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Synthetic Governance

Finance Working Paper N° 693/2020
Revised September 2021

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This paper can be downloaded without charge from:
https://doi.org/10.67929/ecgi-fin-693-2020

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ECGI Working Paper Series in Finance

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Abstract

Although securities regulation is distinct from corporate governance, the two fields have considerable substantive overlap. By increasing the transparency and efficiency of the capital markets, securities regulation can also enhance the capacity of those markets to discipline governance decisions. The importance of market discipline is heightened by the increasingly vocal debate over what constitutes "good" corporate governance.

Securities product innovation offers new tools to address this debate. The rise of index-based investing provides a market-based mechanism for selecting among governance options and evaluating their effects. Through the creation of bespoke governance index funds, asset managers can create indexes that correspond to investors' governance preferences. We argue that this "synthetic governance" offers a way to gather evidence on the economic impact of corporate governance by providing a market-based tool for evaluating the relationship between corporate governance and stock returns.

We illustrate the potential of synthetic governance by creating a new governance-based index, the Dual Index, which selects portfolio companies on the basis of a dual class voting structure and comparing its performance to various benchmarks. We further modify the Dual Index by implementing synthetic sunsets to highlight the value creation of dual class companies in their early years and provide evidence on the appropriate length of a time-based sunset provision. Finally, we expand our analysis of synthetic governance with a second index—the Split Index—which tests the effect of separating the positions of CEO and Chairman of the Board. We conclude that synthetic governance demonstrates the ability of securities market innovation to discipline corporate governance.

Keywords: Law and economics, corporate governance, capital markets, securities regulation, mutual funds, dual-class stock, shareholder voting, investment choices, asset management, index funds, split board chair and CEO

JEL Classifications: G11, G32, G38, K22

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SYNTHETIC GOVERNANCE

Byung Hyun Ahn, Jill E. Fisch, Panos N. Patatoukas, & Steven Davidoff Solomon*

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I. Introduction 477
II. The Debate over Corporate Governance 483
III. Synthetic Governance 489
A. Index Investing 490
B. The Dual Class Controversy 499
IV. The Dual Index—a Case Study of Synthetic Governance 505
A. Dual Index Construction 506
B. Dual Index Characteristics 508
C. Back-Testing Results 511
D. The Effect of Sunset Lengths 513
V. The Split Index 515
VI. Implications 517
VII. Conclusion 518

I. INTRODUCTION

The relationship between corporate law and securities regulation is complex.[1] When Congress adopted the federal securities laws, it consciously rejected a federal corporation statute in favor of disclosure-based regulation of the capital markets that would co-exist with state corporation law.[2] That system of dual sovereignty remains to the present day. Nonetheless, there is substantial overlap between the two

[1] *See, e.g.*, James J. Park, *Reassessing the Distinction Between Corporate and Securities Law*, 64 UCLA L. REV. 116, 118 *2017) ("The relationship between corporate and securities law has always been a close one[.]").

[2] *See, e.g.*, Manuel F. Cohen, Chairman, U.S. Sec. & Exch. Comm'n, Federal Corporation Law, *in* 20 J. LEGAL EDUC. 529, 529 (1968) ("As you know, Congress has consistently rejected proposals for a general federal corporation statute.").

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regulatory systems. Both state and federal law regulate the shareholder voting process.[3] Federal securities litigation has been used as a tool to supplement limited state law remedies for officer and director misconduct.[4] And the Sarbanes-Oxley Act of 2002 expanded federal regulation to a range of corporate governance practices.[5]

The entangling of state and federal law stems, in part, from the fact that the capital markets serve to discipline corporate behavior. A corporation's choice of its state of incorporation and its governance structure, as well as the quality of its management and business strategy, are reflected in the market price of its stock.[6] By promoting transparent and efficient capital markets, federal securities regulation thus has the potential to increase the market's ability to promote economically beneficial corporate law and governance.

Capital market innovation can enhance this process. Today's capital markets do not limit investors to purchasing traditional stocks and bonds. New investment products abound—from stock slices, to indexed ETFs, to SPACs. These products allow investors to invest in a broad range of businesses, frequently at low transaction costs made possible through automation and scale. They also allow investors to increase their diversification as well as invest in a more directed manner. These innovative products can spur

3 *See, e.g.*, Jill E. Fisch, *From Legitimacy to Logic: Reconstructing Proxy Regulation*, 46 VAND. L. REV. 1129, 1132 (1993) (describing "the dual system under which shareholder voting is regulated, which includes both the federal proxy rules and state corporation law").

4 *See, e.g.*, Robert B. Thompson & Hillary A. Sale, *Securities Fraud as Corporate Governance: Reflections upon Federalism*, 56 VAND. L. REV. 859, 863 (2003) (demonstrating empirically that "federal securities fraud litigation operates much like state fiduciary duty litigation in policing corporate governance").

5 Roberta Romano, *The Sarbanes-Oxley Act and the Making of Quack Corporate Governance*, 114 YALE L.J. 1521, 1523 (2005) (describing Congress as introducing through the Sarbanes-Oxley Act "a series of corporate governance initiatives into the federal securities laws").

6 *See* Ralph K. Winter, Jr., *The Development of the Law of Corporate Governance*, 9 DEL J. CORP. L. 524, 527–28 (1984).

Electronic copy available at: https://ssrn.com/abstract=3645312

companies to adopt more economically beneficial characteristics.

We introduce one such product here that highlights the potential of the new securities market: the bespoke governance index fund. Advances in the structure and scope of our capital markets now allow investors to select into investment products that implement their governance preferences. We term this approach "synthetic governance." More specifically, we argue that investors can use index funds to structure their investment decisions based on their assessments as to which corporate governance structures can (and cannot) create economic value.[7] Such funds provide market-based mechanisms for evaluating the relationship between corporate governance and economic value—a relationship that is, in many areas, hotly contested. In short, synthetic governance provides a new tool by which the capital markets can discipline corporate governance.

In this Article we develop the concept of synthetic governance. We explain that existing securities regulation has facilitated the growth of index investing as a strategy for enabling investors to obtain a diversified portfolio at a relatively low cost. These features, as well as economies of scale, have led to substantial inflows into index funds.[8]

Although the initial index funds were based on broad market indexes such as the S&P 500, index investing can be used to implement any rules-based approach to investment selection and portfolio composition.[9] Consequently, index fund

[7] Index funds do not make information-based trading decisions and instead hold securities based on their inclusion in a designated index. *See* Jill Fisch, Assaf Hamdani & Steven Davidoff Solomon, *The New Titans of Wall Street: A Theoretical Framework for Passive Investors*, 168 U. PA. L. REV. 17, 19 (2019) (describing index investing). We use the term "index fund" here to include both indexed mutual funds and exchange-traded funds (ETFs). ETFs are "publicly traded on the [secondary] market rather than purchased directly from (or sold to) the fund sponsor." *Id.* at 19 n.4.

[8] *See* Lucian Bebchuk & Scott Hirst, *The Specter of the Giant Three*, 99 B.U. L. REV. 721, 727, 729 (2019).

[9] *See* Andrew W. Lo, *What Is an Index?*, J. PORTFOLIO MGMT., Winter 2016, at 21, 22–25 (recounting the history of index funds and explaining that an index must be transparent, investible, and systematic, the latter

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sponsors have created an ever-expanding variety of specialized or bespoke index funds.[10] The SHE ETF tracks the SSGA Gender Diversity Index, which is comprised of companies that are advancing women on their boards and in senior management.[11] Another example, the BUZZ ETF, was launched in March 2021, following the social-media-fueled trading frenzy in meme stocks.[12] BUZZ tracks an index of stocks based on their popularity on social media.[13]

We argue that index technology similarly enables investors to select into or out of preferred governance mechanisms, more closely tying the capital markets with the market for corporate governance. Although large asset management firms do not currently appear to offer investors index funds that invest on the basis of governance provisions, such indexes could allow investors to exclude firms that incorporate value-decreasing governance provisions without sacrificing the low cost and diversification afforded by an index strategy.[14]

Notably, synthetic governance allows investors to make governance-based investment decisions without the heavy hand of regulatory intervention. Rather than the Securities and Exchange Commission (SEC) or the stock exchanges prohibiting the use of dual class voting structures, synthetic

"meaning that the index's construction must be rules-based and not dependent on any discretion or human judgment"); Adriana Z. Robertson, *Passive in Name Only: Delegated Management and "Index" Investing*, 36 YALE J. ON REGUL. 795, 810–33 (2019) (providing a taxonomy of index types).

10 Robertson, *supra* note 9, at 821 (explaining the concept of a bespoke index).

11 *SPDR® SSGA Gender Diversity ETF*, U.S. NEWS & WORLD REP. (on file with the Columbia Business Law Review), https://money.usnews.com/funds/etfs/large-blend/spdr-ssga-gender-diversity-etf/she (last visited Apr. 7, 2021).

12 Emily Nicolle, *Why VanEck's New Meme Stocks ETF Might Not Be Reddit-Worthy*, BARRON'S, https://www.marketwatch.com/articles/why-vanecks-new-meme-stocks-etf-might-not-be-reddit-worthy-51615308160?mod=mw_quote_news [https://perma.cc/C8BY-P9N7] (last updated Mar. 9, 2021, 11:46 AM).

13 *Id.*

14 Actively-managed funds can take governance factors into account, although the degree to which they do so is unclear, in part because actively-managed investment strategies are proprietary.

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governance would enable an investor to invest in a mutual fund that excludes dual class stocks.[15] Index fund strategies could also be tailored more precisely. So, for example, rather than excluding all dual class firms from its portfolio, a fund could disinvest from companies with dual class stock if the dual class does not sunset after a pre-specified period of time, creating, in effect, a synthetic sunset.

We argue that synthetic governance offers three potential benefits. First, it provides a market-based mechanism to test the economic value of controversial governance provisions. If critics of such governance provisions are correct, governance-based index funds should outperform their broad-based competitors. Second, synthetic governance may lead to more efficient allocation of capital by drawing inflows into funds that properly evaluate the economic value of governance. Third, synthetic governance can enhance management accountability by providing passive investors a mechanism for subjecting the governance choices of their portfolio companies to capital market discipline. There are also systemic effects—if bespoke governance indexes are successful in attracting investor assets, firms may proactively adopt specific governance practices to qualify for inclusion.

We go on to provide a practical illustration of our theory of synthetic governance by constructing and evaluating the performance of a novel bespoke governance index, the Dual Index.[16] The Dual Index permits the evaluation of dual class companies in response to the debate over dual class voting structures. The Dual Index further provides a tool for implementing sunset provisions for dual class voting structures by dropping companies from the index if they fail to eliminate that dual class structure after a pre-specified number of years following their IPOs. In other words, the Dual Index imposes a synthetic sunset for dual class companies.

[15] *See infra* Section IV.A (evaluating a portfolio using the opposite rule). As developed later, we distinguish an investment product that expressly selects for or against a particular governance provision from a decision by a broad-based index such as the S&P 500 to exclude a firm based on governance criteria.

[16] *See infra* Part IV.

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We examine the performance of this index over a period of time. We find that over a back-testing period from June 2009 to December 2019, the Dual Index earned an annual return of 19.23% with a standard deviation of 14.39%, while the market index earned an annual return of 14.98% with a standard deviation of 12.98%. The Dual Index performance corresponds to a monthly multi-factor alpha of thirty-one basis points. We modify the Dual Index by implementing synthetic sunsets to provide evidence on the appropriate length of a time-based sunset provision. Our results highlight that value creation in the Dual Index occurs to a greater extent in the early years after a dual class firm's IPO.

We expand our analysis of synthetic governance with a second index—the Split Index—which tests the effect of separating the positions of CEO and chairman of the board. We find that the Split Index outperforms the market as well.

Our findings support our thesis that synthetic governance can be used to generate excess returns. They also highlight the importance of securities market innovation as a response to changing firm structures and governance norms. The performance of both the Dual Index and the Split Index run contrary to conventional wisdom about "best practices" in corporate governance. Although regulators have raised concerns about the potential complexity and opacity of new market products,[17] these products demonstrate the continuing effectiveness of the market as an alternative to one-size-fits-all investment and governance practices in an evolving economy.

[17] *See* Press Release, Jay Clayton, Chairman, U.S. Sec. & Exch. Comm'n, Dalia Blass, Dir., Div. of Inv. Mgmt., U.S. Sec. & Exch. Comm'n, William Hinman, Dir., Div. of Corp. Fin., U.S. Sec. & Exch. Comm'n & Brett Redfearn, Dir., Div. of Trading & Mkts., U.S. Sec. & Exch. Comm'n, Joint Statement Regarding Complex Financial Products and Retail Investors (Oct. 28, 2020), https://www.sec.gov/news/public-statement/clayton-blass-hinman-redfearn-complex-financial-products-2020-10-28 [https://perma.cc/9YN2-C8MJ] (noting the "increasing number and type of investment products that are more complex than conventional stock and bond investments" and warning of the risks that such products pose for retail investors).

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II. THE DEBATE OVER CORPORATE GOVERNANCE

Corporate governance is generally understood to concern the provisions within a corporation that enhance management accountability to shareholders and reduce the potential for managerial agency costs.[18] Corporate governance (as opposed to corporate law) focuses on the internal structures of the corporation and on firm-specific choices among legally permissible structures.[19] Common elements of corporate governance include board size and composition, shareholder rights and the balance of power between shareholders and directors, and, in some jurisdictions, the role of non-shareholder stakeholders.[20] A variety of specific provisions fall within this general framework, such as the proportion of independent directors on the board, whether the board is classified or subject to election annually, and the ability of shareholders to influence board composition and corporate operations through the power to nominate director

[18] *See, e.g.*, Andrei Shleifer & Robert W. Vishny, *A Survey of Corporate Governance*, 52 J. FIN. 737, 740–41 (1997) (explaining that corporate governance seeks to answer the question: "[H]ow can financiers be sure that, once they sink their funds [into a firm], they get anything but a worthless piece of paper back from the manager?"); Edward B. Rock, *America's Shifting Fascination with Comparative Corporate Governance*, 74 WASH. U. L.Q. 367, 389 (1996) (describing a common focus of corporate governance as "the question of how we can make managers sufficiently accountable so that they will manage the corporation for the shareholders").

[19] *See generally* Brian R. Cheffins, *The History of Corporate Governance*, *in* THE OXFORD HANDBOOK OF CORPORATE GOVERNANCE 46 (Mike Wright, Donald S. Siegel, Kevin Keasey & Igor Filatotchev eds., 2013) (detailing the evolution and usage of the term "corporate governance").

[20] *See generally id.* For a broad discussion of corporate governance principles and an effort to "identify the key building blocks for a sound corporate governance framework," see ORG. FOR ECON. COOP. & DEV., G20/OECD PRINCIPLES OF CORPORATE GOVERNANCE 7–11 (2015), https://www.oecd-ilibrary.org/docserver/9789264236882-en.pdf?expires=1617805953&id=id&accname=ocid177456&checksum=951917299644D4B2329CEC0E7D2246C3 [https://perma.cc/F3S3-B73N].

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candidates, call special meetings, and act through written consents.[21]

The question of what constitutes "good corporate governance" is polarizing. Many large institutional investors support governance mechanisms that increase managerial accountability to shareholders and characterize mechanisms that insulate management from shareholder interference as entrenchment.[22] Accordingly, institutional investors, proxy advisory firms, and other participants in corporate governance debates have developed guidelines of corporate governance practices that emphasize shareholder power.[23] Other commentators argue that the emphasis on shareholder democracy sacrifices managerial discretion and creates the risk of shareholder opportunism.[24] In addition, some commentators challenge the notion that a standard set of good governance practices exists, arguing instead for firm-specific governance structures tailored to each firm's idiosyncratic needs and characteristics.[25]

In an effort to provide empirical support for the competing calls for regulatory reform or issuer freedom, scholars have sought to evaluate the impact of corporate governance both on

[21] *See* ORG. FOR ECON. COOP. & DEV., *supra* note 20, at 21–23 (discussing these provisions).

[22] *See generally* Fisch et al., *supra* note 7 (detailing the attempts of institutional investors to improve corporate governance).

[23] *See, e.g.*, COUNCIL OF INST. INVS., CORPORATE GOVERNANCE POLICIES 5–7 (2017), https://www.cii.org/files/policies/09_15_17_corp_gov_policies.pdf [https://perma.cc/2PVB-5UGD].

[24] *See, e.g.*, Stephen M. Bainbridge, *Director Primacy: The Means and Ends of Corporate Governance*, 97 NW. U. L. REV. 547, 605 (2003) ("[T]he board of directors is not a mere agent of the shareholders, but rather is a sort of Platonic guardian serving as the nexus of the various contracts making up the corporation.").

[25] *See, e.g.*, Martin Lipton, *One Size Does Not Fit All*, HARV. L. SCH. F. ON CORP. GOVERNANCE (Oct. 16, 2019), https://corpgov.law.harvard.edu/2019/10/16/one-size-does-not-fit-all/ [https://perma.cc/8GQM-X4G9] (endorsing "the ringing truth of the oft heard 'one size doesn't fit all' criticism of the stylized corporate governance principles promulgated by organizations like Institutional Shareholder Services, Glass Lewis, Council of Institutional Investors and many major institutional investors").

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overall economic performance[26] and on more specific issues such as a firm's investment in research and development,[27] and the likelihood that a firm will be involved in financial fraud or other misconduct.[28] Hundreds of such studies have attempted to assess the value of governance provisions such as independent boards,[29] takeover defenses,[30] and Delaware incorporation.[31]

Despite the extensive effort that has gone into empirical analyses, there is limited consensus on the desirability of most corporate governance provisions.[32] On the most hotly

[26] *See, e.g., generally* Sanjai Bhagat & Bernard Black, *The Non-Correlation Between Board Independence and Long-Term Firm Performance*, 27 J. CORP. L. 231 (2002) (attempting to evaluate the effect of board independence on firm financial performance); Ryan Krause, Matthew Semadeni & Albert A. Cannella, Jr., *CEO Duality: A Review and Research Agenda*, 40 J. MGMT. 256 (2014) (reviewing empirical work on the effect of separating the positions of CEO and chairman of the board).

[27] *See, e.g., generally* Diego Asensio-López, Laura Cabeza-García & Nuria González-Álvarez, *Corporate Governance and Innovation: A Theoretical Review*, 28 EUR. J. MGMT. & BUS. ECON. 266 (2019) (reviewing empirical literature analyzing the relationship between corporate governance and innovation).

[28] *See, e.g., generally* Mark S. Beasley, *An Empirical Analysis of the Relation Between the Board of Director Composition and Financial Statement Fraud*, 71 ACCT. REV. 443 (1996); Patricia M. Dechow & Douglas J. Skinner, *Earnings Management: Reconciling the Views of Accounting Academics, Practitioners, and Regulators*, 14 ACCT. HORIZONS 235 (2000).

[29] *See, e.g., generally* Bhagat & Black, *supra* note 26.

[30] *See, e.g.*, Lucian Arye Bebchuk, John C. Coates IV & Guhan Subramanian, *The Powerful Antitakeover Force of Staggered Boards: Theory, Evidence, and Policy*, 54 STAN. L. REV. 887, 889–92 (2002); Lucian Bebchuk, Alma Cohen & Allen Ferrell, *What Matters in Corporate Governance?*, 22 REV. FIN. STUD. 783, 823 (2009).

[31] *See, e.g.*, Robert Daines, *Does Delaware Law Improve Firm Value*, 62 J. FIN. ECON. 525, 553 (2001) (finding Delaware corporations to be worth more than comparable firms incorporated in other states); Guhan Subramanian, *The Disappearing Delaware Effect*, 20 J.L. ECON. & ORG. 32, 41–43 (2004) (reporting that Daines's findings did not persist over time).

[32] *See* Matthew D. Cain, Jill E. Fisch, Sean J. Griffith & Steven Davidoff Solomon, *How Corporate Governance Is Made: The Case of the Golden Leash*, 164 U. PA. L. REV. 649, 657 (2016) ("Corporate governance research has . . . focused on the empirical question of whether and how particular governance terms are priced as a necessary first step in

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contested issues, scholars reach conflicting results. On the question of whether a staggered board of directors affects firm value, for example, one group of scholars has consistently argued that staggered boards reduce value.[33] A second group finds the opposite—that staggered boards increase the value of at least some firms.[34] A third set of scholars critiques both groups' studies and concludes that the effect of a staggered board is idiosyncratic and firm-specific.[35]

Similarly, the empirical evidence on the economic impact of dual class voting structures is mixed. A number of studies have shown that dual class stock enhances agency costs and reduces returns.[36] The challenge is that these were studies of older dual class firms such as media companies.[37] Newer studies that focus on technology firms have found that, at least in some cases, dual class firms outperform firms with

answering whether particular governance provisions are good or bad. Unfortunately, whether and how the market prices corporate governance remains subject to dispute, as a review of the recent literature shows.").

[33] Lucian A. Bebchuk & Alma Cohen, *The Costs of Entrenched Boards*, 78 J. FIN. ECON. 409, 410–11 (2005) [hereinafter Bebchuk & Cohen, *Entrenched Boards*]; *see also supra* note 30.

[34] K.J. Martijn Cremers, Lubomir P. Litov & Simone M. Sepe, *Staggered Boards and Long-Term Firm Value, Revisited*, 126 J. FIN. ECON. 422, 424 (2017); David F. Larcker, Gaizka Ormazabal & Daniel J. Taylor, *The Market Reaction to Corporate Governance Regulation*, 101 J. FIN. ECON. 431, 433 (2011); *cf. also* Martijn Cremers & Allen Ferrell, *Thirty Years of Shareholder Rights and Firm Value*, 69 J. FIN. 1167, 1186 (2014) (finding different effects in different periods).

[35] Yakov Amihud, Markus Schmid & Steven Davidoff Solomon, *Settling the Staggered Board Debate*, 166 U. PA. L. REV. 1475, 1505 (2018).

[36] Ronald W. Masulis, Cong Wang & Fei Xie, *Agency Problems at Dual-Class Companies*, 64 J. FIN. 1697, 1722 (2009) (finding that dual class stock is associated with increased agency costs and reduced market value to minority shareholders); Paul A. Gompers, Joy Ishii & Andrew Metrick, *Extreme Governance: An Analysis of Dual-Class Firms in the United States*, 23 REV. FIN. STUD. 1051, 1084–85 (2010) (reporting that dual class companies were associated with higher agency costs and lower firm value).

[37] Both the Gompers et al. and Masulis et al. studies are based on the same sample of U.S. firms from 1994 to 2002. *See* Masulis et al., *supra* note 36, at 1700, 1717 & n.22 (describing the sample).

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one share/one vote structures.[38] Studies also provide support for the proposition that the economic value of a dual class structure evaporates over time, although these studies document confounding factors such as a decline in the economic stake and involvement of the founder.[39] These findings reinforce the notion that dual class structures allow founders to focus on the long term, but that performance dissipates as founders sell their stakes or reduce their efforts to develop the business.

One reason for the failure of empirical analysis conclusively to resolve the value of governance mechanisms is that the empirical methodology faces several challenges. For example, the research design of most studies allow them to identify correlation, but evidence on causality remains limited. As one commentator explains, "[e]ven those who have written extensively on the correlation of governance, generally or with respect to specific governance factors, with company performance have largely rejected the existence of a causal connection."[40]

In addition, many studies of corporate governance suffer from an endogeneity problem. They cannot separate out whether governance is causing a value increase in the firm or governance is a proxy for other characteristics which enhance firm value.[41] In other words, it may simply be the case that well-managed firms have good corporate governance, and that poorly-managed firms do not. Studies of dual class stock raise particular concerns about endogeneity.[42] An issuer's decision to go public with a dual class voting structure may reflect its superior performance, which makes shareholders willing to

38 *See* Jill Fisch & Steven Davidoff Solomon, *The Problem of Sunsets*, 99 B.U. L. REV. 1057, 1072–75 (2019) (describing empirical studies finding that dual class forms initially outperform but that this outperformance dissipates over time).

39 *Id.*

40 Laura Kabler, *Money in the Game: Executing a Governance-Based Hedge Fund Strategy*, 12 STAN. J.L. BUS. & FIN. 121, 122 (2006).

41 *See, e.g.*, Amihud et al., *supra* note 35, at 1501–05 (highlighting this issue in valuing the adoption or removal of staggered board provisions).

42 *See, e.g.*, Masulis et al., *supra* note 36, at 1719–20 (acknowledging and attempting to address the endogeneity problem).

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invest notwithstanding the firm's voting structure. In other words, dual class stock may be a result of the issuer's high performance rather than the cause of that performance. Moreover, the growth in dual class companies has occurred relatively recently, posing challenges in empirically assessing its long-term effect. It may be that the studies finding impact of dual class are dependent upon an early crop of technology outperformers such as Google.[43]

In addition, it is unclear whether a given governance provision will affect all issuers the same way. A substantial percentage of corporate governance studies assume that it will, examining the effect of a particular corporate governance provision across all firms and evaluating the effect of that provision on the average firm.[44] Yet this assumption is problematic. Firms differ substantially along various dimensions, and the effects of specific governance terms may be heterogenous as well. Thus, for example, Martijn Cremers, Lubomir Litov, and Simone Sepe found that, when they differentiated among firms, the effect of a classified board was positive for some firms and negative for others.[45] Amihud, Schmid, and Solomon take this approach even further and find that the staggered board on average has no effect on firm value, and any measurement is also idiosyncratic.[46]

These challenges have limited the success of empirical studies in distinguishing good governance provisions from bad ones. In the absence of conclusive empirical evidence, much of the debate over corporate governance measures has become policy-oriented—based on idiosyncratic preferences of capital

[43] Google went public in 2004 with a dual class structure. Google Inc., Amendment No. 9 to Form S-1 Registration Statement (Form S-1/A), at 29–30 (Aug. 18, 2004).

[44] *See e.g.*, Bebchuk & Cohen, *Entrenched Boards*, *supra* note 33, at 419–30 (reporting results across all sample firms); Paul Gompers, Joy Ishii & Andrew Metrick, *Corporate Governance and Equity Prices*, 118 Q.J. ECON. 107, 129, 130 tbl.IX (2003) (same).

[45] *See* Cremers et al., *supra* note 34, at 424 ("Our results suggest that the role of staggered boards differs across firms in a way that both [insulation of management and signaling commitment to firm-specific investors] could play a role.").

[46] *See* Amihud et al., *supra* note 35, at 1505–07.

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markets actors and policymakers. Thus, for example, provisions that increase the power of shareholders relative to managers are defended in terms of democratic principles and accountability.[47] With this development, normative debate over certain provisions has become even more fractured. The example of dual class stock is again emblematic, as reflected, for example, in a former SEC Commissioner's statement that "asking investors to put eternal trust in corporate royalty is antithetical to our values as Americans."[48] These arguments have been used in support of banning certain governance provisions—prohibiting issuers from going public with those provisions, for example, or barring their securities from being listed on the stock exchanges.[49] Yet, as Dorothy Lund has observed, "without a consensus about what constitutes good governance, there is reason to believe that the proliferation of an unthinking, one-size-fits-all approach to governance will make many companies worse off."[50]

III. SYNTHETIC GOVERNANCE

Synthetic governance offers a capital markets solution to this conundrum. Rather than relying on regulators to identify and impose best corporate governance practices, synthetic

[47] *See, e.g.*, Grant Hayden & Matthew T. Bodie, *Shareholder Democracy and the Curious Turn Toward Board Primacy*, 51 WM. & MARY L. REV. 2071, 2079 (2010) (describing two political theory ways of conceptualizing shareholder democracy: "a public choice approach and a civic republican approach"); Lisa M. Fairfax, *Making the Corporation Safe for Shareholder Democracy*, 69 OHIO ST. L.J. 53, 57 (2008) ("[S]hareholder democracy may enable shareholders to increase their advocacy on behalf of stakeholders.").

[48] Robert J. Jackson Jr., Comm'r, U.S. Sec. & Exch. Comm'n, Perpetual Dual-Class Stock: The Case Against Corporate Royalty (Feb. 15, 2018), https://www.sec.gov/news/speech/perpetual-dual-class-stock-case-againstcorporate-royalty [https://perma.cc/AN3N-RVY4].

[49] Indeed, regulations currently impose some such mandates. For example, the NYSE and Nasdaq listing requirements mandate that a majority of directors be independent. LISTED CO. MANUAL § 303A.01 (N.Y. Stock Exch. 2021); RULEBOOK § 5605(b)(1) (The Nasdaq Stock Mkt. 2021).

[50] Dorothy S. Lund, *The Case Against Passive Shareholder Voting*, 43 J. CORP. L. 493, 495 (2018).

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governance empowers investors to operationalize their governance preferences through their investment decisions. Further, synthetic governance generates the opportunity to evaluate the relationship of those preferences to stock price returns.

We first describe how the rise of index investing has created a vehicle in the securities markets for synthetic governance. We then explain the governance controversy to which this Article applies synthetic governance: the debate over dual class voting structures.

A. Index Investing

As the debate over governance rages in the corporate world, the rise of index funds has dramatically reformed the role of the capital markets in disciplining governance choices. Over the past decade, the percentage of assets invested in the U.S. equity markets through index funds has doubled—from seven percent in 2010 to approximately fourteen percent in 2019.[51] Because a passive investment strategy is less costly than active stock-picking, index funds typically charge investors lower fees than actively-managed mutual funds.[52] The growth in index funds has also led, for a variety of reasons, to a concentration in the asset management market.[53] The "big three"—BlackRock, Vanguard, and State Street—collectively manage roughly eighty percent of the

[51] *See* Dawn Lim, *Index Funds Are the New Kings of Wall Street*, WALL ST. J. (Sept. 18, 2019, 5:30 AM) (on file with the Columbia Business Law Review), https://www.wsj.com/articles/index-funds-are-the-new-kings-of-wall-street-11568799004.

[52] *See* Jill E. Fisch, *The Uncertain Stewardship Potential of Index Funds*, *in* GLOBAL SHAREHOLDER STEWARDSHIP: COMPLEXITIES, CHALLENGES AND POSSIBILITIES (Dionysia Katelouzou & Dan W. Puchniak eds., forthcoming) (manuscript at 110) (on file with the Columbia Business Law Review), https://ssrn.com/abstract=3525355 ("Because they do not rely on costly firm-specific research, index funds incur lower management costs, and they pass these reduced costs on to mutual fund investors in the form of very low fees.").

[53] *See* Fisch et al., *supra* note 7, at 26 (noting that index fund sponsors "enjoy economies of scale which enable them to manage very large pools of assets at low cost.").

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index fund market and, as a result of the funds they manage, own roughly twenty percent of S&P 500 companies.[54]

Although there are thousands of indexes,[55] the vast majority of assets are invested in funds based on widely-known and broad-based market indexes. Adriana Robertson reports that almost $4 trillion in assets are invested in funds that track the S&P 500, and another almost $800 billion are invested in funds that track the CRSP U.S. Total Market index.[56] Together these indexes account for approximately half of the assets invested in index funds.[57]

A variety of studies have sought to analyze the effect of the rise in index investing on corporate governance and the capital markets.[58] At a minimum, an index-based investment strategy limits the ability of index fund managers to discipline portfolio companies through trading decisions. This issue has raised particular concern with respect to corporate governance. Because index funds are compelled to hold the portfolio companies in the underlying indexes, they cannot sell companies on the basis of bad governance or invest more in companies with high quality governance. This has led some commentators to express concern that growth in index investing will undermine the ability of the capital markets to discipline corporate governance through stock prices.[59] Other researchers provide evidence that index investing can facilitate informed trading for more arbitrage-constrained micro-cap stocks through the realization of short sales constraints.[60]

54 *See* Lim, *supra* note 51.

55 *Cf.* Robertson, *supra* note 9, at 811–12 (reporting 601 distinct indexes based on U.S. equities).

56 *Id.* at 816 tbl.4.

57 *Id.*

58 *See, e.g., generally* Fisch et al., *supra* note 7.

59 *See, e.g.*, Vladyslav Sushko & Grant Turner, *The Implications of Passive Investing for Securities Markets*, BIS Q. REV., Mar. 2018, at 113, 121 ("A higher share of passive investors could . . . weaken market discipline and alter the incentives of corporate and sovereign issuers to act in the interest of investors.").

60 Byung Hyun Ahn & Panos N. Patatoukas, *Identifying the Effect of Stock Indexing: Impetus or Impediment to Arbitrage and Price Discovery*?,

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Companies frequently go public with dual class voting structures, staggered boards, and other features that do not comply with so-called best governance practices.[61] When those companies meet the criteria for inclusion in an index, an index fund must invest in their shares despite its view that the company's performance would be improved by changes in its governance. Sponsors have complained vociferously about the fact that they are being forced to invest in companies that lack the governance scheme the sponsors desire.[62]

Some have called for regulatory intervention. In response to Snap's announcement that it planned to issue non-voting stock to public investors, commentators urged the SEC to prohibit or restrict the issuance of non-voting shares.[63] Another option is to exclude such companies from listing their shares on the stock exchanges. In 2018, the Council of Institutional Investors (CII) filed petitions with the New York Stock Exchange (NYSE) and Nasdaq encouraging them to limit the listing of dual class issuers.[64] After a debate over

J. FIN. & QUANTITATIVE ANALYSIS (forthcoming 2021) (manuscript at 2–5) (on file with the Columbia Business Law Review), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3525355.

61 *See, e.g.*, Blair Nicholas & Brandon Marsh, *Dual-Class: The Consequences of Depriving Institutional Investors of Corporate Voting Rights*, HARV. L. SCH. F. ON CORP. GOVERNANCE & FIN. REGUL. (May 17, 2017), https://corpgov.law.harvard.edu/2017/05/17/dual-class-the-consequences-of-depriving-institutional-investors-of-corporate-voting-rights/ [https://perma.cc/AA35-LSRA] (discussing trend of initial public offerings with dual class structures).

62 *See* Ning Chiu, *BlackRock Wants Equal Voting Rights but Opposes Exclusion from Indexes*, DAVIS POLK BRIEFING: GOVERNANCE (Oct. 23, 2017), https://www.briefinggovernance.com/2017/10/blackrock-wants-equal-voting-rights-but-opposes-exclusion-from-indexes/ [https://perma.cc/VK3S-W7HC].

63 Madison Marriage, *State Street Asks SEC To Block Non-Voting Shares*, FIN. TIMES (June 18, 2017) (on file with the Columbia Business Law Review), https://www.ft.com/content/9595e5c4-51db-11e7-bfb8-997009366969. The SEC had previously attempted to ban Exchanges from listing dual class stock, but its effort was overturned by the D.C. Circuit Court of Appeals. Bus. Roundtable v. SEC, 905 F.2d 406, 407 (D.C. Cir. 1990).

64 *See* Hazel Bradford, *Investors Intensify Fight Against Dual-Class Shares*, PENSIONS & INVS. (Apr. 1, 2019, 1:00 AM),

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whether issuers should be allowed to go public with dual or multi-class voting structures in which public investors are only able to purchase low-vote or no-vote stock, some market participants called upon index providers to exclude dual class issuers from the most popular indexes.[65] In 2017, two leading index providers—Dow Jones and FTSE Russell, which provide the indexes tracked by the most popular index funds—agreed, on a prospective basis, to exclude companies with multi-class voting structures.[66]

As Scott Hirst and Kobi Kastiel explain, governance by exclusion is problematic for broad-based index funds.[67] The exclusion of dual class companies can substantially affect the composition of such a fund as well as its performance.[68] Governance by exclusion imposes unproven assumptions about the economic impact of particular governance terms on those who invest in index funds. In addition, index fund investors who are seeking to invest in the overall market may not even understand that, as a result of a decision by the index provider, their portfolio does not contain exposure to an important segment of the market.[69] On these bases, BlackRock opposed the revision of the indexes, instead arguing that its index funds should still be permitted to invest in these companies but that the companies themselves should eliminate dual class structures.[70]

https://www.pionline.com/article/20190401/PRINT/190409984/investors-intensify-fight-against-dual-class-shares [https://perma.cc/V3PV-9FXZ].

65 *See* Scott Hirst & Kobi Kastiel, *Corporate Governance by Index Exclusion*, 99 B.U. L. REV. 1229, 1231–33, 1246–47(2019).

66 *Id.* at 1232.

67 *See id.* at 1234.

68 *See id.* at 1246–47.

69 For example, a dual class exclusion would include companies such as Google, Facebook, and Pinterest. *See* Kosmas Papadopoulos, *Dual-Class Shares: Governance Risks and Company Performance*, HARV. L. SCH. F. ON CORP. GOVERNANCE & FIN. REGUL. (June 28, 2019), https://corpgov.law.harvard.edu/2019/06/28/dual-class-shares-governance-risks-and-company-performance/ (observing that Google, Facebook, and Pinterest are among the companies with dual class voting structures).

70 *See* Chiu, *supra* note 62.

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The challenge of disciplining governance through index investing results from limitations in the scope of index funds themselves. As noted above, the vast majority of funds track a few broad-based indexes such as the S&P 500.[71] Index exclusion, at least in the case of dual class stock, focuses on whether to exclude companies with a particular governance feature from those standard indexes.

While most mutual fund assets are concentrated in funds based on large, well-known indexes, there are a number of bespoke indexes created at the behest of particular asset managers to facilitate specific investment strategies. In her pathbreaking taxonomy of index funds, Adriana Robertson found that the median index was tracked by only a single fund.[72] Moreover, she found a total of 193 different indexes that were associated with assets exceeding $1 billion.[73]

In contrast to the broad-based indexes, bespoke indexes are highly divergent. Index funds can be used to invest in a specific industry, to limit investments according to environmental criteria, or to reflect the investing style of T. Boone Pickens.[74] Although environmental, social, and governance (ESG) investing differs to a degree from a governance-based investing strategy, the rise of ESG index funds provides an illustration of the practicality of the index-based concept. ESG-based investing is one of fastest-growing investment categories.[75] Large asset managers are offering investors an increasing number of index fund products that track various ESG indexes such as the MSCI ESG indexes or the Dow Jones Sustainability indexes, or that are based on indexes constructed from ESG ratings such as

[71] More than twice as many index funds track the S&P 500 as track any other index. *See* Robertson, *supra* note 9, at 816 tbl.4.

[72] *Id.* at 813.

[73] *Id.* at 814.

[74] *See* Fisch et al., *supra* note 7, at 30 n.65 (describing the BOON ETF as pursuing the latter strategy).

[75] *See, e.g.*, Greg Iacurci, *Money Moving into Environmental Funds Shatters Previous Record*, CNBC (Jan. 14, 2020, 10:54 AM), https://www.cnbc.com/2020/01/14/esg-funds-see-record-inflows-in-2019.html [https://perma.cc/VUU7-NEC5] (describing record inflows into ESG mutual funds in 2019).

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Sustainalytics.[76] In each case, the fund uses an index constructed on the basis of ESG criteria as the basis for its investments. For example, Dow Jones offers an S&P 500 ESG fund that excludes those companies in each industry group that have the lowest ESG scores based on the S&P DJI ESG ratings, as well as companies that make tobacco or weapons or that do not comply with the United Nations Global Compact.[77]

Investors can thus use index funds to select or exclude portfolio companies based on ESG criteria. In other words, ESG can function as a positive screen—marking companies that meet designated ESG criteria for inclusion in the index—or as a negative screen—excluding companies with certain characteristics from the index. As funds based on these indexes develop a track record, their performance will provide valuable information on the relationship beween ESG and economic performance. ESG indexes can implement broad-based screens or hyper-specific ones. The SPDR SSGA Gender Diversity Index ranks companies within each sector by three gender diversity ratios and focuses "on companies with the highest levels within their sectors of senior leadership gender diversity."[78] The related ETF had $236.05 million in assets

[76] *See, e.g.*, *ESG Indices Passive Funds*, SUSTAINALYTICS, https://www.sustainalytics.com/investor-solutions/index-research-services/esg-index#:~:text=Sustainalytics'%20ESG%20research%20is%20used,ESG%20indices%20and%20passive%20vehicles.&text=Sustainalytics%20will%20provide%20quarterly%20updates%20on%20the%20state%20of%20the%20regulations [https://perma.cc/2PMG-EW7Z] (last visited Apr. 7, 2021) (listing funds using Sustainalytics research); Jess Liu, *Morningstar's Quintessential List of Sustainable Funds* (Apr. 20, 2020) (on file with the Columbia Business Law Review), https://www.morningstar.com/articles/977271/morningstars-quintessential-list-of-sustainable-funds (describing various categories of ESG mutual funds).

[77] REID STEADMAN & DANIEL PERRONE, S&P GLOB., THE S&P 500® ESG INDEX: INTEGRATING ENVIRONMENTAL, SOCIAL, AND GOVERNANCE VALUES INTO THE CORE 2–4 (2019), https://www.spglobal.com/_media/documents/the-sp-500-esg-index-integrating-esg-values-into-the-core.pdf [https://perma.cc/WD9U-65W2].

[78] *SPDR® SSGA Gender Diversity Index ETF*, STATE ST. GLOB. ADVISORS (on file with the Columbia Business Law Review),

Electronic copy available at: https://ssrn.com/abstract=3645312

under management as of June 17, 2021, and its three top holdings were PayPal, Texas Instruments, and Visa.[79] In 2020, the ETF returned 17.95% compared to 16.4% for the S&P 500 Index.[80]

To date, however, the index market does not appear to have used governance provisions as a basis for constructing bespoke indexes.[81] There is no obvious reason for this omission. The major index providers can and do construct bespoke indexes at the behest of asset managers.[82] An index provider can incorporate any set of rule-based firm selection

https://www.ssga.com/us/en/individual/etfs/funds/spdr-ssga-gender-diversity-index-etf-she (last visited Jun. 18, 2021).

79 *Id.*

80 *Compare* SPDR SSGA Gender Diversity Index ETF (SHE) Performance, YAHOO!: FIN., https://finance.yahoo.com/quote/SHE/performance/ [https://perma.cc/CK73-7HHJ] (last visited May 31, 2021) (Gender Diversity Index), *with* fhorner@sir-inc.com, *Dow, S&P 500 Score Record Closes as 2020 Comes to an End*, NASDAQ (Dec. 31, 2020, 4:50 PM), https://www.nasdaq.com/articles/dow-sp-500-score-record-closes-as-2020-comes-to-an-end-2020-12-31 [https://perma.cc/2YWP-SMA2] (S&P 500).

81 There have been limited efforts to exploit corporate governance as a trading strategy outside the ESG context. Perhaps the best known is the Lens fund, founded by well-known activist Robert Monks, which used a long/short strategy to exploit differences in corporate governance. *See* Hilary Rosenberg, *An Activist Shareholder Takes on the World*, N.Y. TIMES, Mar. 21, 1999 (§ 3), at 8 (describing the Lens Fund). An example of an actively-managed fund that explicitly discloses its consideration of governance is the Neuberger Berman Intrinsic Value Fund. *See* NEUBERGER BERMAN, NEUBERGER BERMAN INTRINSIC VALUE FUND: SUMMARY PROSPECTUS 2–3 (2020) (on file with the Columbia Business Law Review), https://www.nb.com/handlers/documents.ashx?item_id=c9b99343-2112-42cf-9a17-9ad85ba01522 ("The Portfolio Managers also integrate governance factors into the investment process. They seek to invest in companies that have effective and independent boards composed of diverse, and currently active, CEOs and other C-level executives. They look for companies where management and shareholder interests are aligned (often through high ownership of the company by management), with long-term incentive plans and CEO and management compensation and succession plans in place."). We note that an index-based approach offers several advantages including a more transparent set of governance criteria as well as the substantially lower costs associated with an index-based investment vehicle.

82 *See* Robertson, *supra* note 9, at 830–31.

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criteria into an index, including governance screens. As a result, it is possible to create an index comprised solely of companies with dual class voting structures or to construct a dual-free S&P 500 index. Similarly, it is possible to construct an index that extends beyond the exclusion of dual class structures and that excludes companies with other "bad" governance provisions such as staggered boards, combined chairman and CEO positions, plurality voting, excessive restrictions on shareholder ability to call a special meeting, or any other governance features.

Governance-based index funds thus could provide investors with access to synthetic governance—the ability to select their portfolio companies on the basis of governance criteria. The utility of such funds is manifold. First, they provide a solution to the inability of index funds to exercise market discipline by selling the stock of companies with bad corporate governance. Because an asset manager can offer a "good governance" fund in which governance is an investment criterion, asset flows into that fund will have the effect of reducing the cost of capital for the fund's portfolio companies.

Second, governance funds offer a market-based mechanism to evaluate empirically the effect of corporate governance. If, as many large institutional investors claim, certain bad governance features are value-decreasing, good governance funds should outperform their broad-based peers and attract inflows from investors.[83]

Finally, synthetic governance provides a mechanism to enhance management accountability by providing passive investors a way to subject the governance choices of their portfolio companies to capital market discipline. There are

[83] Mutual fund asset flows respond to fund performance. *See, e.g.*, Jonathan B. Berk & Jules H. van Binsbergen, *Mutual Funds in Equilibrium*, 9 ANN. REV. FIN. ECON. 147, 148 (2017) ("[F]und flows into mutual funds are known to be highly predictable on the basis of past performance[.]"); C. Wei Li, Ashish Tiwari & Lin Tong, *Investment Decisions Under Ambiguity: Evidence from Mutual Fund Investor Behavior*, 63 MGMT. SCI. 2509, 2523 (2017) ("One of the most well-known findings in the mutual fund literature is the convex relationship between investor flows and past fund performance.").

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also systemic effects: if bespoke governance indexes are successful in attracting investor assets, firms may adopt specific governance practices to qualify for inclusion. To be sure, this may dilute the extent to which performance of these indexes reflects firm characteristics that are independent of the governance mechanism, but we see this effect as a valuable feature of synthetic governance in that synthetic governance will generate not just capital flows but also firm-specific governance reforms when the market demonstrates the value of particular governance mechanisms.

Given the range of indexes and related ETFs, it is apparent that there is demand and a market structure to support the use of bespoke indexes to implement synthetic governance. Mutual funds structured in accordance with these indexes would allow investors to select for their preferred governance characteristics.

We theorize that fund flows into governance mutual funds would be based on the characteristics that drive fund flows elsewhere—mainly excess return. In this regard we do not view a governance index as a sector index likely to generate idiosyncratic or undiversified performance. A governance index would instead operate as a general market index akin to the S&P 500 or Russell 3000. Consequently, the benchmark for such an index would be these broader market indexes.[84]

The development of governance indexes would allow investors to address the selection and endogeneity problems of empirical studies. A firm's governance provisions would be evaluated by comparing the performance of the governance fund to the broader market (or, in some cases, the relevant sector). Governance indexes could include or exclude companies based on their use of one or multiple governance provisions. In this regard, synthetic governance is no different than any index—it implements a rule-based approach to stock selection, with specific governance provisions constituting the applicable rules. By providing a simple and low-cost investment strategy based on governance provisions,

[84] We note that this proposition would not hold to the extent that particular governance provisions are disproportionately associated with a particular industry sector.

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synthetic governance will allow capital flows to select which governance features are value-increasing. As such, it is a market-based alternative to regulation—a tool for enhancing the market discipline of firm-specific governance choices.

Two of us have theorized that index fund engagement can ameliorate systemic risk issues.[85] To the extent this theory is true, a bespoke governance ETF may also draw capital looking to hedge against the systemic risks addressed by specific governance provisions. As a result, certain governance index strategies may attract capital even if they lag the S&P 500 or other major indexes.

B. The Dual Class Controversy

Few governance provisions have generated as much controversy as dual class voting structures. In a company with dual class stock, all the shares of common stock have equal economic rights, but some shares, termed high-vote shares, have more voting rights than the others, which are termed low-vote shares.[86] The typical ratio is ten votes to one,[87] although in the extreme case, exemplified by Snap, the shares sold to public shareholders have no voting rights at all.[88] Founders and, sometimes, other early stage investors

[85] *See* Fisch et al., *supra* note 7, at 25–26.

[86] *See* Fisch & Solomon, *supra* note 38, at 1064 ("Dual class stock refers to a capital structure in which shares of an issuer's common stock with equal economic rights differ with respect to their relative voting power. The common stock in a dual class company is divided into two or more classes, in which the shares with more voting power are typically described as high vote stock, and the shares with less voting power are described as low vote stock." (footnote omitted)).

[87] *See* COUNCIL OF INST. INVS., *Dual-Class Stock*, https://www.cii.org/dualclass_stock [https://perma.cc/FD78-LCTU] (last visited May 31, 2021) ("The per-share voting power disparity most typically employed is 10/1[.]").

[88] *See* Eleanor Bloxham, *Snap Shouldn't Have Been Allowed To Go Public Without Voting Rights*, FORTUNE (Mar. 3, 2017, 3:18 PM), http://fortune.com/2017/03/03/snap-ipo-non-voting-stock/ [https://perma.cc/9LFU-FYYV] (explaining that, "[a]t Snap (SNAP), only pre-IPO investors who own private shares will be able to vote on company matters").

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typically hold high-vote shares, while low-vote shares are sold to public investors.[89] Dual class stock thus enables a founder to retain control while holding an investment that reflects less than a majority of the firm's economic value.[90] In some cases the divergence can be stark, with the founder or other controllers maintaining control of the company with ten percent or less of the economic value.[91]

Dual class voting structures have existed for decades, and firms using dual class structures historically tended to be media companies, family businesses, and insider-controlled businesses.[92] Ford Motor Company used a dual class structure in its 1956 IPO to maintain control of the company within the Ford family.[93] The New York Times has a dual class

89 *See* Ken Bertsch, *Snap and the Rise of No-Vote Common Shares*, HARV. L. SCH. F. ON CORP. GOVERNANCE (May 26, 2017), https://corpgov.law.harvard.edu/2017/05/26/snap-and-the-rise-of-no-vote-common-shares/ [https://perma.cc/4B2P-9J38] ("With NYSE-listed Snap's arrival with 'zero' rights for public shareholders, perhaps the bottom has been reached."); Eric Jhonsa, *Zillow Plans To Issue Non-Voting Class C Shares*, SEEKING ALPHA (July 21, 2015, 9:54 PM), https://seekingalpha.com/news/2643935-zillow-plans-to-issue-non-voting-class-c-shares [https://perma.cc/T8NV-FK7J] (reporting that Zillow created "Class C shares that carry no voting rights"); Floyd Norris, *The Many Classes of Google Stock*, N.Y. TIMES: ECONOMIX (Apr. 2, 2014, 6:03 PM), https://economix.blogs.nytimes.com/2014/04/02/the-many-classes-of-google-stock/ [https://perma.cc/89RK-JJL4] (describing the issuance of Class C shares in Google that "have no voting rights").

90 *See* Fisch & Solomon, *supra* note 38, at 1065.

91 *See* Lucian A. Bebchuk & Kobi Kastiel, *The Untenable Case for Perpetual Dual-Class Stock*, 103 VA. L. REV. 585, 620 (2017).

92 David J. Berger & Laurie Simon Hodrick, *Are Dual-Class Companies Harmful to Stockholders? A Preliminary Review of the Evidence*, HARV. L. SCH. F. ON CORP. GOVERNANCE & FIN. REGUL. (Apr. 15, 2018), http://corpgov.law.harvard.edu/2018/04/15/are-dual-class-companies-harmful-to-stockholders-a-preliminary-review-of-the-evidence/ [https://perma.cc/24VN-9V8Z] (explaining that, although "[d]ual class companies have existed for nearly a century . . . ., most dual-class companies were family businesses, media companies seeking to ensure their publications could maintain journalistic editorial independence, or other companies led by a strong group of insiders").

93 *See* J.A. LIVINGSTON, THE AMERICAN STOCKHOLDER 166–77 (J.B. Lippincott Co. 1958) (detailing the background to the IPO of Ford Motor Company and its use of dual class stock).

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structure.[94] The justification for dual class structures was that they permitted a founding family or other controller to maintain a unique business, such as a newspaper operation, which needed to be isolated from market forces or otherwise run in the interests of stakeholders other than shareholders.[95] While dual class stock may assist firms in meeting these other stakeholder interests, studies suggest that dual class structures at these firms were also associated with higher agency costs, limited minority shareholder rights, and inferior economic performance.[96]

Starting with the Google IPO in 2004, dual class voting structures increased in popularity and migrated to the technology sector.[97] In recent years, approximately twenty-two percent of U.S. technology companies have gone public with a dual class structure.[98] Although historically dual class companies have comprised a small percentage of the major stock market indexes, they now represent roughly nine percent of the S&P 100 by market capitalization.[99] And with the rise of dual class stock in technology firms, firms in other industries have felt more willing to adopt dual class voting

94 The N.Y. Times Co., Annual Report (Form 10-K), at 106 (Feb. 25, 2021).

95 *See* Gerald F. Davis, *What Might Replace the Modern Corporation? Uberization and the Web Page Enterprise*, 39 SEATTLE U. L. REV. 501, 505–06 (2016).

96 *See, e.g.*, Gompers et al., *supra* note 36, at 1084–85; Masulis et al., *supra* note 36, at 1722.

97 *See* Fisch & Solomon, *supra* note 38, at 1067–70 (detailing the resurgence of dual class stock in technology companies after the Google IPO).

98 *See* George F. Schoen & Keith Hallam, *Dual-Class Share Structures in the United States*, *in* CORPORATE GOVERNANCE 2020, at 1, 2 (2020) (Sabastian V. Niles & Adam O. Emmerich eds., 13th ed. 2020), https://www.cravath.com/a/web/13094/CG20_Chapter%201%20-%20Cravath,%20Swaine%20and%20Moore-B.pdf [https://perma.cc/5UQJ-BT9M] (finding that a yearly average of 22.6% of technology company IPOs from 2010 through 2019 featured dual class structures).

99 Charles M. Elson & Craig K. Ferrere, *Unequal Voting and the Business Judgment Rule*, HARV. L. SCH. F. ON CORP. GOV. (Apr. 7, 2018), https://corpgov.law.harvard.edu/2018/04/07/unequal-voting-and-the-business-judgment-rule/ [https://perma.cc/K3AD-7PYQ].

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structures. For example, Shake Shack, which sells hamburgers, has gone public with dual class stock,[100] as has Chewy, which sells pet goods online.[101]

Shareholders have objected to the spread of dual class structures on many grounds. First, they have complained about disenfranchisement and the lack of appropriate shareholder voice in the corporate enterprise.[102] Because dual class stock provides control to one or a small group of individuals, ordinary shareholders are unable to elect directors or, if things go awry, remove directors. Second, the structure of dual class stock creates a potential gap between a controller's economic interest and the controller's voting interest, a gap that Lucian Bebchuk and Kobi Kastiel have termed the "wedge."[103] This gap creates increased incentives for self-dealing by the controller.[104] The theoretical potential for self-dealing finds some real world support. Viacom, for example, was notorious for continuing to pay its controller Sumner Redstone tens of millions of dollars each year despite his incapacitation.[105]

100 *See* Jeff Green & Carol Hymowitz, *Let Them Eat Burgers*, BLOOMBERG (on file with the Columbia Business Law Review), https://www.bloomberg.com/news/articles/2015-02-05/shake-shack-ipo-soars-shareholder-democracy-be-damned (last updated Feb. 6, 2015, 11:22 AM).

101 *See* Kevin Curran, *Chewy's Dual-Class Structure Isn't Ideal for Investors*, THESTREET (June 14, 2019, 11:26 AM), https://realmoney.thestreet.com/investing/stocks/chewy-s-dual-class-structure-isn-t-ideal-for-investors-14992086 [https://perma.cc/GU5N-BT7V].

102 *See Dual-Class Stock*, *supra* note 87 ("CII's policies endorse the principle of 'one share, one vote': every share of a public company's common stock should have equal voting rights." (emphasis omitted)).

103 *See* Lucian A. Bebchuk & Kobi Kastiel, *The Perils of Small-Minority Controllers*, 107 GEO. L.J. 1453, 1461 (2019) (defining the wedge as "the gap between the controller's fraction of voting rights and fraction of equity capital").

104 *See id.* at 1468–71 (modeling the increased potential for self-dealing as the size of the wedge increases).

105 *See* Bebchuk & Kastiel, *supra* note 91, at 587–88 (discussing the ninety-three-year-old Redstone's refusal to give up control despite "profound physical and mental illness" (internal quotation marks omitted) (quoting

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There are other concerns. As a practical matter, dual class structure is also one of the most powerful antitakeover devices,[106] insulating dual class companies from the discipline of the takeover market.[107] Relatedly, dual class stock also insulates management from activist shareholders who might agitate for change at the company.[108] Additionally, commentators have raised the idea that it is unfair or undemocratic for some shareholders to have disproportionate voting rights.[109] And, ultimately, dual class stock can vest perpetual control in the hands of one person long after that control is appropriate.[110]

The criticism of dual class structures has grown more strident with the rise of institutional investors. Dual class stock tempers the power of these stockholders, shifting it back to the founder. Many institutional investors have responded by calling for regulatory limits on companies with dual class

Emily Steel, *Viacom Chiefs Take Trust Battle to Court*, N.Y. TIMES, May 24, 2016, at B1)); Emily Steel, *Viacom Board Said To End Salary for Sumner Redstone*, N.Y. TIMES (May 18, 2016) (on file with the Columbia Business Law Review), https://www.nytimes.com/2016/05/19/business/media/viacom-board-said-to-end-salary-for-sumner-redstone.html (discussing Redstone's compensation).

106 Gompers et al., *supra* note 36, at 1052 (describing dual class stock as the most extreme example of antitakeover protection).

107 *See, e.g.*, Robert Daines & Michael Klausner, *Do IPO Charters Maximize Firm Value? Antitakeover Protection in IPOs*, 17 J.L. ECON. & ORG. 83, 116–17 (2001) ("The most restrictive [antitakeover protection] is either dual-class or a staggered board combined with prohibitions on voting by written consent and prohibitions on shareholders calling a special meeting.").

108 *See* Kobi Kastiel, *Against All Odds: Hedge Fund Activism in Controlled Companies*, 2016 COLUM. BUS. L. REV. 60, 93–95 (observing variations in the effect depending on the type of dual class structure used by a company).

109 *See, e.g.*, Kara M. Stein., Comm'r, U.S. Sec. & Exch. Comm'n, Mutualism: Reimagining the Role of Shareholders in Modern Corporate Governance (Feb. 13, 2018), https://www.sec.gov/news/speech/speech-stein-021318 [https://perma.cc/3YPG-C8C3] (stating that dual class structures are "inherently undemocratic, disconnecting the interests of a company's controlling shareholders from its other shareholders").

110 *See* Bebchuk & Kastiel, *supra* note 91, at 590.

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structures.[111] The CII, for example, explains that "the 'one share, one vote' principle has been a core focus for CII since its founding in the 1980s,"[112] and the group has actively campaigned against dual class structures.[113] Despite the limited success of institutions in persuading some index providers to exclude dual class companies from their indexes,[114] to date neither the SEC nor the stock exchanges appear willing to prohibit dual class structures. In the absence of regulation, issuers continue to go public with dual class voting structures.[115]

This impasse has led commentators to shift to a compromise position: the mandatory sunset. They argue that, if a company goes public with a dual class voting structure, that structure should terminate automatically a designated number of years after the IPO.[116] The justification for sunset provisions is based on the proposition that any value that a

111 *See* Bradford, *supra* note 64 (describing the CII's petitions to the NYSE and Nasdaq, which were supported by BlackRock and T. Rowe Price). The SEC attempted to prohibit the NYSE from amending its listing requirements to permit dual class companies, but its effort was invalidated by the D.C. Circuit Court of Appeals. Bus. Roundtable v. SEC, 905 F.2d 406, 407 (D.C. Cir. 1990).

112 *Dual-Class Stock*, *supra* note 87.

113 *Id.*

114 *See* Hirst & Kastiel, *supra* note 65, at 1266.

115 Warner Music Group, for example, recently went public, raising $1.925 billion utilizing dual class stock with the high-vote stock having twenty votes per share. *See* Warner Music Grp. Corp., Amendment No. 2 to Form S-1 Registration Statement (Form S-1/A), at 15 (May 26, 2020) ("Upon completion of this offering, we will have two classes of voting common stock, Class A common stock and Class B common stock. Each share of Class A common stock is entitled to one vote per share and each share of Class B common stock is entitled to 20 votes per share."); Press Release, Warner Music Grp., Warner Music Group Corp. Announces Pricing of Initial Public Offering (June 3, 2020), https://www.wmg.com/news/warner -music-group-corp-announces-pricing-initial-public-offering-34826 [https://perma.cc/8D9V-T2TK] (reporting the offering price).

116 *See, e.g.*, Andrew William Winden, *Sunrise, Sunset: An Empirical and Theoretical Assessment of Dual-Class Stock Structures*, 2018 COLUM. BUS. L. REV. 852, 870 (describing time-based sunsets as "presumably what most institutional investors and proxy advisors are referring to when they insist that dual-class companies must adopt reasonable sunset provisions").

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dual class structure provides by insulating the founders of newly-public companies from shareholder interference likely dissipates over time. Eventually, the benefits of the dual class structure decline to the point where they are outweighed by the associated agency costs of the dual class structure. The CII, although continuing to prefer unitary voting structures has, since 2016, supported a seven-year sunset as "[a] credible path to alignment."[117] SEC Investor Advocate Rick Fleming has urged the stock exchanges to require the sunsetting of "super-voting rights."[118] To date, though, no governmental regulation appears to be imminent.

IV. THE DUAL INDEX—A CASE STUDY OF SYNTHETIC GOVERNANCE

The Dual Index is a bespoke index of dual class companies conceived and developed by one of the co-authors of this paper.[119] The objective of the Dual Index is to target those dual class companies for which, according to the existing empirical literature, the net benefits of the dual class structure are most likely to be positive. It does so in two steps: first, by selecting dual class companies, and second, by creating a synthetic time-based sunset provision to exclude the stock of companies that retain a dual class structure a designated number of years after the company's IPO. The

117 *Dual-Class Stock*, *supra* note 87 (emphasis omitted).

118 Rick Fleming, Inv. Advoc., U.S. Sec. & Exch. Comm'n, Dual-Class Shares: A Recipe for Disaster (Oct. 15, 2019), https://www.sec.gov/news/speech/fleming-dual-class-shares-recipe-disaster#_edn8 [https://perma.cc/9KNN-CK5S].

119 A version of the Dual Index is licensed to an ETF issuer under the name North Shore Dual Share Class Index. *See About Us*, N. SHORE INDICES, https://www.northshoreindices.com/ [https://perma.cc/MT2Q-LMPF] (last visited Apr. 8, 2021); N. SHORE INDICES, DUALSX: NORTH SHORE DUAL SHARE CLASS INDEX 1 (2019), https://ab72e310-eadb-4d77-877d-1432cd571de5.filesusr.com/ugd/849193_1263b717587241b8acdd7b6b75697e81.pdf [https://perma.cc/9ZXT-SRRM] (describing the index). The Index is designed to track the performance of dual-class companies incorporated in the United States. The calculator of this index is Indxx. *North Shore Dual Share Class Index*, INDXX, https://www.indxx.com/north-shore-dual-share-class-index-tr [https://perma.cc/N2C7-5VUV] (last visited May 31, 2021).

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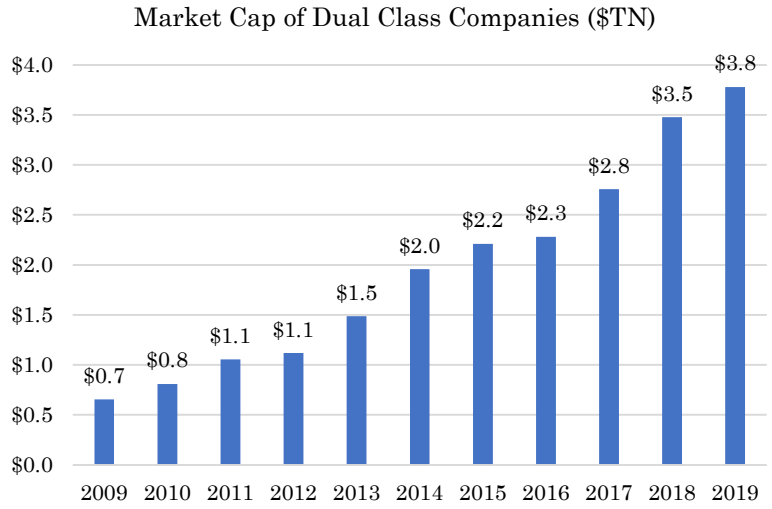
Dual Index thus provides a model of how to create a customized governance regime through synthetic governance.

In the following sections, we provide the details of the Dual Index's construction and report our tests of its performance.

A. Dual Index Construction

Figure 1 illustrates the rise to prominence of dual class companies over the last decade. The total market value of dual class companies has increased by five times: from $700 billion in June 2009 to $3.8 trillion in December 2019. As of the December 2019 index reconstitution, the value of dual class companies represented more than ten percent of the market capitalization of the entire Russell 3000 index.[120]

Figure 1



To develop the Dual Index, we collect data from the Center for Research in Security Prices (CRSP) as well as the Securities Data Company (SDC) Platinum database and

120 *See* FTSE RUSSELL, 2020 RUSSELL US INDEXES RECONSTITUTION 1 (2020), https://content.ftserussell.com/sites/default/files/russell_us_indexes_recon_2020_recap_6.26.2020.pdf [https://perma.cc/263A-3DH6] (giving a total Russell 3000 market capitalization of $31.4 trillion as of May 2020).

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follow a biannual reconstitution process.[121] At the end of June and December each year, we compile a list of dual class companies with ordinary common shares listed on NYSE, Nasdaq, or NYSE American and total market capitalization in excess of $100 million.

From this subset, we initially select for inclusion those dual class companies whose firm age as a public company (the time elapsed since their IPO) ranges from six months to twenty years. Since most IPOs have six-month lockups that can influence both price and volatility,[122] our portfolio excludes IPOs prior to the expiration of that lockup. The twenty-year filter retains all companies that went public after the Google IPO in 2004.[123] As a result, the Dual Index effectively eliminates the prior generation of dual class companies—the family owned and media companies that are the focus of some earlier empirical studies of dual class stock.[124] The twenty-year filter is sufficiently long that it does not impose a synthetic sunset—an issue that we address later; instead, a twenty-year window is of sufficient length that it addresses the issues two of us raised in *The Problem of Sunsets*: namely that a fixed time horizon is arbitrary and appears contrary to the purpose of a sunset, which is to end the dual class structure when it is no longer useful to implement the founder's visionary mission.[125]

121 On these data, see *Research Data*, CTR. FOR RSCH. IN SEC. PRICES, http://www.crsp.org/products/research-products [https://perma.cc/NW8R-RKS3] (last visited May 31, 2021) (CRSP data); *SDC® Platinum*, REFINITIV, https://www.refinitiv.com/en/products/sdc-platinum-financial-securities [https://perma.cc/F8KL-CVCH] (last visited May 31, 2021) (SDC Platinum data).

122 *See, e.g.*, James C. Brau, David A. Carter, Stephen E. Christophe & Kimberly G. Key, *Market Reaction to the Expiration of IPO Lockup Provisions*, 30 MANAGERIAL FIN. 75, 83 (2003) (reporting statistically significant negative abnormal returns in the event window surrounding the expiration date of the lockup).

123 *See generally* Google Inc., *supra* note 43 (giving the 2004 date of Google's IPO).

124 *See supra* notes 36–37 and accompanying text.

125 *See* Fisch & Solomon, *supra* note 38, at 1080–83.

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In case of a delisting or the collapse of the dual class structure, we reinvest the proceeds in the market portfolio until the next Dual Index reconstitution. Our back-testing period is from June 2009 to December 2019, which is the most recent date on which we reconstituted the Dual Index.

B. Dual Index Characteristics

As of the December 2019 reconstitution, the Dual Index included 178 dual class companies valued in total at $3.4 trillion. The Index includes eighty-nine percent of the market capitalization of all dual class companies listed across major U.S. stock exchanges.

With respect to the distribution of index weights across sectors, Table 1 shows that as of December 2019, the most heavily weighted sectors are Communication Services (38.8%) and Information Technology (33.7%), followed by Financials (9.4%), Consumer Discretionary (4.9%), and Health Care (4.4%). Focusing on these sectors, the top portfolio holdings include, Facebook (Communication Services), Visa (Information Technology), CME Group (Financials), Lululemon Athletica (Consumer Discretionary), and Zoetis (Health Care).

Table 1 also demonstrates how the sector representation within the Dual Index has evolved over time. In particular, the prominence of dual class companies in the Communication Services and Information Technology sector has increased, and the relative index weights of dual class companies in the Industrials sector has declined.

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Table 1

Dual Index Sector Weights			
GICS Sector	June 2009	December 2019	Average
Communication Services	23.4%	38.8%	29.2%
Information Technology	20.9%	33.7%	26.1%
Financials	15.8%	9.4%	13.4%
Consumer Discretionary	8.1%	4.9%	6.8%
Health Care	5.8%	4.4%	3.8%
Consumer Staples	9.2%	3.5%	7.9%
Industrials	13.5%	2.7%	10.1%
Real Estate	0.8%	0.9%	1.0%
Energy	0.8%	0.8%	0.5%
Materials	1.8%	0.7%	1.2%
Utilities	0.0%	0.3%	0.1%

Table 2 compares the Dual Index constituents to the general population of companies along several dimensions of corporate governance. The evidence shows that the dual class structure overlaps with other provisions that may inhibit management accountability to shareholders and increase agency costs—that is, other provisions typically characterized as "bad" governance. To illustrate, dual class companies are significantly less likely to separate the CEO and board chair positions.[126] The frequency of dual class companies with combined CEO-chair roles is 42% compared to 32% for the general population. Dual class companies are less likely to require majority voting to elect their board (26% versus 42%).[127] Dual class companies are also slightly less likely to

[126] For a discussion of separating the CEO and chair positions, see Yaron Nili, *Successor CEOs*, 99 B.U. L. REV. 787, 805–16 (2019).

[127] For an explanation of majority versus plurality voting, see Stephen J. Choi, Jill E. Fisch, Marcel Kahan & Edward B. Rock, *Does Majority*

Electronic copy available at: https://ssrn.com/abstract=3645312

have a majority of independent board directors (83% versus 88%)[128] and less likely to have a majority voting director resignation policy (30% versus 48%).[129]

Table 2

Corporate Governance Characteristics			
Variables	Dual Stocks	Non-Dual Stocks	Dif.
I(Dual CEO Chair)	42%	32%	10%***
I(Majority Vote to Elect Board)	26%	42%	-16%***
I(Majority Board Being Independent)	83%	88%	-5%*
I(Director Resignation Policy)	30%	48%	-18%***
I(Poison Pill Policy)	1%	3%	-2%***
I(Supermajority Vote Merger)	7%	17%	-10%***
I(Shareholders Special Meeting Rights)	39%	46%	-7%**

****, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively, using two-tailed tests.*

With respect to other corporate governance dimensions, dual class companies are less likely to have a poison pill policy under which the company needs to obtain stockholder approval before adopting a poison pill (1% versus 3%) and are less likely to require supermajority voting for mergers (7% versus 17%). This last provision makes it difficult for an acquirer to collect the affirmative votes of enough shareholders to approve a merger transaction or even

Voting Improve Board Accountability?, 83 U. CHI. L. REV. 1119, 1124–29 (2016).

128 Recall that Nasdaq and the NYSE require a majority of directors to be independent. *See supra* note 49.

129 A director resignation policy requires any directors who receive more withheld ballots than votes for their election to tender their resignation to the board. The board will then decide whether it will accept the resignation. *See* Choi et al., *supra* note 127, at 1125–6 (explaining director resignation policies).

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impossible if insiders hold enough shares to prevent the acquirer from obtaining the required vote. Lastly, dual class companies are less likely to provide shareholders with the power to call a special meeting (39% versus 46%).

C. Back-Testing Results

Next, we evaluate the historical track record of the Dual Index. Table 3 presents the results over the 126 months from June 2009 to December 2019. We construct the value-weighted market index, including distributions, using the CRSP universe of common stocks.

Over the back-testing period, the Dual Index earned an annual return of 19.23% with a standard deviation of 14.39%, while the CRSP market index earned an annual return of 14.98% with a standard deviation of 12.98%. The Dual Index performance corresponds to a monthly multi-factor alpha of thirty-one basis points. In terms of factor loadings, the Dual Index has (1) positive loadings on the market and momentum factors, (2) negative loadings on the size and investment factors, and (3) insignificant loadings on the value and profitability factors.

Table 3

Dual Index Performance (June 2009 to December 2019)				
	Dual Index	Market Index	Market ex Dual	Mimic Index
Monthly Return	1.60%	1.25%	1.23%	1.32%
Monthly Volatility	4.15%	3.75%	3.75%	3.78%
Annual Return	19.23%	14.98%	14.72%	15.89%
Annual Volatility	14.39%	12.98%	12.99%	13.10%
Cum. Growth of $1	$6.68	$4.38	$4.26	$4.81

Table 3 also compares the Dual Index to two other benchmarks. First, in the third column, it compares the Dual Index to the market with dual class companies excluded. The third column thus demonstrates the economic impact of excluding issuers with dual class stock in accordance with the

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approach recently adopted by some index providers.[130] As the column indicates, excluding dual class has little effect on performance relative to the market as a whole.

Second, in response to the fact that dual class voting structures are concentrated in the technology sector,[131] and to isolate the sectoral component of the Dual Index, we construct a portfolio of non-dual-class companies with identical sector weights to those of the Dual Index. In essence, the mimicking index (Mimic Index) replicates the sectoral exposure of the Dual Index using non-dual-class companies. This index thus addresses concerns that the results of the Dual Index are driven solely by outperformance of technology firms.

Table 3 shows that over the back-testing period the Mimic Index earned an annual return of 15.89% with a standard deviation of 13.10%, while the Dual Index earned an annual return of 19.23% with a standard deviation of 14.39%. Figure 2 also shows that a one-dollar investment in the Mimic Index would have grown to $4.81 between June 2009 and December 2019. Over the same time, a one-dollar investment in the Dual Index would have grown to $6.68. While the Mimic Index outperforms the market index over the back-testing period, it does not fully account for the outperformance of the Dual Index. Stated otherwise, the performance of the Dual Index does not simply capture the sectoral performance of dual class constituents. One implication is that there is a firm-specific component to the dual class share structure choice that goes beyond sectoral variation.

Figure 2 plots the cumulative growth of a one-dollar investment in the Dual Index (green line) relative to the cumulative growth of a one-dollar investment in the market index (blue line). The evidence shows that a one-dollar investment in the Dual Index would have grown to $6.68 between June 2009 and December 2019. Over the same time, a one-dollar investment in the market index would have grown to $4.38. Figure 2 also shows that the outperformance of the Dual Index is especially pronounced in the second half

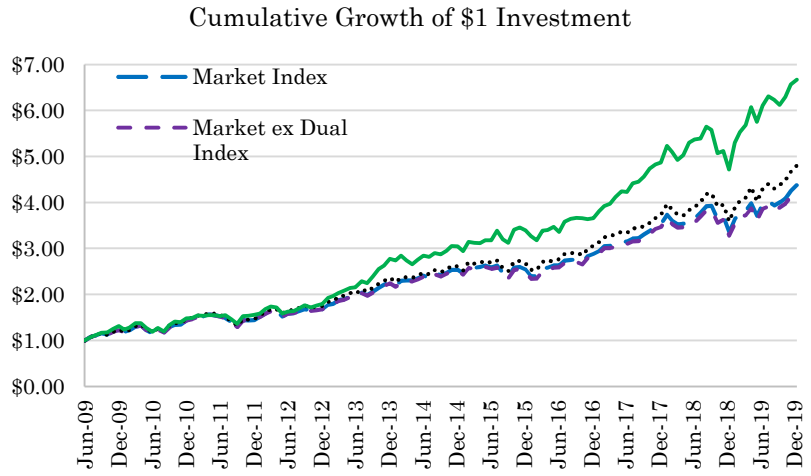
130 *See* Fisch & Solomon, *supra* note 38, at 1076.

131 *See supra* Section IV.B tbl.1.

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of our back-testing period, which is consistent with the rise in prominence of dual class companies.

Figure 2



We note that the spread in the realized performance of the Dual Index relative to the overall market portfolio may understate the outperformance of dual class companies. This is because the overall market index performance, especially over the last decade, is partially attributable to the rise of dual class companies. Going forward, major indexes will either exclude or underweight dual class companies. As a result, index investors will no longer be able to access the growth of these companies through their index holdings. Indeed, over the back-testing period a one-dollar investment in the market index excluding Dual Index stocks would have grown to $4.26, which is slightly below the performance of the market index including Dual Index stocks.

D. The Effect of Sunset Lengths

The Dual Index does not merely enable us to capture the effect of an investment strategy based on whether a firm utilizes a dual class voting structure; it allows us to go further

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and test the effect of a time-based sunset. We do this by shortening the length of time a company remains in our index following its IPO. By excluding dual class companies a designated number of years after the IPO we are, in effect, creating a synthetic sunset.

Part of the value of this approach is that it sheds light on the time period that is necessary to allow founders to fulfill their idiosyncratic visions. To explore this question, we test the performance of the Dual Index using alternative sunset provisions ranging from five to twenty years.

Table 4 reports the back-testing results and reveals that the performance of the Dual Index is higher for shorter sunset windows but at the expense of higher return volatilities and portfolio turnover. Indeed, the Sharpe ratio, that is, the ratio of average excess returns divided by the standard deviation of the excess return on each bespoke portfolio, is relatively flat across the different sunset windows. It follows that per unit of volatility the performance of the Dual Index is similar regardless of the length of the synthetic sunset.

Table 4

Dual Index Performance (June 2009 to December 2019)				
Sunset Length:	20 years	15 years	10 years	5 years
Monthly Return	1.60%	1.71%	1.67%	2.11%
Monthly Volatility	4.15%	4.32%	4.85%	5.35%
Annual Return	19.23%	20.47%	20.01%	25.38%
Annual Volatility	14.39%	14.95%	16.82%	18.54%
Cum. Growth of $1	$6.68	$7.53	$6.97	$11.74
Portfolio Turnover	5.7%	6.6%	6.6%	12.8%

Our evidence illustrates the range of possibilities in the design of synthetic governance portfolios, although we do not firmly advocate for a particular sunset window. Nonetheless, our findings illustrate the fact that early-stage dual class companies appear to generate higher returns for investors but at the cost of causing them to bear additional risk. The variation in Table 4 indicates the potential value of multiple

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dual class indexes using a variety of artificial sunsets which reflect the risk preferences of investors. Again, we view this as an advantage of synthetic governance, allowing investors to select for their preferred governance provisions. To be clear, our evidence does not directly speak to the value of the alternative sunset lengths. Nevertheless, our evidence demonstrates that the dual class structure may be most valuable in the first few years post-IPO.

One significant question about the Dual Index is the extent to which it truly evaluates the economic effect of a dual class structure. Particularly as applied to the recently-public technology companies, dual class voting structures may not be the cause of excess returns but instead the consequence. That is, companies that investors expect to outperform may, at the IPO stage, be able to go public with governance structures that investors would not otherwise tolerate. The fact that those companies subsequently perform well does not provide evidence on the counterfactual question of whether they would have performed even better with a one share/one vote structure. At the same time, we note that fewer companies are choosing to access the public capital markets at all.[132] The availability of governance provisions that increase founder insulation may increase a founder's willingness to allow public investors to share in the company's growth. If governance provisions that provide founder insulation are necessary to induce unicorns to enter the public markets, the Dual Index suggests that public investors are better off with such companies than without them.

V. THE SPLIT INDEX

The Dual Index is but one example of synthetic governance. It is possible to create indexes based on other governance characteristics. For example, an independent director index could be used to invest only in companies with

[132] *See* JAY R. RITTER, INITIAL PUBLIC OFFERINGS: UPDATED STATISTICS 3 tbl.1 (2021), https://site.warrington.ufl.edu/ritter/files/IPO-Statistics.pdf [https://perma.cc/VG8B-GNAM] (showing that the number of IPOs per year remains below historical highs).

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a specified proportion of independent directors. A staggered board index could be used to invest only in companies with (or without) a staggered board.[133]

To illustrate further the potential of synthetic governance we create a Split Index which consists of companies that split the positions of CEO and chairman of the board. Institutional investors increasingly cite the separation of these positions as an important measure of good corporate governance.[134] The theoretical idea behind this split is that it will cause a board to have more oversight over the CEO and thereby make economically-improved decisions.[135] But, as with dual class structures, the positive economic effect of splitting the two positions has yet to be established.

We create the Split Index by obtaining annual CEO-Chairman duality data from Execucomp[136] and identify the role of chairman of the board by keyword detection in the CEO's yearly title. Specifically, our keywords include "chairman" and "chmn," and exclude "vice chairman" and "vice-chairman." We then create an index of companies that meet this criteria.

133 Such an index would be particularly useful in generating evidence for what appears to be a never-ending debate about the economic impact of staggered boards. *See supra* notes 33–35 and accompanying text.

134 *See, e.g.*, *Independent Board Leadership*, COUNCIL OF INST. INVS., https://www.cii.org/independent_board [https://perma.cc/5BRZ-V767] (last visited Apr. 8, 2021) ("A CEO who also serves as chair can exert excessive influence on the board and its agenda, weakening the board's oversight of management. Separating the chair and CEO positions reduces this conflict, and an independent chair provides the clearest separation of power between the CEO and the rest of the board.").

135 *See id*. ("Having an independent chair helps the board carry out its primary duty—to monitor the management of the company on behalf of its shareowners.").

136 On Execucomp, see *Compustat Execucomp: The Basics*, WHARTON RSCH. DATA SERVS., https://wrds-www.wharton.upenn.edu/pages/grid-items/compustat-execucomp-basics/ [https://perma.cc/CA4P-6LSV] (last visited Apr. 9, 2021).

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Table 5

Split Index Performance (June 2009 to December 2019)		
	Split Index	Market Index
Monthly Return	1.31%	1.25%
Monthly Volatility	3.87%	3.75%
Annual Return	15.73%	14.98%
Annual Volatility	13.41%	12.98%
Cum. Growth of $1	$4.70	$4.38

The back-testing results in Table 5 show that the Split Index outperforms the CRSP market benchmark by seventy-five basis points per annum. A one-dollar investment in the Split Index would have grown to $4.70 between June 2009 and December 2019. Over the same time, a one-dollar investment in the market index would have grown to $4.38.

The findings thus highlight that indexes filtered by corporate governance measures other than dual class status can also earn excess returns above a benchmark. In addition, the Split Index partially addresses the endogeneity problem that we identified with respect to the Dual Index. Because an issuer is not typically locked into split chair and CEO positions through a charter provision, midstream changes between combined and split positions are a regular occurrence, an existing CEO rarely has the power to preclude the shareholders or the board from splitting the two positions, and an issuer cannot extract investor acquiescence in a combined structure as the price of investing in the company.[137]

VI. IMPLICATIONS

Our findings illustrate the facility with which bespoke governance indexes can be constructed and used within our

[137] *See, e.g., generally* Brian Patrick Eha, *Will Wells' Chairman-CEO Split Force Other Banks' Hands?*, AM. BANKER, Jan. 11, 2017 (describing Wells Fargo's decision to adopt a bylaw splitting the roles of CEO and Chair after the fake accounts scandal).

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capital markets to select for or against specific governance provisions. If asset managers believe that dual class structure, staggered boards, Nevada incorporation, or other governance features systematically reduce firm value, they can create specific or general "good governance" products that offer their customers the opportunity to screen out issuers that do not adhere to their identified best practices. If these products accurately identify those governance provisions that maximize firm value, synthetic governance products will outperform their competitors, and assets will flow into these funds. These inflows will, in turn, reduce the cost of capital to issuers that adopt good governance practices.

To be sure, issuers may respond to the growth of synthetic governance by modifying their governance features to qualify for inclusion in governance-based index funds. This may have an effect on future returns. Notably, however, this response would demonstrate the potential disciplinary power associated with enabling investors to choose an index strategy based on governance. To the extent that a governance index generates superior returns, investor assets respond by flowing into the index, and issuers react by adopting the index's governance provisions, the capital market forces are working effectively.

VII. CONCLUSION

Although the rise of intermediated investing has generated extensive criticism, it offers a new mechanism for exercising market discipline. Mutual funds already offer investors the opportunity to invest in a passive fund that replicates the performance of a broad-based market index or to focus on ESG criteria in their investment decisions. The returns of these funds provide empirical evidence on the relative performance of their investment strategies.

We demonstrate that the potential of mutual funds extends further and provides a tool to evaluate corporate governance practices. To the extent that investor concerns over particular governance features are well-founded, the returns of governance funds enable fund flows to function as a form of synthetic governance. Synthetic governance thus

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creates a neutral arbiter of governance that can dictate preferred provisions through capital allocation.

We illustrate the potential of synthetic governance by creating and evaluating an example: the Dual Index. The Dual Index confirms that synthetic governance is a viable and discrete possibility. It shows that, at least on a historical basis, a synthetic index of dual class stock outperforms applicable benchmarks. While this outperformance might be attributable to selection effects or the enhanced protection dual class provides to a founder's idiosyncratic vision, either way, investors benefit from the option to invest in the Dual Index.

While synthetic governance is unlikely to end the debate over which corporate governance provisions enhance firm value, it offers a practical market-based response as an alternative to broad-based regulatory reforms. By facilitating the development of customized index products, securities regulation thus offers a path forward to resolve what has previously been a logjam in the debates over the efficacy of corporate governance. Our findings suggest a role for the SEC in fostering but continuing to monitor innovation which can provide greater utility to our capital markets and enhance investors' opportunities for diversification and growth.

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