89] *Id.* at 613.

[90] *Id.* at 623.

Changes in market reality also have the potential to create harmful inconsistencies with non-regulatory law. Because even non-regulatory law, as mentioned, is often tied to the particular design and structure of financial markets at the time the law is promulgated, a change in that design or structure could undermine the law's ability to continue correcting market failures for which it was originally designed.[91]

Most of the scholarship discussing the need to update non-regulatory law to reflect changing market reality focuses on the Uniform Commercial Code ("UCC") in the United States. The UCC is a uniform state law promulgated jointly by the American Law Institute and the Uniform Law Commission[92] for enactment by state legislatures. These public-interest bodies have jointly appointed a Permanent Editorial Board (PEB) to periodically review how, if at all, the UCC should be changed to reflect changes in commercial markets and practice.[93] This review process, and the updating of the law, reflects the practical wisdom of the UCC's founding visionary, Karl Llewellyn.[94]

Routine "[o]ngoing monitoring and updating" of non-regulatory law in response to changes in financial architecture nonetheless "can be costly."[95] Controversial legal updating can also be "subject to political interference."[96] The UCC monitoring and updating process works in part because commercial law is apolitical—because parties to

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[91] *See supra* note 65 and accompanying text.
[92] The Uniform Law Commission's official name is The National Conference of Commissioners on Uniform State Laws (abbreviated NCCUSL).
[93] [cite]
[94] *Cf.* KARL N. LLEWELLYN, THE THEORY OF RULES 79 (Frederick Schauer ed., 2011) (observing that the "pace of an industrial civilization . . . present[s] [legal systems with] new states of fact too rapidly for knowledge to keep up with them," which could "throw[] into doubt the *significance* of the very lines of classification on which the would-be precise rules have been made to rest"). At least in part for that reason, Llewellyn included in the UCC certain key terms—such as "good faith," "usage of trade," and "unconscionability"—that focus on the underlying functions of commercial law, in order to "provide safety valves to make the entire system more predictable." Curtis Nyquist, *Llewellyn's Code As a Reflection of Legal Consciousness*, 40 NEW ENG. L. REV. 419, 433 (2006).
[95] *Regulating Financial Change*, *supra* note 5, at 1443.
[96] *Id*.

commercial transactions can be on either side, depending on the transaction[97]—and in part because [insert brief discussion, including that the ALI and Uniform Law Commission act voluntarily and without charge, in the public interest[98]].

C. How the Literature Informs the Hypothesis

The literature on financial change does not provide a studied normative framework for addressing when financial market changes should drive legal changes. The relationship between these changes is described as—and in fact tends to be—essentially ad hoc.[99] For example, scholars and other commentators often spot inconsistencies that develop between market reality and market regulation, but that usually occurs after those inconsistencies develop and cause harm. The literature does not advocate proactive monitoring of market changes, in order to prevent those inconsistencies from becoming harmful. Furthermore, even after inconsistencies that could cause harm are spotted, market regulatory law tends to change slowly. The lag may be even longer for changing non-regulatory law.

The principal exception to these observations concerns the special case of the UCC, for which the two public-interest organizations that promulgate that legal code perform, without charge, active commercial market monitoring and legal updating. The UCC may also be special because commercial law is almost uniquely apolitical.[100]

The literature on financial change thus informs this essay's hypothesis in at least two ways. First, the lack of a normative framework allows harmful inconsistencies to develop between market reality and law, suggesting that the creation of such a framework

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[97] *Id*. at 1443 n. 6.
[98] [cite1]
[99] The ad hoc nature of today's financial regulation is a problem that goes far beyond this essay. *Cf*. *Regulating Financial Change*, *supra* note 6, at 1448 (describing why "[e]ven the theoretical scholarship on law and finance takes [an] ad hoc approach").
[100] *See supra* note 97 and accompanying text.

may well provide value.[101] Second, nothing in the literature appears to be inconsistent with this essay's use of consequence-based analysis to create such a framework.

I next test and develop this essay's hypothesis by applying it to the two test cases previously mentioned.[102] Part III applies the hypothesis to the test case of whether the bond-market change should drive a change in corporate governance law. Part IV applies the hypothesis to the test case of whether the bond-market change should drive a change in damages law.

III. TESTING THE HYPOTHESIS UNDER CORPORATE GOVERNANCE LAW

To begin the examination of whether the bond-market change should drive a change in corporate governance law, Subpart A provides an overview of that law. Thereafter, Subpart B analyzes whether the bond-market change should drive that legal change.

A. Overview of Corporate Governance Law

Corporate governance law generally adopts the shareholder-primacy model, in which a corporation is "organized and carried on primarily for the profit of the stockholders."[103] As residual claimants of the firm (holding equity interests), shareholders

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[101] Some might argue, however, that the ad hoc relationship described in the literature, between financial market changes and legal changes, is sufficient or even desirable.
[102] *See supra* notes 55-56 and accompanying text.
[103] Dodge v. Ford Motor Co., 170 N.W. 668, 684 (Mich. 1919). *See also* Milton Friedman, *The Social Responsibility of Business is to Increase its Profits*, N.Y. TIMES, Sept. 13, 1970. The overwhelming acceptance for the shareholder-primacy model can be traced to a debate in the 1930s between two academics, Adolph A. Berle and Merrick Dodd. Berle argued that "all powers granted to a corporation or to the management of a corporation … [are] at all times exercisable only for the ratable benefit of all the shareholders as their interest appears." *See* Adolph A. Berle, *Corporate Powers as Powers in Trust*, 44 HARV. L. REV. 1049, 1049 (1931). Dodd, in contrast, argued that the business corporation should be viewed as "an economic institution which has a social

are not entitled to a fixed return. Instead, they may look for income streams in the form of dividends, payable from a portion of the firm's profits.[104] Shareholders also place significant value on increasing the stock price, which enables them to sell their shares at a profit.[105] Because covenants "can never restrict or determine all the operating and investment decisions necessary to run the firm efficiently,"[106] shareholders must rely on the firm's management.[107]

Shareholder primacy implicitly assumes that bonds are held to maturity. Bondholders therefore lack a direct interest in their firm's performance so long as the firm remains solvent to repay principal and interest when due.[108] Shareholder primacy also assumes that creditors, such as bondholders, can contractually protect against the firm's insolvency by negotiating covenants in their loan agreements.[109]

B. Analysis: Should Corporate Governance Law be Changed?

Should the bond-market change drive a change in corporate governance law,[110] to enable bondholders to share in some way in corporate governance? This essay's

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service as well as a profit-making function." *See* Merrick Dodd, *For Whom Are Corporate Managers Trustees?* 45 HARV. L. REV. 1145, 1148 (1932).

[104] RICHARD A. BREALEY, STEWART C. MYERS, & FRANKLIN ALLEN, PRINCIPLES OF CORPORATE FINANCE 5 (11th ed. 2014).

[105] *See, e.g.,* William W. Bratton, *Shareholder Value and Auditor Independence*, 53 DUKE L. J. 439, 452–456 (2004) (observing that shareholders speculate, or at least place significant value, on the ability to resell their stock at a profit).

[106] BREALEY et al., supra note 104, at 352.

[107] *Cf.* Jill E. Fisch, *Market Efficiency in Corporate Law: The Role of Shareholder Primacy*, 31 J. CORP. L. 637, 658 (2006) (arguing that shareholders therefore have a direct stake in the firm's future performance).

[108] Lynn A. Stout, *Bad and Not-So-Bad Arguments for Shareholder Primacy*, 75 S. CAL. L. REV. 1189, 1192 (2002).

[109] *See, e.g.*, Greg Nimi, David C. Smith, & Amir Sufi, *Creditor Control Rights, Corporate Governance, and Firm Value*, 25 REV. FINAN. STUD. 1713, 1714-15 (2012).

[110] If corporate governance law should be changed to reflect the bond-market change, that legal change could result from legislative action or from judicial decisionmaking. An analysis of a similar legal change suggests, however, that legislative action would be more effective. Steven L. Schwarcz, *Misalignment: Corporate Risk-Taking and Public*

hypothesis is that the extent to which the law should attempt to correct financial market failures should depend on consequences: consequences of those market failures, and consequences of changing the law to attempt to correct them.[111] Therefore, to attempt to answer that question, I first identify the corporate governance market failures resulting from the bond-market change and analyze the consequences of those failures. If a market failure causes material harm, I consider legal changes that could correct the harmful failure, examine the consequences of making those changes, and finally balance consequences to reach a course of action.

1. *Identifying the corporate governance market failures resulting from the bond-market change*. The principal market failure resulting from the bond-market change is agency failure.[112] Agency failure includes conflicts of interest between principals and their agents, classically portrayed as conflicts between owners and managers of a firm.[113] The agency failure resulting from the bond-market change is that managers of firms do not act on behalf of bondholders, who (as shown below) are now a significant investor group whose interests are affected by management decisions.

Bondholders have become a significant investor group, and indeed they are usually the dominant investors in firms. When the shareholder-primacy model originated during the 1930s,[114] the equity markets far out-shadowed the size of the corporate bond

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Duty, 92 NOTRE DAME L. REV. 1, § III.B.1 (forthcoming Nov. 2016), available at http://ssrn.com/abstract=2644375.

[111] *See supra* notes 19-21 and accompanying text.

[112] Economists identify three possible financial market failures: agency failure, information failure, and externalities. Steven L. Schwarcz, *Regulating Shadows: Financial Regulation and Responsibility Failure*, 70 WASH. & LEE L. REV. 1781, 1788 (2013). I have argued that "externalities" is not truly a market failure because it refers to a failure's consequence, not its cause. *Id*.

[113] Lucian A. Bebchuk & Jesse M. Fried, *Pay Without Performance: Overview of the Issues*, 20 ACAD. MGMT. PERSP. 5, 9 (2006).

[114] Berle, *supra* note 103; Dodd, *supra* note 103.

market.[115] In contrast,[116] bonds are now the principal source of external financing for U.S. firms.[117]

Bondholders interests are also now affected by management decisions. Recall that shareholder primacy assumes that bondholders lack a direct interest in their firm's performance so long as the firm remains solvent to repay principal and interest when due, and that bondholders can rely on covenants to contractually protect against the firm's insolvency.[118] The bond-market change effectively undermines both of those assumptions. Because the resale price of bonds is tied to firm performance, bondholders

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[115] *See, e.g.*, Bruno Biais & Richard C. Green, *The Microstructure of the Bond Market in the 20th Century*, IDEI Working Paper 1 (2007) (stating that in the 1930s, the trading volume of corporate bonds was between one-fifth and one-third of the trading volume in stocks). Indeed, that dominance of equity appears to be one of the justifications for shareholder primacy. *Cf.* Adolph A. Berle, *For Whom Corporate Managers are Trustees*, 45 HARV. L. REV. 1365, 1370 (observing that "Probably half the entire savings of the country are now represented by passive property" in the form of shares of stock, and that corporate shareholding "directly affect[s] not less than half of the population of the country").

[116] Hendrik Bessembinder & William Maxwell, *Markets: Transparency and the Corporate Bond Market*, 22 J. ECON. PERSP. 217, 220 (2008). *Cf.* Hugh Thomas & Zhiqiang Wang, *The Integration of Bank Syndicated Loan and Junk Bond Markets*, J. OF BANKING & FIN. 299, 302 (2004) (observing the shift of corporate debt markets "from a bank liquidity orientation to a capital markets orientation").

[117] In 2014, for example, newly issued corporate bonds raised approximately $1.49 trillion, compared to only $175 billion (i.e., $0.175 trillion) raised by newly issued shares of stock. New Security Issues, U.S. Corporations, BOARD OF GOVERNORS OF THE FESERVE SYSTEM (2015), http://www.federalreserve.gov/econresdata/releases/corpsecure/current.htm. Since 2006, new corporate bond issuances have exceeded new issuances of equity more than eight-fold. *Id*. at http://www.federalreserve.gov/econresdata/releases/corpsecure/corpsecure2015.htm. This compares the proceeds of newly issued corporate bonds and equity shares, excluding any increase of balance-sheet equity resulting from retained earnings—the portion of a firm's net income (primarily built up through income from operations) that is retained by the firm rather than being distributed to shareholders as dividends. The reason for this exclusion is that categorizing retained earnings as equity is an accounting convention; even the retained net income of a firm financed primarily by debt would be categorized as equity under that convention. Any comparison between debt and equity proceeds is inherently imprecise, however, because debt securities have fixed maturities whereas equity securities are generally co-terminus with the firm's existence.

[118] *See supra* notes 108-109 and accompanying text.

now (like shareholders) have a direct stake in their firm's performance. And bondholders cannot contractually assure that performance because, as observed for shareholders, covenants cannot control all of the operating and investment decisions necessary to run the firm efficiently.[119]

2. *Analyzing the consequences of those market failures*. Agency failure can make bondholders reluctant to invest without management representation, resulting in underinvestment. Agency failure can also foster moral hazard, in this case that managers are acting with other people's (i.e., bondholders') money but are not responsible to those people.[120] Shareholders may exacerbate that failure by pressuring managers to take risks that could benefit shareholders but harm bondholders, such as a gamble that could greatly increase the firm's equity but, if unsuccessful, could make the firm insolvent.[121] Although bondholders might try to impose stricter covenants to attempt to correct the agency failure, covenants are relatively blunt instruments and would likely be insufficient.[122] Moreover, because covenants are relatively inflexible—any change requires a formal waiver—the imposition of stricter covenants could reduce profitability and actually increase the risk of payment defaults.[123]

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[119] *See supra* note 106 and accompanying text.
[120] Dale B Tauke, *Should Bonds Have More Fun? A Reexamination of the Debate over Corporate Bondholder Rights,* 1989 COLUM. BUS. L. REV. 1, 3 (1989).
[121] *Cf.* Yakov Amihud, Kenneth Garbade, & Marcel Kahan, *A New Governance Structure for Corporate Bonds,* 51 STAN. L. REV. 447, 454 (1999) (discussing that opportunistic shareholders may want their firm to take risks that could benefit them even if their expected benefit is smaller than the expected loss to the firm's creditors). *Cf.* Tauke, *supra* note 120, at 3 (arguing that shareholders might cause corporate assets to be selectively distributed to them, such as through dividends or stock repurchases).
[122] *Cf. supra* notes 106 & 119 and accompanying text (discussing that covenants cannot be used to run firms efficiently).
[123] *See* Simone M. Sepe, *Corporate Agency Problems and 'Dequity' Contracts*, 36 J. CORP. L. 113, 145–146 (2010) (arguing that covenants can "impair[] the managers' ability to pursue value-maximizing projects [which would] reduce the likelihood of increases in cash-flow production and enhance the risk of debtor payment defaults."). *Cf.* Amihud, Garbade & Kahan, *supra* note 121, at 455 (observing the "costs stemming from the limitations on the company's actions imposed by [bond] covenants . . . because covenants are not (and cannot be) fine-tuned to restrain only actions that reduce the aggregate value of the firm").

The agency failure resulting from the bond-market change therefore has significant harmful consequences, which cannot be adequately mitigated through the imposition of covenants. I next examine how corporate governance law could be changed to correct that agency failure.

3. *Examining how corporate governance law could be changed to correct those market failures*. Corporate governance law could be changed to correct the agency failure by including bondholders in corporate governance. There are at least two ways that could occur. Bondholders and shareholders could share governance (the "sharing-governance" approach), or managers could have a duty to both bondholders and shareholders (the "dual-duty" approach").[124]

Under the sharing-governance approach, bondholders would elect a minority of management, and thus could be outvoted.[125] However management decisions that could significantly harm bondholders would require some form of supermajority voting, such as the consent of at least one or more of the bondholders' representatives.[126] Under the dual-duty approach, managers would have a duty to consider both bondholder and shareholder interests. Their primary duty would be to shareholders except when a management decision could significantly harm bondholders,[127] in which case they would have to more closely balance bondholder and shareholder interest.[128]

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[124] *See generally* Steven L. Schwarcz, *Rethinking Corporate Governance for a Bondholder Financed, Systemically Risky World*, 58 WM. & MARY L. REV. (forthcoming 2016-17), available at http://ssrn.com/abstract=2741794 (hereinafter, "*Rethinking Corporate Governance*").
[125] *Id*.
[126] *Id*.
[127] *Id*. Under the sharing-governance approach, the bondholders' representatives would determine when a management decision could significantly harm bondholders. Under the dual-duty approach, any manager could make that determination. *Id*.
[128] *Id*. (arguing that such managers should then favor bondholders unless the overall benefit to shareholders is expected to considerably outweigh the harm to bondholders (or there is some other compelling reason to favor shareholders over bondholders)).

4. *Analyzing the consequences of making that change in law*. Making that change in law should help to mitigate the agency failure resulting from the bond-market change.[129] Both the sharing-governance approach and the dual-duty approach should be feasible. The sharing-governance approach would be simpler and involve less managerial discretion, and thus procedurally easier. But the ability of bondholder representatives to block management decisions that could significantly harm bondholders could be costly, impairing corporate profitability.[130]

In contrast, the dual-duty approach to governance would provide more flexibility for profit making. Rather than enabling bondholder representatives to block management decisions, the dual-duty approach contemplates a more nuanced balancing of shareholder and bondholder interests.[131] Although that balancing would require managers to exercise discretion, which can create uncertainty,[132] managers exercising that discretion would be protected by the business judgment rule so long as they use at least slight care.[133]

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[129] [Expand and explain. cite1]
[130] *Cf.* Tauke, *supra* note 120, at 55 (arguing that bondholders are likely to have a preference for liquidity events "even when the expected value of remaining an independent private company is higher"); Jesse M. Fried & Mira Ganor, *Agency Costs of Venture Capitalist Control in Startups,* 81 N.Y.U. L. REV 957, 998 (2006) (arguing that preferred shareholders, whose interests somewhat parallel that of bondholders, may prefer safety to profitability).
[131] *See supra* note 128 and accompanying text.
[132] *Compare* Marcel Kahan, *The Qualified Case Against Mandatory Terms in Bonds*, 89 NW. U. L. REV. 565, 613 (1995) (arguing that imposing a fiduciary duty to bondholders would be "vague and create great uncertainty as to whether a given action would violate it or not. As a result, the duty would be difficult to enforce and would likely result in significant litigation costs.") *with* Morey M. McDaniel, *Bondholders and Corporate Governance,* 41 BUS. LAW. 413, 446 (1986) (arguing that directors already have fiduciary duties to different classes of shareholders and regularly consider and resolve conflicts between the two classes, so extending fiduciary duties to creditors may not result in a detrimental increase in uncertainty and chaos).
[133] *Rethinking Corporate Governance*, *supra* note 124. Although an additional cost of including bondholders in governance would be the administrative and logistical expenses of changing the corporate governance regime (both legally and as a matter of changing corporate operating procedures), that transitional cost should be justified by the

That balancing of shareholder and bondholder interests might itself sometimes impair corporate profitability. For systemically important firms, however, any such impairment would be at least partially offset by a reduction in systemic risk.[134] Because bondholders are more risk-averse than shareholders,[135] including them in governance would reduce such a firm's likelihood of failing with systemically harmful consequences.[136] Reducing systemic risk can yield a very high benefit because the magnitude and harmful consequences of a systemic collapse, if it occurs, could be devastating.[137] The Dodd-Frank Act itself regards those consequences as so harmful that it directs the Federal Reserve, when regulating to mitigate risks to the financial stability of the country, to bypass consideration of costs and benefits.[138]

5. *Balancing the consequences*. Balancing these consequences, the bond-market change may well justify changing corporate governance law for systemically important

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significant shift in bondholder financing of corporations. *See supra* notes 114-117 and accompanying text.

[134] *Cf*. Executive Order 12866 (requiring CBA for "economically significant" rules that "adversely affect in a material way the economy, a sector of the economy, productivity, competition, [or] jobs").

[135] *Rethinking Corporate Governance*, *supra* note 124.

[136] *Rethinking Corporate Governance*, *supra* note 124. *Cf*. Peter O. Muelbert & Alexander Wilhelm, *CRD IV Framework for Banks' Corporate Governance*, *in* EUROPEAN BANKING UNION 196-97 (Danny Busch & Guido Ferrarini, eds., 2015) (observing that "it seems that in jurisdictions which prioritize shareholder supremacy, bank managements are indeed encouraged to take significantly more risk"). This is somewhat anomalous because systemic risk is a market failure that does not result from, but yet (through that change in law) can be mitigated by, the bond-market change.

[137] *See, e.g.*, Steven L. Schwarcz, *Systemic Risk*, 97 GEO. L.J. 193, 204 (2008). Estimates of the cost of the financial crisis are in the trillions. *See, e.g.*, Tyler Atkinson, David Luttrell, & Harvey Rosenblum, *How Bad Was It? The Costs and Consequences of the 2007-09 Financial Crisis*, Fed. Res. Bank of Dallas Staff Paper No. 20 (July 2013) (estimating the likely cost of the financial crisis to the United States as "greater than the value of one year's output," or greater than $15.5 trillion).

[138] BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, *supra* note 47, at 13 (stating that "cost-benefit analysis was not chosen as the primary calibration framework for the GSIB surcharge for two reasons [of which the first is that] it is not directly related to the mandate provided by the Dodd-Frank Act, which instructs the Board to mitigate risks to the financial stability of the United States").

firms, to include both bondholders and shareholders in a dual-duty approach to governance. I next apply the hypothesis to analyze how the bond-market change should drive changes in damages law.

IV. TESTING THE HYPOTHESIS UNDER DAMAGES LAW

To begin the examination of whether the bond-market change should drive a change in damages law, Subpart A provides an overview of that law. Thereafter, Subpart B analyzes whether the bond-market change should drive that legal change.

A. Overview of Damages Law

Courts generally award damages to preserve the reasonable expectations of an injured party.[139] Thus, they award damages for the market-value losses of securities, such as shares of stock, that "are normally purchased with an eye toward a later sale."[140] The historical rationale for awarding damages this way is to reduce the likelihood of private retribution by restoring a sense of fairness.[141] The more modern rationale is to align incentives ex ante,[142] making promises credible and inducing the optimal level of performance.[143]

Bondholder damages are traditionally calculated on the assumption that bonds are held to maturity.[144] Bondholders would thus be harmed, and damages would therefore be

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[139] *Compensating Market Value Losses*, *supra* note 55, at 1062.
[140] Dura Pharm., Inc. v. Broudo, 544 U.S. 336, 342 (2005). *See id.* at 345 (indicating that the purpose of the securities laws is "to protect [investors] against those economic losses that misrepresentations actually cause"). Congress has gone so far as making market value loss a required element in an action for securities fraud. 15 U.S.C. § 78u-4(b)(4) (2006).
[141] *Compensating Market Value Losses, supra* note 55, at 1060.
[142] *Id.* at 1060-61.
[143] *Id.* at 1061
[144] *Cf. supra* notes 49-50 and accompanying text (observing that most corporate bonds were historically held by investors to maturity; therefore investors in those bonds expected to receive their value through principal and interest payments).

measured, by a reduction in the payment of principal and interest.[145] For example, In *Metropolitan Life Insurance Co. v. RJR Nabisco, Inc.*,[146] decided before the bond-market change established bond trading as the norm it is today, plaintiff MetLife argued that RJR's leveraged buyout caused the RJR bonds held by MetLife to lose their investment-grade rating,[147] causing the resale price of the bonds to plummet.[148] MetLife argued that its damages should include this price loss but the court disagreed, reasoning that loss did not constitute the "fruits of the agreement" under which the bonds were issued[149]—such "fruits" being "the periodic and regular payment of interest and the eventual repayment of principal."[150]

The bond-market change reflects a change in bondholder expectations, tying the value of corporate bonds to their trading price.[151] Bondholders would now be harmed by a reduction in that price. Should damages law be changed accordingly, to allow damages to be calculated based on that reduction?[152]

B. Analysis: Should Damages Law be Changed?

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[145] For a comprehensive analysis of whether damages should include the loss in market value of wrongfully affected property, *see Compensating Market Value Losses*, *supra* note 55).
[146] 716 F. Supp. 1504 (S.D.N.Y. 1989).
[147] For a description of how bond ratings are structured, see Steven L. Schwarcz, *Private Ordering of Public Markets: The Rating Agency Paradox*, 2002 U. ILL. L. REV. 1, 7 ("[T]he highest rating on long-term debt securities is AAA, with ratings descending to AA, then to A, and then to BBB and below. . . . The higher the rating, the lower the rating agency has assessed the credit risk associated with the securities in question. . . . Ratings below BBB- are deemed non-investment grade, and indicate that full and timely repayment on the securities may be speculative." (internal quotation marks omitted)).
[148] *RJR Nabisco*, 716 F. Supp. at 1506.
[149] *Id.* at 1518.
[150] *Id*. Even after RJR's leveraged buyout, these payments were expected to continue. *Id.* at 1519.
[151] *See supra* notes 50-55 and accompanying text.
[152] If damages law should be so changed, that change could result from legislative action or from judicial decisionmaking.

Applying this essay's hypothesis to try to answer that question, I first identify the market failures relating to damages resulting from the bond-market change and analyze the consequences of those failures. If a market failure causes material harm, I consider legal changes that could correct the harmful failure, examine the consequences of making those changes, and finally balance consequences to reach a course of action.

1. *Identifying the market failures relating to damages resulting from the bond-market change*. As discussed, the bond-market change alters the reasonable expectations of injured bondholders, who now tend to view their bond investment decisions from a market-pricing standpoint, based on trading price.[153] As a result, the traditional method of calculating damages, which ignores bond trading price, may no longer protect the reasonable expectations of an injured bondholder. This can cause an agency failure due to misaligned incentives between a firm and its bondholders.[154] It also allows parties to harm bondholders without having to internalize the cost of their harm, thereby creating externalities.[155]

2. *Analyzing the consequences of those market failures*. These market failures can undermine the credibility of contractual promises and thereby reduce the optimal level of performance.[156] If bondholders do not feel protected by their contracts, they may rationally underinvest, depriving firms of a critical source of funding.[157] These market failures can also create moral hazard by motivating the firm to engage in excessively

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[153] *See supra* notes 55-56 and accompanying text (also observing that bondholders are less likely to view their bond-investment decisions from a periodic-payment standpoint).
[154] *Cf. Metropolitan Life Insurance Co. v. RJR Nabisco, Inc.*, *supra* note 146 (in which a firm's decision to engage in a leveraged buyout significantly harmed its bondholders); David M.W. Harvey, *Bondholders' Rights and the Case for a Fiduciary Duty*, 65 ST. JOHN'S L. REV. 1023, 1029 (1991) (describing ways in which stockholders may expropriate value from bondholders, one example being a leveraged buyout).
[155] *Cf. supra* note 112 (although economists regard externalities as a market failure, I argue they are more accurately the effect of a market failure).
[156] *See supra* notes 142-143 and accompanying text.
[157] They might also attempt to strengthen their contracts, wasting time and resources trying to negotiate protective covenants. *Cf. supra* notes 119-123 and accompanying text (explaining why that effort would likely fail).

risky ventures, with the risk externalized to the bondholders. And although less likely, these market failures might tempt a bondholder who felt unfairly injured to engage in private retribution.[158]

Because these market failures can have significantly harmful consequences, I next examine how damages law could be changed to correct the failures.

3. *Examining how damages law could be changed to correct those market failures*. This change should be relatively simple: allow bondholders to calculate damages based on the reduction in trading price.[159] For example, assume a third party tortiously harms a firm, reducing the firm's net worth from $100 million to $10 million. Further assume that net-worth reduction causes the firm's bonds to drop in trading price from $5,000 per bond to $4,500 per bond.[160] Because the firm would still be solvent (and thereby presumably able to pay principal and interest on the bonds), bondholders would have no damages under the traditional method of calculation. If, however, damages were instead calculated based on the reduction in trading price, bondholders would have a $500-per-bond claim against the tortfeasor.[161]

4. *Analyzing the consequences of making that change in law*. Changing damages law would greatly reduce the harmful consequences of the aforesaid market failures relating to damages. As shown, the change itself would be relatively simple. The change should also not be costly. It would only apply when bondholders obtain an enforceable judgment and need to calculate damages. It would be unlikely to impair corporate

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[158] *See supra* note 141 and accompanying text.
[159] This is an exception to the observation that objectivity would best be achieved by examining a range of possible legal changes. *See supra* notes 43-44 and accompanying text. The change here appears to be straightforward.
[160] For a detailed analysis of why the bonds' trading price could drop, see *Rethinking Corporate Governance*, *supra* note 124.
[161] The above calculation assumes the bondholders' claims are not subject to a defense of being for pure economic loss. Most jurisdictions in the United States now allow at least some recovery for pure economic loss. *Compensating Market Value Losses*, *supra* note 55, at 1055.

profitability except, possibly, at the margin where managers might become reticent to undertake risky ventures that could reduce their firm's credit rating.[162]

5. *Balancing the consequences*. Balancing these consequences, it would appear that the bond-market change should drive a change in damages law, to allow bondholders to calculate damages based on the reduction in a bond's trading price. Courts may already be reaching this same result, although without clearly articulating their rationale. Just a few years ago, for example, on facts virtually identical to the *RJR Nabisco* case,[163] the Canadian Supreme Court awarded bondholders damages based on the reduction in the trading price of their bonds.[164] Plaintiff-bondholders argued that the bond issuer's board of directors had acted inappropriately in agreeing to a leveraged buyout that would have caused the bonds to lose their investment-grade rating, thereby diminishing their value.[165] The Court awarded damages based on that diminished value.[166]

V. CONCLUSIONS

This essay uses consequence-based analysis to derive a normative framework for determining when financial market changes should drive legal changes. That framework can improve the current ad hoc and politically distorted lawmaking process, which often results in over- or under-reactive legal changes that are made too late, after harm has occurred. Under the framework, the extent to which financial market changes should drive legal changes should depend on the consequences of the market failures resulting from financial market changes and the consequences of changing the law to attempt to correct those market failures.

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[162] [Might there be any consequences to parties managing or contracting with the firm? cite1]
[163] *See supra* note 146 and accompanying text.
[164] BCE Inc. v. 1976 Debentureholders, [2008] 3 S.C.R. 560 (Can.).
[165] *Id*. at 563.
[166] *Id*. at 565.

This consequence-based analysis is broader in several ways than traditional cost-benefit analysis, addressing not only the "how" but also the "when" of regulation and also addressing the "how" more objectively than cost-benefit analysis. Whereas cost-benefit analysis assumes a decision, which may well be politically motivated, to implement specific proposed regulation if its benefits exceed its costs, consequence-based analysis begins by identifying market failures resulting from a change in financial markets and examining the consequences of those failures. If those consequences are significantly negative, consequence-based analysis gets to the next step of considering legal changes that could correct the harmful failures, examining the consequences of making those changes, and finally balancing consequences to reach a course of action. That next step is more objective than cost-benefit analysis because it does not necessarily start with any specific proposal and thus avoids confirmation bias.[167]

Because its first step is identifying market failures that result from financial market changes, a real-world application of consequence-based analysis would start with identifying those failures. To that end, governments might want to consider proactively monitoring changes in their financial markets to try to recognize market failures that could cause harmful consequences. A full analysis of proactive monitoring, including processes and procedures by which monitors could try to recognize those failures, is beyond this essay's scope.[168]

Regulatory agencies in the United States do not generally appear to have any formally systematized monitoring obligations.[169] Further analysis of proactive monitoring might focus, however, on the U.S. Financial Stability Oversight Council (FSOC), which

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[167] Another possible difference is that consequence-based analysis does not assume that the relevant consequences can always be precisely measured. Consequence-based analysis may therefore better comport with the messy reality of financial regulation. *See supra* notes 46-47 and accompanying text.

[168] [Does Gerding's proposal that regulators should try to ascertain when bubbles arise (*see supra* note 69 and accompanying text) inform this monitoring? cite1]

[169] *See supra* note 29 (observing that, even under the first principle of regulation articulated in Executive Order 12866, regulatory agencies have not been required to proactively systematize the identification of market failures).

appears to have some responsibility, or at least authority, to proactively monitor financial market failures that could cause systemically harmful consequences.[170] That responsibility might reflect a decision that the benefits of avoiding systemically harmful consequences[171] justify the costs of proactive monitoring.[172] It might also reflect the statutory policy of the Dodd-Frank Act, which established FSOC, to regard financial stability as a paramount goal.[173] I also have noted that proactive monitoring occurs in the commercial law context,[174] but that is a special case.[175]

This essay does not examine consequence-based analysis beyond the financial market context. Nonetheless, consequence-based analysis would appear to have the potential for more general application, perhaps even for determining when non-financial market (or possibly even non-market) changes should drive legal changes.

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[170] [cite1A. And does that responsibility/authority extend beyond financial firms to financial markets? FSOC's by-laws (emphasis added) suggests it does: "§ XXX.4. Information Collection and Sharing. (a) Information Collection from the OFR, Member Agencies, the FIO, and Other Federal and State Financial Regulatory Agencies.—The Council shall collect any data or information from member agencies and the FIO as necessary to carry out the duties of the Council under the Act, *including monitoring the financial services marketplace to identify and assess risks to the United States financial system*." But FSOC's website suggests that's not part of its actual current focus: "By statute, the Council has a duty to facilitate the sharing of data and information among the member agencies. In instances where available data proves insufficient, the Council has the authority to direct the OFR [Office of Financial Research] to collect information from certain individual financial companies in order to assess risks to the financial system." *See* https://www.treasury.gov/initiatives/fsoc/about/Pages/default.aspx.]

[171] *Cf. supra* notes 137-138 and accompanying text (showing that the consequences of a systemic collapse could be devastating).

[172] *Cf. supra* note 95 and accompanying text (observing that routine ongoing monitoring and updating of law in response to changes in financial architecture can be costly).

[173] *See supra* note 138 and accompanying text.

[174] *See supra* notes 93-94 and accompanying text.

[175] *See supra* note 100 and accompanying text.