

Blockholders and Corporate Governance

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Abstract

This paper reviews the theoretical and empirical literature on the channels through which blockholders (large shareholders) engage in corporate governance. In classical models, blockholders exert governance through direct intervention in a firm's operations, otherwise known as “voice.” These theories have motivated empirical research on the determinants and consequences of activism. More recent models show that blockholders can govern through an alternative mechanism known as “exit”—selling their shares if the manager underperforms. These theories give rise to new empirical studies on the two-way relationship between blockholders and financial markets, linking corporate finance with asset pricing. Blockholders may also worsen governance by extracting private benefits of control or pursuing objectives other than firm value maximization. I highlight the empirical challenges in identifying causal effects of and on blockholders as well as the typical strategies attempted to achieve identification. I close with directions for future research.

1. INTRODUCTION

The seminal article by Berle & Means (1932) highlights the agency problems that arise from the separation of ownership and control. When a firm's managers are distinct from its ultimate owners, they have inadequate incentives to maximize its value. For example, they may exert insufficient effort, engage in wasteful investment, or extract excessive salaries and perks. The potential for such value erosion leads to a first-order role for corporate governance—mechanisms to ensure that managers act in shareholders' interest. The importance of firm-level governance for the economy as a whole has been highlighted by the recent financial crisis, which had substantial effects above and beyond the individual firms involved.

The source of agency problems is that managers have inadequate stakes in their firms. As a result, large shareholders—otherwise known as blockholders—can play a critical role in governance, because their sizable stakes give them incentives to bear the cost of monitoring managers. Blockholders are prevalent across companies and around the world. Holderness (2009) finds that 96% of US firms contain at least one blockholder (defined as a shareholder who holds at least 5%); this ratio is the 15th highest out of the 22 countries that he studies. Thus, understanding the role that blockholders play in corporate governance is an important issue.

Large shareholders can exert governance through two main mechanisms (see Hirschman 1970). The first is direct intervention within a firm, otherwise known as “voice.” Examples include suggesting a strategic change via a public shareholder proposal or via a private letter to management, or voting against directors. Although most of the early research on blockholder governance has focused on voice, a recent literature has analyzed a second governance mechanism—trading a firm's shares, otherwise known as “exit,” following the “Wall Street Rule,” taking the “Wall Street Walk,” or “voting with your feet.” If the manager destroys value, blockholders can sell their shares, pushing down the stock price and thus punishing the manager *ex post*. *Ex ante*, the threat of exit induces the manager to maximize value.

Blockholders may also exacerbate rather than solve agency problems. First, even if blockholders' actions maximize firm value *ex post*, their presence may reduce value *ex ante*: The threat of intervention may erode managerial initiative, and their mere presence may lower liquidity. Second, instead of maximizing firm value, blockholders may extract private benefits. While blockholders may alleviate conflicts of interest between managers and investors, there may be conflicts of interest between the blockholders and small shareholders. For example, blockholders may induce the firm to buy products at inflated prices from another company that they own.

This article surveys the three mechanisms through which large shareholders can affect firm value: (a) improving it by governance through voice, (b) improving it by governance through exit, or (c) worsening it through extracting private benefits or other channels. I start by reviewing the theoretical literature, in particular highlighting empirical implications. The two governance mechanisms share some predictions: For example, a larger stake generally improves governance through both voice and exit, and such governance in turn enhances firm value. However, they differ in many others. Most notably, voice theories yield implications for the causes and consequences of activism, whereas exit theories predict how blockholders affect financial markets and how their effectiveness depends on microstructure factors. I then move to the empirical evidence on the determinants and effects of blockholder structure.

In linking the theoretical and empirical literatures, I emphasize four challenges. First, identifying causal effects is difficult: Instead of causing changes in firm outcomes, potential investors may predict changes in firm outcomes and acquire a block accordingly, or unobservable variables may jointly attract large shareholders and affect outcomes. Second, blockholders can exert governance through the threat of exit and voice, rather than only actual acts of exit and voice. The

absence of these actions does not imply the absence of governance—on the contrary, the threat of intervening or selling may be sufficient to induce the manager to maximize value, so that the actual act is not necessary. However, such threats are much harder for empiricists to observe. Third, there is no unambiguous definition of a blockholder. The empirical literature typically defines a blockholder as a 5% shareholder, because this level triggers disclosure requirements in the United States. However, theoretical models predict that monitoring increases continuously with block size (up to a point), rather than a discontinuity at 5%. Moreover, if the benefits of monitoring are increasing in firm size, the dollar block size is a more accurate measure of monitoring incentives than the percentage block size. Fourth, although most models consider a single blockholder or multiple symmetric blockholders, in reality blockholders are a diverse class comprising many different types of investors: hedge funds, mutual funds, pension funds, individuals, and corporations. These different investors may engage in different forms of governance, be affected by firm characteristics in different ways, and have different effects on firm outcomes. Considering blockholders as a homogenous entity may miss interesting relationships at a more granular level.

Far from reducing its attractiveness as a research area, these empirical challenges suggest that blockholder governance is a particularly fruitful topic, as they mean that many first-order questions—including an issue as fundamental as whether blockholders affect firm value—remain unanswered and many theories remain untested. This article closes by highlighting open questions for future research, both theoretical and empirical. In particular, whereas early voice theories spawned an empirical literature on blockholders and corporate control (for an excellent survey, see Holderness 2003¹), recent exit theories suggest a different way of thinking about blockholder governance that gives rise to new areas for research—notably, the link between governance (traditionally a corporate finance topic) and financial markets (traditionally an asset pricing topic). (For a survey on the link between financial markets and corporate finance, see Bond, Edmans & Goldstein 2012.) This article focuses on outside blockholders: large shareholders who are not the firm's officers.² The literature on inside blockholders is covered by reviews of CEO compensation, such as Murphy (1999, 2013), Edmans & Gabaix (2009, 2014), and Frydman & Jenter (2010).

2. THE THEORY

2.1. Theories of Voice/Intervention

Intervention encompasses any action that an investor can undertake to improve firm value but that is costly to the investor. It can involve helping managers to create value, such as providing advice on strategic alternatives, or preventing managers from destroying value, such as blocking a wasteful merger or removing an underperforming executive. Regardless of the specific form, all intervention involves a free-rider problem: The blockholder bears all the costs of intervention but enjoys only a fraction of the benefits.

I introduce notation to make the discussion more concrete; in addition, using consistent notation across models highlights their shared themes. Let V (V^*) denote firm value without (with) the intervention, $G = V^* - V$ be the value created by intervention, and P be the price at which the

¹Becht, Bolton & Röell (2003) provide a comprehensive survey of the theoretical and empirical literature on intervention both by blockholders and through other corporate governance channels.

²Some empirical studies further distinguish between outside blockholders who are on the board of directors and those who are not.

blockholder can trade shares. This price will typically depend on the number of shares that the blockholder trades and whether she buys or sells. The blockholder's initial stake is given by α .

Shleifer & Vishny (1986) model the blockholder's free-rider problem. The blockholder engages in costly monitoring, which increases the probability that she uncovers a superior business strategy that creates a privately known value G . If she finds a new strategy, she can implement it through one of three channels of intervention. First, she can pay the cost of launching a takeover bid for $0.5 - \alpha$ shares to obtain majority control and implement the new strategy. She earns a return on her activism from two sources: Her initial stake of α increases in value by αG , and she may be able to buy the additional $0.5 - \alpha$ shares at a price P that is below the postrestructuring value V^* . This purchase is subject to the free-rider problem of Grossman & Hart (1980)³: Small shareholders will demand a price P that incorporates their expectation of the restructuring gains (and thus exceeds V). However, because small shareholders do not know the actual restructuring gains G (and thus the postrestructuring value V^*) but must estimate it, P will typically be below V^* . The higher the blockholder's initial stake α , the higher her share of the restructuring gains αG (her first source of return). Thus, G need not be so high to induce the blockholder to bid. Because small shareholders expect fewer restructuring gains, they sell for a lower price P . Knowing that she will not have to pay as high a takeover premium, the blockholder monitors more to begin with.

Second, the blockholder can implement the new strategy after changing the board of directors via a proxy fight.⁴ For example, she may propose her own slate of directors and solicit votes from other investors via a public campaign. Here again, a larger stake is beneficial through the standard free-rider argument: It gives the blockholder a sufficiently large share of the gains αG to offset the cost of the proxy fight.⁵

Third, the blockholder can implement a strategy by "jawboning": informal negotiations with firm management such as writing letters. This mechanism is less costly, as it does not involve changing management, but the absence of a management change also means that the blockholder realizes only a fraction of the potential value creation $(1 - \beta)G$, where $\beta > 0$. A higher α encourages the blockholder to pay the cost of a takeover, rather than jawboning, thus creating greater value as the full improvement G is achieved. In sum, Shleifer & Vishny (1986) predict that firm value is monotonically increasing in block size.

Since block size determines intervention incentives, Winton (1993), Noe (2002), and Edmans & Manso (2011) show that the number of blockholders affects the strength of voice by impacting block size. Splitting a block between multiple investors (e.g., so that N blockholders each hold α/N shares) weakens voice by exacerbating the free-rider problem. As a result, each individual shareholder has less incentive to intervene.

Even if a blockholder has a sufficiently large stake to justify the costs of activism, she may still not intervene. Kahn & Winton (1998) show that the blockholder may instead "cut and run": not intervene (in which case, the firm is worth V) and sell her shares. She will be able to sell for

³The general free-rider problem in intervention is that the blockholder earns only a fraction α of the benefits of intervention (whether intervention involves launching a takeover bid or proxy fight, engaging with management, or any other channel) but bears all the costs. The free-rider problem of Grossman & Hart (1980) is specific to the takeover channel: Small shareholders will not sell their shares to the acquirer for V , instead wishing to free ride on the restructuring that the acquirer will undertake postacquisition. They will sell only for V^* , reducing the blockholders' gains from taking over the firm. However, it does not apply to the other channels (e.g., jawboning or voting) that do not require the purchase of additional shares.

⁴See Yermack (2010) for a review of the role in corporate governance of shareholder voting more generally.

⁵See, e.g., Becker, Bergstresser & Subrahmanian (2013) for details on the costs of launching a proxy fight. Gantchev (2013) builds a sequential decision model to estimate the costs of proxy fights and other stages of shareholder activism.

a price P that exceeds V , because the price incorporates a possibility of intervention, and thus profit from selling.⁶ (Unlike in exit theories, such selling has no beneficial impact on governance, as there is no managerial action.) The option to cut and run leads to a second driver of intervention in addition to block size: stock illiquidity, the cost at which the blockholder can trade her shares. Holding all else equal, greater illiquidity reduces the profitability of selling, and thus encourages intervention. One source of illiquidity is price impact—a large trade moves the price because the market maker fears that the trader is informed (adverse selection). In turn, price impact can be reduced by the presence of investors who trade for noninformational reasons, such as financing consumption.⁷ A second source of illiquidity is transaction costs, such as taxes, commissions, or shorting costs. A third is inventory-holding costs, the market maker's cost of holding risky assets after buying from the blockholder.

Voice theories reach different conclusions on whether liquidity hinders or helps intervention. Coffee (1991) and Bhidé (1993) verbally argued that liquidity deters voice, as it facilitates cutting and running. This point was later modeled formally by Aghion, Bolton & Tirole (2004) and others. It led academics and practitioners to advocate the Japanese model of illiquid stakes—to “lock in” shareholders for the long term and induce them to govern through voice. These arguments have resurfaced in the recent financial crisis, as commentators argued that locked-in shareholders would have monitored firms more closely and prevented the crisis. Partly motivated by this reasoning, ten member countries of the European Union have agreed to implement a financial transaction tax by January 2016.

Maug (1998) overturns the above arguments by showing that liquidity can encourage intervention. As in Shleifer & Vishny (1986), the blockholder gains from intervention not only on her block α , but also by buying additional shares for a price $P < V^*$; liquidity increases the number of additional shares she can buy. If block size α is exogenous, this benefit of liquidity (encouraging “doubling down and intervening”) exceeds the cost described by Coffee (1991) and Bhidé (1993) (encouraging “cutting and running”) if and only if α is sufficiently small. Intuitively, if α is large to begin with, then the blockholder has sufficient incentive to intervene even without the ability to buy additional shares, and so the benefit of liquidity is less important. Maug then analyzes the stake α that the blockholder will choose endogenously. In this extended model, the blockholder starts with an initial stake of zero, and then acquires α via an observable purchase. Maug shows that the blockholder will endogenously acquire a small α . Intuitively, a small α increases the free float $(1 - \alpha)$ held by liquidity investors, and thus the volume of liquidity trades. Since a small α is chosen, liquidity encourages intervention overall.

Back, Li & Ljungqvist (2014) reach a different conclusion with a model that contrasts Maug (1998) along a number of dimensions. First, the blockholder acquires her stake α through an optimal initial public offering (IPO) mechanism, rather than an observable purchase. Second, the second-stage trading (where the blockholder either cuts and run or doubles down and intervenes) occurs in a dynamic Kyle model. As a result, the blockholder can infer liquidity from past prices, whereas it is unknown to her in Maug (1998). Third, liquidity trades are independent of the free float $(1 - \alpha)$, whereas in Maug (1998) they are increasing in the free float. Fourth, the blockholder has private information on her cost of intervention. Back, Li & Ljungqvist (2014) show that, under

⁶Maug (2002) shows that this problem is particularly severe if insider trading is allowed. The manager will voluntarily tell the blockholder bad news, to encourage her to “cut and run” on this news rather than intervene.

⁷Such needs are often referred to as “liquidity” needs, and these investors as “liquidity” investors. Note that these concepts differ from stock liquidity. Stock liquidity is enhanced not only by the presence of liquidity investors, but also by other factors such as a reduction in transaction costs.

these assumptions, the stake α chosen in the IPO is typically large. As a result, the “cutting and running” effect dominates and so liquidity deters intervention.

A separate benefit of liquidity is identified by Faure-Grimaud & Gromb (2004). The value created by intervention may manifest only in the long term. The blockholder may be hit by a liquidity shock that forces her to sell in the short term at a price P that is less than V^* because the full benefits of intervention have not yet materialized. Stock liquidity encourages trading by speculators (such as hedge funds), who have information on V^* through their own monitoring. Such trading pushes P closer toward V^* and allows the blockholder to earn a return on her intervention even if she has to sell early.

The above discussion surrounds how liquidity affects intervention incentives for a given block size α , and finds contrasting results depending on whether α is large or small. In addition, liquidity also affects the block size α that is formed in the first place. Here, the results are more consistent, with theories generally finding that liquidity facilitates block formation. In Maug (1998), if liquidity is sufficiently low, then the blockholder knows that if she acquires a stake of α , she will earn few profits from subsequently doubling down and intervening. Thus, she chooses to remain at her initial stake of zero and does not intervene. Kahn & Winton (1998) consider a similar two-period model. Liquidity increases the informed trading profits that the blockholder enjoys in the second period, after she has acquired her stake of α . Fearing second-period losses to the blockholder, small shareholders are willing to sell at a greater discount when she acquires α in the first period, and so a larger block is formed.⁸

In Maug (1998) and Kahn & Winton (1998), small shareholders are willing to sell to the blockholder for less than V^* because they fear second-period trading losses if they subsequently suffer a liquidity shock. In contrast, in Grossman & Hart (1980) and Shleifer & Vishny (1986), there is a single trading period and thus no risk of future liquidity shocks. As a result, small shareholders will sell only for a price that includes the expected gains from restructuring, leading to a free-rider problem. Kyle & Vila (1991) also consider a single round of trading and show that the presence of liquidity traders in this round allows the raider to overcome the free-rider problem and obtain a block, by camouflaging her trade among liquidity orders. Collin-Dufresne & Fos (2014b) extend Kyle & Vila (1991) to a dynamic model where the blockholder accumulates shares continuously and the value created by her eventual intervention is endogenously determined by her block size at the time. They find that liquidity is beneficial for a similar reason to Kyle & Vila: It allows greater accumulation of shares, leading to a larger block and thus greater effort by the activist.

2.2. Theories of Exit/Trading

Many of the above forms of intervention are difficult to implement for some blockholders. First, certain blockholders’ competitive advantage may lie in selecting stocks, rather than launching a proxy fight or providing strategic advice. Per the terminology of Dow & Gorton (1997), the expertise of such blockholders lies in gathering backward-looking, “retrospective” information to evaluate the current value of the firm (which depends on past decisions), but not forward-looking, “prospective” information about optimal future decisions. Second, even with expertise, successful

⁸In Maug (1998), liquidity also increases the discount at which the blockholder can buy her stake α , but does not affect the size of the stake she chooses to buy. The blockholder earns a return from two sources—buying her initial stake α at a discount in the first period, and second-period trading against liquidity investors who own $(1 - \alpha)$. While a greater α allows her to profit more from the first-period discount, it reduces free float and thus second-period trading profits.

intervention can be difficult. The firm can use corporate resources to support the board's recommended slate of directors in a proxy fight or oppose a takeover bid, e.g., through campaigning to shareholders. It can stagger board elections so that only a minority of positions can be voted on during a particular year. Third, particularly in the United States, most blockholders hold small stakes. While Holderness (2009) reports that 96% of US firms feature a shareholder who owns at least 5%, La Porta, Lopez-de-Silanes & Shleifer (1999) note that only 20% (10%) of large (medium) US firms feature a blockholder with at least 20%, which they estimate as the threshold required to exert control.⁹ Roe (1990) documents political and legal impediments to forming large blocks in the United States. The theories in Section 2.1 show that low α reduces incentives to intervene. Even if the blockholder's incentives were sufficient (e.g., high G means that αG is high even if α is low), a low stake lowers her likelihood of success in a proxy fight (which requires winning a sufficient percentage of votes) or being able to "jawbone" managers into changing strategy (because managers' receptivity may depend on the threat of a proxy fight if they are noncompliant).

In the context of voice theories, the prevalence of small blockholders poses a puzzle—if they cannot intervene, why do they exist, given that holding an undiversified stake is costly from a risk perspective? Admati & Pfleiderer (2009) and Edmans (2009) show that, even if a blockholder cannot exercise voice, she can still exert governance through the alternative channel of exit. We now define V^* as the firm's long-run fundamental value after the manager has taken an action (e.g., effort or investment). The manager's objective function will typically place weight not only on V^* , but also on the short-term stock price P , for reasons discussed below. Thus, his incentives to improve V^* will depend on the extent to which these improvements are reflected in P . The blockholder has private information on V^* ; by trading on this information, she makes the stock price more reflective of firm value.¹⁰ Put differently, if the manager destroys value and reduces V^* , the blockholder will sell her shares and drive the stock price down toward V^* , hurting the manager.¹¹ Thus, the manager has greater incentives to maximize value in the first place. Admati & Pfleiderer (2009) show that the blockholder typically induces the manager to exert greater effort but in some cases can worsen the agency problem.¹² Edmans (2009) shows that the blockholder encourages the manager to invest in long-term projects. If a firm announces low earnings, the blockholder engages in monitoring to determine the cause of low earnings. If they result from long-term investment rather than low firm quality, she retains her stake rather

⁹One caveat is that, because La Porta, Lopez-de-Silanes & Shleifer (1999) study several countries, they use a small sample size within each country: "Large firms" are the top 20 firms by market capitalization, and "medium firms" are the smallest 10 firms with a market capitalization of at least \$500 million. In personal correspondence, Cliff Holderness reports a median block size of 8.9% in the United States, using the larger data set of Holderness (2009).

¹⁰Although this governance mechanism is commonly referred to as "exit," blockholder trading in both directions increases price informativeness. In Edmans & Manso (2011), blockholders trade in both directions—in particular, they purchase additional shares if firm value is higher than the market price. In Admati & Pfleiderer (2009) and Edmans (2009), the blockholder either holds or sells in the core model, but the results are robust to allow for blockholder purchases.

¹¹In Edmans (2009), exit involves breaking up a block and selling shares on the secondary market, so that the blockholder can camouflage with liquidity traders. In Admati & Pfleiderer (2009), the block remains intact and its sale is observable, but it is sold to an uninformed market maker who does not know whether the blockholder has sold in response to a liquidity shock rather than negative information. Negotiated block sales (studied, e.g., by Barclay & Holderness 1991), where the block not only remains intact but also is sold to an informed buyer who engages in substantial due diligence, are unlikely to be motivated by negative private information.

¹²If all investors can observe whether the manager has taken an action to increase firm value, but only the blockholder can observe the value created by the action, the blockholder will sell her shares if the value increase is small. Such selling will reduce the stock price and the manager's incentive to take the value-maximizing action in the first place.

than selling, supporting the stock price. This expected “loyalty” encourages the manager to invest in the first place.

Note that exit theories do not require the blockholder to be cognizant of the impact of her trading on the manager’s behavior for it to be effective. The blockholder could be motivated purely by the private desire to earn informed trading profits, but such self-interested actions have a social benefit by disciplining the manager. In addition, exit theories also highlight an important distinction between price efficiency and price informativeness, two terms often used synonymously. In any rational model, the price is always semi-strong-form efficient conditional upon an information set. However, in the presence of blockholders, this information set is richer, and so price informativeness (strong-form efficiency) is greater.

A natural question is why blockholders have private information on V^* , and thus a special role in governing through exit compared to other traders (e.g., speculators without a stake). Edmans (2009) microfound the link between block size, information acquisition incentives, and informed trading. Regardless of her stake, the investor has the option to engage in costly monitoring to gather information about V^* . In the presence of short-sale constraints, a trader with a zero position has little incentive to acquire information, because if she receives a negative signal, she cannot trade on it. Up to a point, the larger her stake, the more she can sell upon a negative signal and thus the greater the incentives to gather the signal to begin with. However, if α becomes too large, liquidity becomes a constraint: The blockholder will not sell her entire stake upon a negative signal because the price impact would be too high. Thus, in contrast to some voice theories, the optimal block size is finite, consistent with the prevalence of small blockholders in the United States.

Similar to voice, the effectiveness of exit depends not only on block size but also on liquidity—but, while voice theories have differing predictions, Edmans (2009) shows that liquidity (a parameter for the volume of liquidity trader demand) enhances exit through three channels. First, holding private information constant, the blockholder trades more aggressively on her information. Second, holding block size constant, she gathers more private information because she can profit more from trading. Third, because liquidity allows her to sell more upon negative information, she acquires a greater initial block. One disadvantage of liquidity is that a given trade size has less impact on the stock price because the blockholder’s informed trade is camouflaged by uninformed trades from liquidity investors.¹³ However, the overall effect of liquidity on price informativeness—and thus the manager’s incentives to maximize firm value—is positive. Admati & Pfleiderer (2009) do not feature liquidity traders, but transaction costs reduce the effectiveness of governance through exit. To the extent that illiquidity proxies for transaction costs, their model also predicts that liquidity improves governance.

A third determinant shared with the voice channel is the number of blockholders, but the effect works in the opposite direction to that of voice theories. While splitting a block reduces the effectiveness of voice by exacerbating the free-rider problem, Edmans & Manso (2011) show that the same coordination difficulties strengthen exit. The threat of selling one’s shares upon managerial misbehavior elicits value maximization *ex ante* only if it is dynamically consistent. Once the manager has taken his action, blockholders cannot change it and are concerned only with maximizing their trading profits. As in Kyle (1985), a single blockholder will strategically limit her order to hide her private information. In contrast, multiple blockholders trade

¹³In the Kyle (1985) model, block size is irrelevant (owing to the absence of short-sale constraints) and information is exogenous. Thus, the second and third benefits of liquidity do not apply. The first benefit of liquidity is fully offset by the disadvantage of liquidity, so price informativeness is independent of liquidity. However, with endogenous information acquisition, liquidity is unambiguously beneficial for price informativeness, even when block size is irrelevant for trading (see also Edmans & Manso 2011).

aggressively, as in a Cournot oligopoly (see also Holden & Subrahmanyam 1992). Such trading impounds more information into P , so that it more closely reflects V^* , and thus the manager's actions.

Other determinants of the effectiveness of exit are not shared with voice. The first is the manager's contract—in particular, the weight placed on P versus V^* . Short-term concerns may stem from a number of factors: takeover threat (Stein 1988), termination threat (Edmans 2011), concern for managerial reputation (Narayanan 1985, Scharfstein & Stein 1990), the manager expecting to sell his shares before V^* is realized (Stein 1989), the manager considering the interests of shareholders who expect to sell early (Miller & Rock 1985), or the firm intending to issue equity (Stein 1996). The greater the manager's short-term concerns are, the greater the power of governance through exit. While standard measures of the manager's incentives, e.g., his stock and option holdings, measure his alignment with firm value in general (either P or V^*), the driver of the manager's sensitivity to exit is his alignment with the short-term stock price in particular. Edmans, Fang & Lewellen (2014) and Edmans et al. (2014) measure short-term incentives by the amount of equity that is scheduled to vest in a particular period. This amount is determined by equity grants made several years prior and plausibly independent of the current information environment.

A second determinant of exit not shared with voice is the blockholder's own short-term concerns. In Edmans (2009) and Edmans & Manso (2011), the blockholder has full discretion regarding when to sell, but in Admati & Pfleiderer (2009), she may suffer a liquidity shock that forces her to sell regardless of the manager's action. An increase in the frequency of this shock reduces the effectiveness of exit, as the blockholder may sell even if the manager is maximizing value. Goldman & Strobl (2013) study a blockholder who may be forced to liquidate her shares before V^* is realized. To increase the price at which any future liquidation will occur, she has incentives to refrain from disciplinary exit and to buy additional shares instead. Such price manipulation is possible only if the firm's assets are complex, i.e., their value does not become public during the shareholder's tenure. Because the manager wishes to encourage price inflation, he chooses excessive investment complexity.

In Dasgupta & Piacentino (2014), the blockholder's short-term concerns arise from a different source: She is a mutual fund who cares about attracting investor flows. She may not sell even if the manager has shirked, because selling would signal that her initial decision to buy the firm was misguided, thereby lowering investors' perceptions of her ability, and thus their inflows into the fund. Hence, the threat of exit is weaker. Song (2013) shows that the negative effect of career concerns on exit also applies in a multiple-blockholder structure. However, he shows that career concerns can strengthen voice by overcoming the free-rider problem typically associated with multiple blockholders. A reputation-conscious blockholder will not intervene, because doing so would signal that she invested in a low-quality stock. Knowing that she cannot rely on her fellow blockholders to intervene if they are reputation-conscious, a reputation-unconscious blockholder has greater incentives to engage in voice herself.

A third determinant of exit not shared with voice is the number of firms in which the blockholder owns a stake. Although most theories (of both voice and exit) consider a single firm, many institutional investors hold blocks in multiple firms (Antón & Polk 2014; Gao, Moulton & Ng 2014). Edmans, Levit & Reilly (2014) analyze the impact multifirm ownership has on the effectiveness of governance through exit. With multiple firms, the blockholder may exit a firm even if it is value-maximizing, to disguise her exit from another underperforming firm as being motivated by a portfolio-wide liquidity shock. This reduces the manager's incentive to work and weakens governance. On the other hand, the existence of multiple firms allows the blockholder to punish a shirking manager particularly strongly by selling only his firm and

retaining his rival. If the agency problem is strong, the second force dominates, and so governance is more effective under multifirm ownership than a single-firm benchmark. Common ownership also leads to the firms' stock prices being correlated, even if their fundamentals are uncorrelated. If and only if the agency problem is strong, this correlation is negative. While standard empirical studies typically investigate the number of blockholders or the ownership stake of the largest blockholder, the model generates empirical predictions for a new measure of blockholder governance—the number of blocks held.

Two other theories show how blockholder trading can exert governance but through a mechanism different from that of affecting the incentives of an equity-aligned manager. Levit (2013) combines both exit and voice. Differing from prior theories, voice involves the blockholder communicating private information to guide the manager's action, in a cheap-talk framework. Because the manager cares about private benefits in addition to shareholder value, he may not follow the blockholder's recommendation. The option to exit improves the effectiveness of voice. If the blockholder can exit when the manager pursues private benefits rather than shareholder value, she becomes less misaligned with the manager. Thus, the manager is more willing to follow her recommendation. Exit improves governance even if the manager is unconcerned with P , as it enhances voice. In contrast to Admati & Pfleiderer (2009) where there is no voice option, Levit (2013) shows that increasing the frequency of the blockholder's liquidity shocks can, interestingly, raise her effectiveness in exerting governance. The greater the frequency of liquidity shocks is, the higher the stock price if the blockholder voluntarily exits, and thus the greater her willingness to exit if the manager pursues private benefits.

Khanna & Mathews (2012) build on Goldstein & Guembel (2008), where an uninformed speculator (with an initial stake of zero) may manipulate the stock price downward by short selling. Such sales will reduce the stock price, fooling the manager into thinking that his investment opportunities are poor and causing him to disinvest incorrectly; the speculator's short position benefits from inducing this incorrect action. Khanna & Mathews (2012) show that a blockholder with a sufficient stake will have incentives to buy to counteract the speculator's bear raid. Even if such purchases incur trading losses, these are outweighed by the benefits of inducing the correct investment decision if α is sufficiently high. Interestingly, an increase in the blockholder's private information may weaken governance, as it may encourage her to trade on her information to maximize trading profits, rather than counteract the bear raid.

2.3. Theories of the Costs of Blockholders

In addition to creating value through governing through voice or exit, blockholders can also reduce firm value. In Burkart, Gromb & Panunzi (1997), as in other voice theories, intervention is ex post desirable, because it ensures that the value-maximizing project is taken. However, the ex ante threat of intervention reduces the manager's incentive to exert effort to find out about potential projects, because he fears that his desired project (which maximizes private benefits rather than firm value) will not be implemented. Thus, even in an intervention model, the optimal block size can be finite. A similar overmonitoring result arises in Pagano & Röell (1998), where a founding owner-manager chooses shareholder structure when going public. He wishes to maximize firm value, plus his private benefits, minus the monitoring costs borne by the new blockholder (as she will demand a price discount to offset these costs). However, when making her monitoring decision, the blockholder will trade off only the effect on firm value and the cost of monitoring, ignoring the fact that monitoring will reduce private benefits. Thus, the founder again chooses a lower block size. (Unlike in Burkart, Gromb & Panunzi (1997), here firm value is monotonically increasing in α ; instead, a finite α arises because the founder is not

maximizing firm value.) Bolton & von Thadden (1998) identify a different cost of large blockholders: A greater block size α lowers the free float $1 - \alpha$ and reduces liquidity.

The above costs exist even though the blockholder maximizes firm value ex post. Moreover, the blockholder can lower firm value if she pursues her own private benefits—utility accruing to the blockholder that is not shared with minority investors. Note that private benefits need not be at the expense of either other shareholders, such as prestige from owning a stake in a sports team, or production synergies with another company controlled by the blockholder. Barclay & Holderness (1992) find that block trades that occur at a premium to the postannouncement exchange price (thus implying private benefits of control) also lead to an increase in the stock price. This result suggests that private benefits either are not at the expense of shareholders or are outweighed by the governance benefits.

However, some forms of private benefits may reduce firm value. First, the blockholder may tunnel corporate resources away from the firm, for example, through inducing it to engage in business relationships with her other companies at unfavorable terms. Second, her voting decisions may be conflicted: A labor union pension fund may vote for labor-friendly directors (Agrawal 2012), or a mutual fund may side with underperforming management to preserve business ties (Davis & Kim 2007). Third, the blockholder's large stakes may cause her to be concerned about idiosyncratic risk (unlike other shareholders) and induce the firm to forgo risky, value-creating investments (Dhillon & Rossetto 2014).

Theorists have modeled the implications of private benefit extraction for blockholder structure. Zwiebel (1995) shows that, when blockholders can extract private benefits, the presence of a majority investor deters other blockholders from forming, as they will not be able to obtain private benefits of control given the presence of the majority shareholder. Thus, large shareholders “create their own space.” In Zwiebel (1995), shareholder structure is privately chosen by the blockholders, but in Bennedsen & Wolfenzon (2000), it is chosen by a founding entrepreneur when going public. The founder brings in outside blockholders to dilute his own power and commit to extracting few private benefits, thus allowing him to sell his equity at a higher price. In Dhillon & Rossetto (2014), the initial owner brings in outside blockholders who have stakes smaller than his, and thus will vote for risky, value-creating projects. This in turn increases the price that diversified shareholders are willing to pay for their stake.

3. THE EVIDENCE

We now turn to empirical evidence of the relationship between large shareholders and firm characteristics. Let F denote a firm characteristic such as profitability and B either a blockholder action (e.g., the decision to intervene or trade) or a measure of blockholdings. Empiricists have used a variety of measures, such as the presence of a blockholder, the ownership of the largest blockholder, the number of blockholders, or the total ownership of all blockholders.

The theoretical literature generates two broad sets of empirical implications. The first ($I1$) is the effect of F on B : the firm characteristics that determine blockholder presence or actions. The second ($I2$) is the effect of B on F : the impact of blockholder presence or actions on firm outcomes, such as profitability. The two-way relationship between blockholders and firm variables highlights the first challenge to testing these theories: Identifying causal effects is difficult. In addition to simultaneity, another problem is that omitted variables may jointly affect both F and B . Several strategies have been attempted to achieve identification. None is watertight, but each helps to partially move our priors toward an understanding of the determinants and consequences of blockholders. I summarize two of the many potential strategies here.

The first approach, as with any endogeneity problem, is to find a source of exogenous variation in the independent variable of interest (B or F). For example, instrumenting for B , or using a natural experiment that provides exogenous variation in B , will help identify the effects of blockholders on firm outcomes ($I2$). However, finding exogenous variation in blockholders is particularly challenging, because many variables that affect B will also affect F directly. Although Becker, Cronqvist & Fahlenbrach (2011) instrument for individual blockholders, I am not aware of instruments for blockholders in general. Isolating exogenous variation in F , to identify the determinants of blockholder presence ($I1$), is similarly challenging. A related approach is to instrument for a firm characteristic that affects firm outcomes F and to show that the strength of the effect depends on the level of blockholdings. This method moves us toward identifying the effect of B on F ($I2$), although it may be that B proxies for an omitted variable.

A second strategy is to analyze the relationship between F (B) and lagged B (F). The use of lagged variables helps mitigate, but does not eliminate, concerns of simultaneity bias. For example, changes in blockholdings may occur in anticipation of future changes in F , rather than being their cause. As a result, $I2$ is not identified. Furthermore, omitted variables may drive both B and future F , because their various determinants may be persistent. These concerns can be attenuated by an event-study approach that analyzes how firm value changes within a small window surrounding a blockholder action: It is unlikely that the blockholder took her action anticipating that firm value would improve in a specific window, and any anticipation of the event would bias event-study returns toward zero. However, this approach can study only blockholders' effects on firm value, rather than other outcomes (e.g., changes in profitability). To investigate the impact of blockholder voice on other firm outcomes, researchers can study how these outcomes differ according to whether the activism was successful versus unsuccessful or hostile versus nonhostile. However, this approach cannot be used to study the effects of entry or exit, and omitted variables and reverse causality remain important concerns. For example, a blockholder may choose not to be hostile if it is likely that the desired changes will be made anyway.

Turning to $I1$, linking F to the level of future blockholdings will not identify causality from F to blockholdings: Current blockholdings may cause current F and may also cause future blockholdings because they are persistent. In contrast, it is less likely (although far from impossible) that a link between F and future changes in blockholdings (i.e., blockholder entry or exit) or actions (e.g., intervention) results from reverse causality, because such events are typically difficult to predict and nonpersistent. However, we still have the problem that omitted variables may drive both F and the event.

In addition to endogeneity, which is a concern in almost all corporate finance settings, three further empirical challenges arise when testing blockholder theories. One is that theory emphasizes that governance can occur through threats or actions that are typically unobservable to the empiricist. For example, in the voice model of Shleifer & Vishny (1986), jawboning may involve writing private letters to firm management; in exit theories, the mere threat of selling shares may be sufficient to induce the manager to maximize value. One solution is to survey blockholders on the governance mechanisms they use (McCahery, Sautner & Starks 2011); although a survey cannot identify the effect of these mechanisms, it can shed light on which channels blockholders employ in practice. Another solution is to obtain nonpublic sources of information on blockholder governance, such as private letters to management (Carleton, Nelson & Weisbach 1998; Becht et al. 2009).

A second challenge when testing blockholder theories is that there is no unambiguous definition of a blockholder. In theory, a blockholder is any investor who has sufficient incentive to

monitor management. There are two sources of ambiguity when applying this concept empirically. The first is what type of investor will constitute a blockholder if she acquires a sufficient stake. Although it seems relatively clear that an officer should not be classified as an outside blockholder, as she is unlikely to exert governance on management, how a nonofficer director should be treated is unclear. Even some investors who are neither officers nor directors may not engage in governance, such as an employee share ownership plan or index fund.

The second source of ambiguity is the stake required for classification as a blockholder. In the United States, a blockholder is typically defined as a 5% shareholder. However, rather than being motivated by theory, this definition arises because investors are required to file a Schedule 13 disclosure upon crossing a 5% threshold. Thus, unless otherwise stated, the papers reviewed below study the United States and define a blockholder as a nonofficer who owns a stake of at least 5%.

In theory, block size matters for two reasons: It affects the incentives to monitor in both voice and exit models and, in voice models specifically, the ability to engage in intervention. Starting with the latter, the percentage stake determines a blockholder's share of voting rights and ability to intervene. However, the required stake to have effective control differs across firms (rather than being a blanket 5%) and will depend on factors such as the stakes held by management and other blockholders. Moving to the former, in theory models, monitoring incentives change continuously with α ; there is no discontinuity at 5% or any other level, in contrast to the discontinuous definitions of blockholders commonly used. In practice, investors may cluster just below 5% to avoid disclosure, and thus be missed by Schedule 13 filings. Moreover, if blockholder governance has a percentage, rather than dollar, effect on firm value, the relevant measure of block size is the dollar, rather than percentage, stake (Baker & Hall 2004 and Edmans, Gabaix & Landier 2009 make this point in relation to the appropriate measure of CEO incentives). In a large firm, a small percentage block may translate into a large dollar block, which provides strong monitoring incentives. Some of the studies discussed below study institutional ownership using 13F filings (which identify large stakes below the 5% threshold), rather than 5% blockholders using Schedule 13 filings. Furthermore, if blockholders face constraints on the total amount of monitoring that they can undertake for their portfolio (e.g., due to time or resource limitations), an investor's holding in one firm as a percentage of her overall portfolio becomes a relevant measure of governance (Ekholm & Maury 2014).

A third challenge when testing blockholder theories is that blockholders are a heterogeneous class of many different types, each with their own determinants and consequences. Thus, even if we are clear on our definition on what constitutes a blockholder, studying these blockholders in aggregate may miss interesting relationships that exist with individual blockholder classes.

Below, I begin by reviewing evidence consistent with the idea that blockholders affect firm outcomes. Such effects may result from voice, exit, or the costs of blockholders. I then move to specific evidence on each of the three mechanisms.

3.1. Evidence on Blockholders and Firm Outcomes

Perhaps the simplest piece of evidence in favor of blockholders exerting governance is their sheer prevalence: Holderness (2009) finds that the vast majority of firms around the world have either inside or outside blockholders. From a Darwinian perspective, if blockholders did not improve firm value, then dispersed ownership should be much more common given the risk-sharing advantages.

A second piece of evidence is the importance of blockholder identity. If blockholders did not engage in governance, firm value would be unaffected by who owns a particular block. Barclay & Holderness (1991) find that trades of large blocks between investors (insiders or outsiders) lead to a 16% increase in market value. They interpret this result as the block being reallocated to a more effective monitor.¹⁴ Holderness & Sheehan (1988) show that trades of majority blocks owned by insiders or outsiders similarly raise stock prices. These results are consistent with blockholders governing through voice and/or exit and with the benefits of governance outweighing any costs associated with blockholders.

Researchers also study the correlation between blockholdings and specific firm outcomes, although it is typically difficult to assign causality. Holderness & Sheehan (1988) find that, compared with matched, diffusely held firms, firms with majority blockholders exhibit insignificant differences in investment, accounting returns, Tobin's Q, leverage, and the frequency of corporate control transactions. McConnell & Servaes (1990) and Mehran (1995) document no correlation between outside block ownership and firm value; Mehran (1995) also finds no link with return on assets. These results need not imply that blockholders have no effect on firm value: If block size is always chosen at the optimal level to maximize firm value, there should be no relationship when controlling for the joint determinants of blockholdings and firm value, as noted by Demsetz & Lehn (1985) in the context of managerial ownership. However, because blockholdings are chosen by the blockholder rather than the firm, the empirically observed block size is likely to be the one that maximizes the blockholder's payoff rather than firm value.¹⁵ Thus, private decisions will move the empirically observed block size to or from the firm value optimum and generate correlations with firm value. Wruck (1989) finds that increases in ownership concentration resulting from private sales of equity, which are unlikely to be motivated by information because the purchaser undertakes due diligence, lead to positive (negative) announcement returns for low (moderate) levels of initial concentration. This result is consistent with the concave relationship between block size and firm value predicted by the voice theory of Burkart, Gromb & Panunzi (1997) and the exit theory of Edmans (2009).

Studying long- rather than short-run returns, Cremers & Nair (2005) find that a portfolio that buys (sells) firms with the highest (lowest) level of takeover vulnerability generates an annualized return of 10–15% only when public pension fund ownership is also high. This finding suggests that external (blockholder) and internal governance are complements and that this relationship is not immediately capitalized by the market.

Moving to international evidence on the correlation between outside block ownership and firm value, Lins (2003) studies 18 emerging markets and finds that Tobin's Q is positively related to the fraction of control rights held by nonmanagement blockholders in aggregate. This correlation is particularly strong in countries with low investor protection, in which corporate governance is likely more important. Claessens et al. (2002) analyze eight East Asian economies. When the largest blockholder is a widely held corporation or financial institution

¹⁴As explained in Section 2.2, such a trade is likely not motivated by overvaluation as in “exit” theories, given that the purchaser engages in extensive due diligence. However, it may lead to the block being transferred to a new owner who is more able to engage in disciplinary exit in the future. Similarly, because the seller is likely to be informed, it is unlikely that the stock price increase arises because the trade signals that the firm is undervalued.

¹⁵The blockholder's objective function will differ from firm value for a number of reasons. First, the blockholder captures only α of firm value. Second, she benefits from trading profits, but such profits do not affect firm value as they are earned at the expense of small shareholders. Third, she may acquire too small a stake (from a governance perspective) to reduce the idiosyncratic risk she has to bear (Admati, Pfleiderer & Zechner 1994).

(and thus an outsider), the market-to-book ratio is increasing in her cash flow ownership and independent of the wedge between her control rights and cash flow ownership. In contrast, when the largest blockholder is a family or the state, valuations are negatively related to this wedge. These results suggest that the private benefits of control are low for outside blockholders, relative to insiders.

Turning to the predictions of multiple blockholder theories, Konijn, Kräussl & Lucas (2011) find a negative correlation between outside blockholder dispersion (proxied by the Herfindahl index) and firm value. Their results support single-blockholder models in which firm value is increasing in the ownership of the largest blockholder. However, their results are inconsistent with the model of Edmans & Manso (2011) in which blockholder dispersion is desirable (up to a point) in situations where exit is an effective governance mechanism.

The insignificant results of Holderness & Sheehan (1988), McConnell & Servaes (1990), and Mehran (1995) may also arise because they study blockholders in aggregate. Cronqvist & Fahlenbrach (2009) disaggregate the data and study the importance of blockholder identity by identifying fixed effects for different classes of outside blockholders. They find significant blockholder fixed effects for various firm variables, such as investment and financial policies, accounting performance, and executive compensation. The effects are strongest for activists, pension funds, and corporations and weakest for banks, money managers, and insurance companies. Because increases in, for example, investment or leverage may be either good or bad for firm value, these results are consistent with voice, exit, or the costs of blockholders. Clifford & Lindsey (2013) find that blockholder types who are typically associated with activism (e.g., hedge funds as opposed to mutual funds) are associated with greater event study returns to Schedule 13 filings, greater improvements in profitability, and a greater increase in the performance sensitivity of CEO pay.

Although the above results could stem from blockholders either causing a change in corporate policies through exerting governance or selecting firms based on expected future changes in corporate policies, Becker, Cronqvist & Fahlenbrach (2011) use the density of wealthy individuals in a firm's headquarter state as an instrument for individual blockholders. Blockholders increase firm performance and shareholder payouts, and they reduce investment, cash holdings, executive pay, and liquidity.¹⁶ Crane, Michenaud & Weston (2014) use inclusion in the Russell 2000 vs. Russell 1000 as an instrument for institutional ownership. Their identification arises from the largest firms of the Russell 2000 having greater weights within their index than the smallest firms of the Russell 1000, and they find that the former have higher institutional ownership. Instrumented institutional ownership leads to higher dividend payments, share repurchases and operating performance, and lower CEO pay. The results are not driven by activist investors, providing evidence for governance through exit. A contemporaneous paper by Mullins (2014) uses the different methodology of a fuzzy regression discontinuity design. He uses the proprietary market capitalization measure, which Russell uses to determine index assignment, as an instrument for index inclusion. Under this approach, he finds that inclusion in the Russell 1000 (rather than Russell 2000) is associated with higher institutional ownership concentration, higher CEO pay-performance sensitivity, a higher likelihood of subsequent CEO turnover, and lower capital expenditures.

Some papers find a negative correlation between blockholders and myopic actions. These results are consistent with the Edmans (2009) model of exit and investment, but they could also be

¹⁶The negative impact on liquidity is consistent with the negative correlations between ownership concentration and liquidity found by Heflin & Shaw (2000) and Rubin (2007).

consistent with a voice theory in which myopia is the main agency problem. Dechow, Sloan & Sweeney (1996) and Farber (2005) find that firms that fraudulently manipulate earnings have lower outside blockholdings. Burns, Kedia & Lipson (2010) study institutional ownership (rather than blockholdings) using 13F filings and find that institutional ownership concentration, measured by the Herfindahl index, is negatively correlated with financial restatements. Baysinger, Kosnik & Turk (1991) document a positive correlation between institutional ownership concentration and R&D, and Lee (2005) shows a positive link between total blockholder ownership and patents. Atanassov (2013) shows that the presence of an outside blockholder reduces the negative impact of antitakeover legislation on patent citations. Aghion, Van Reenen & Zingales (2013) use S&P 500 index inclusion as an instrument for total institutional ownership and find a positive effect on citation-weighted patents.

3.2. Evidence Specific To Voice/Intervention

While the above results could be consistent with voice or exit, the survey of McCahery, Sautner & Starks (2011) provides evidence on the specific channels of voice that blockholders employ. In order of frequency, they show that blockholders vote against management at the annual general meeting (AGM), initiate discussions with the executive board, contact the supervisory board to seek management changes, disclose that they voted against management, make shareholder proposals at the AGM, make critical speeches at the AGM, initiate lawsuits against managers, and publicly criticize executive board members. The second and third of these channels are examples of the jawboning analyzed by Shleifer & Vishny (1986). Duan & Jiao (2014) show that mutual funds vote against management in proxy proposals, particularly when Institutional Shareholder Services recommends doing so.

A separate set of papers studies the effect of activist events on firm performance. An early literature found little evidence that activism by shareholders in general improves firm performance. Del Guercio & Hawkins (1999) show that shareholder proposals by active pension funds lead to asset sales, restructurings, and layoffs but have no effect on stock or accounting performance. Yermack's (2010, p. 117) survey concludes that, "the success of institutional investor activism to date appears limited."

However, the absence of significant results may arise, not because activism does not create value, but because these studies cover blockholders whose expertise does not lie in activism or who face barriers to activism. Diversification requirements hinder mutual funds from acquiring the large positions needed to exercise control,¹⁷ and "prudent man" rules constrain pension funds from acquiring stakes in troubled firms in need of intervention (Del Guercio 1996). Even if not legally restricted, a blockholder may choose not to engage in activism owing to a conflict of interest. For instance, a fund may lose its contract to manage a firm's pension plan if it opposes management.

Research focusing on blockholders that have both a particular expertise in activism and few barriers to intervention finds more significant effects. Holderness & Sheehan (1985) document that the market reacts more favorably to block acquisitions by six controversial raiders known to engage in activism as compared with a random sample of investors. Bradley et al. (2010) show that activist institutions successfully force closed-end funds to open end, thereby creating value through the elimination of the closed-end fund discount. Moreover, activism attempts

¹⁷Under the Investment Company Act of 1940, a "diversified" mutual fund can, with respect to 75% of its portfolio, have no more than 5% invested in any one security and own no more than 10% of the voting rights in one company.

became particularly frequent after the 1992 proxy form that reduced the costs of communication among shareholders, demonstrating that coordination costs are an important determinant of intervention.

Recent papers focus on activist hedge funds. Hedge funds have few business ties or regulatory constraints that hinder activism and high performance-based fees that induce intervention even if it is costly. While some hedge funds focus on stock picking, activist hedge funds have particular expertise in intervention. McCahery, Sautner & Starks (2011) and Clifford & Lindsey (2013) find that hedge funds are more willing to engage in activism than are other institutions.

Brav et al. (2008) study the 13D filings of activist hedge funds. When acquiring a 5% stake in a public firm, a shareholder must file a Schedule 13, which can take one of two forms. If she intends to engage in intervention, she must file a 13D and state in Item 4 the form of intervention she intends to employ; if she intends to remain passive, she can file a 13G, which is shorter and comes with fewer disclosure requirements. Although blockholders who intend to remain passive still have the option of filing a 13D, they are unlikely to do so because of the benefits of filing a 13G as described in Edmans, Fang & Zur (2013). Brav et al. (2008) find that 13D filings lead to 7–8% abnormal returns in a (–20, 20) window, consistent with activism creating value. To support the hypothesis that the abnormal returns stem from activism rather than stock picking (i.e., do not simply arise because the hedge fund's block acquisition signals that the stock was undervalued), the authors find that the abnormal return is 3.9% higher when the hedge fund uses hostile tactics than when they do not. Moreover, if the hedge fund later exits (reduces its stake to below 5%) owing to the failure of activism, the (–20, 20) return to the exit is 8% lower than the full sample of exits. In a similar vein, Clifford (2008) finds that, compared with 13G filings, 13D filings by hedge fund activists lead to larger event-study returns and improvements in return on assets, implying an additional return to activism over stock picking (before taking into account the costs of activism). Turning to operating performance, Brav et al. (2008) find that 13D filings lead to improvements in total payout, return on assets, and operating margins, and Brav, Jiang & Kim (2013) document improvements in plant-level productivity using Census data.

Klein & Zur (2009) focus on confrontational activism and find that hedge fund targets earn 10.2% abnormal returns in a (–30, +30) window surrounding a 13D filing, compared with 5.1% for other activist targets. Greenwood & Schor (2009) show that the abnormal returns to 13D filings stem from activists' ability to force target firms into a takeover, one particular form of intervention. Both announcement and long-term returns to 13D filings are significant for targets that are ultimately acquired but insignificant for targets that remain independent. Boyson & Mooradian (2011) show that hedge fund activism is associated with gains in long-term operating performance and short-term stock performance.

While the above studies focus on particular institutions that are most likely to be skilled at activism (activist hedge funds), Boyson & Mooradian (2012) study particular fund managers. They posit that hedge fund managers with past experience in the hedge fund's industry of specialization, or prior portfolio management experience at similar hedge funds, are likely skilled. Indeed, activism by such managers is associated with higher long-term stock returns, in contrast to Brav et al. (2008), who document insignificant long-term stock returns (albeit significant event-study returns) for activist hedge funds in general. The analysis of Boyson & Mooradian (2012) also highlights the importance of blockholder heterogeneity.

Moving away from hedge funds to blockholders in general, Helwege, Intintoli & Zhang (2012) find that forced CEO turnover, a particular type of activism, was positively related to the presence of an outside blockholder in 1982–1994 but not in 1995–2006. Chen, Harford & Li (2007) find that independent long-term institutional investors are associated with superior M&A performance

and the withdrawal of bad M&A bids, particularly if they have a large stake. They interpret their results as stemming from blockholder monitoring.

A quite separate reason why early studies of overt activism by blockholders in general need not imply that voice is ineffective is that blockholders may engage in activism in ways unobservable to the econometrician. Carleton, Nelson & Weisbach (1998) study private letters written to management by TIAA-CREF (a major pension fund) in an attempt to enact corporate governance changes. TIAA-CREF reached agreements with the firm 95% of the time; more than 70% of these cases occurred without shareholder votes. This result indicates that looking at actual shareholder votes may miss a significant amount of activism. However, they find little evidence that such letters increase the short-term stock price, likely because the letters were usually private. Becht et al. (2009) study the Hermes Focus Fund (a UK pension fund that also specializes in activism) and find that “engagement rarely took a public form,” instead occurring through communications with executives and sometimes other shareholders. Common objectives included selling noncore assets, replacing the CEO or Chairman, and increasing the cash payout to investors. When the fund’s engagement objectives were achieved and publicly announced, the mean abnormal (−3, +3) returns were 5.3%, and these returns were higher for confrontational than for collaborative engagements.

While these last two papers directly observe behind-the-scenes activism, Fos (2013) estimates it using a two-stage model that accounts for not only actual proxy contests but also the threat of such contests. The first stage is a binary choice model to predict the likelihood of a proxy contest, and the second studies the effect of the threat of a proxy fight on firm outcomes. Using liquidity as an instrument (making the assumption that liquidity increases the likelihood of a proxy contest but does not affect firm outcomes), he shows that an increase in the threat of a proxy fight causes firms to increase leverage, dividends, and CEO turnover and to reduce R&D, capital expenditure, and executive compensation. Thus, the mere threat of intervention plays a disciplinary role. He studies all proxy fights, rather than only proxy fights by blockholders.

Turning from the effects of activism to the determinants of activism, Norli, Ostergaard & Schindele (2014) use the decimalization of the major US stock exchanges in 2001 as an exogenous shock to liquidity and show that liquidity increases the frequency of proxy fights and shareholder proposals. Moreover, as predicted by Maug (1998), investors acquire additional shares in advance of engaging in activism. Back, Li & Ljungqvist (2014) use three different sources of exogenous variation in liquidity—brokerage closures, market maker closures, and mergers of retail with institutional brokerage firms—and, in contrast, find a negative effect on hedge fund activist campaigns and shareholder proposals. While the above papers study actual acts of intervention, Edmans, Fang & Zur (2013) use a 13D filing to measure the threat of activism. They use decimalization to show that liquidity has a positive causal effect on the likelihood of activist hedge funds filing a 13D.

Brav et al. (2008) find that activist hedge funds are more likely to target firms with high operating cash flows, high return on assets, low total payout, and high executive compensation. Such firms likely suffer from the agency costs of free cash flow (Jensen 1986), thus increasing the gains from blockholder intervention. These results are consistent with the theory of Maug (1998), in which a block only forms to begin with if the gains from intervention are sufficiently high relative to the cost. Brav et al. (2008) and Becker, Cronqvist & Fahlenbrach (2011) find that blockholders target smaller firms, where it is easier to acquire a significant percentage stake. Evidence on targets’ prior stock price performance is more mixed. While Klein & Zur (2009) find that targets of confrontational activism in the United States previously outperformed the market, Becht et al. (2009) show that targets of the UK Hermes Focus Fund previously underperformed.

3.3. Evidence Specific To Exit/Trading

The survey by McCahery, Sautner & Starks (2011) finds that exit is the number one governance mechanism employed by blockholders. In response to dissatisfaction with firm performance, 80% of institutions will sell shares, a greater fraction than any of the channels of voice listed in Section 3.2. Duan & Jiao (2014) show that, even in proxy proposals where Institutional Shareholder Services recommends voting against management—a scenario particularly conducive to voice—mutual funds sometimes choose to exit.

One piece of evidence loosely consistent with exit is the existence of multiple blockholders. Owing to free-rider problems, such a structure is suboptimal for voice, but it improves the efficiency of exit as shown by Edmans & Manso (2011). Edmans & Manso (2011) use data from Dlugosz et al. (2006) to show that 70% of US firms have multiple blockholders (defined as a shareholder who owns at least 5%). Using a 10% threshold, Laeven & Levine (2007) find that 34% of European firms have multiple blockholders, Maury & Pajuste (2005) document 48% for Finland, and Western European data made available by Faccio & Lang (2002) yield a figure of 39%. However, the existence of multiple blockholders is also consistent with voice-only theories in which a finite individual stake arises owing to wealth constraints (Winton 1993) or risk aversion (Admati, Pfleiderer & Zechner 1994).

More specific evidence for exit studies the link between blockholders and financial markets. The first set of evidence supports the notion that blockholder trades contain private information. Parrino, Sias & Starks (2003) show that sales by institutional investors precede CEO turnover and negative long-run returns. Institutions with larger positions sell their shares to a greater extent than those with smaller positions, as in the Edmans (2009) model where larger blockholders are more informed. Bushee & Goodman (2007) find the private information content of an institutional investor's trade increases in his stake. Brockman & Yan (2009) document that stocks with higher total outside block ownership contain greater firm-specific information. They also recognize the importance of blockholder heterogeneity and show that this result does not hold for employee share ownership plans, which are unlikely to trade on information. Gallagher, Gardner & Swan (2013) find that blockholders who trade frequently generate trading profits, and Yan & Zhang (2009) find that frequent traders are more informed (in terms of their trades predicting future stock returns) than those who rarely trade. Collin-Dufresne & Fos (2014a) show that the trades made by 13D filers over the 60 days before the filing date (which must be disclosed in the filing) are highly profitable.

A second strand of research studies the link between blockholders and price informativeness. Gallagher, Gardner & Swan (2013) use Australian data that provide higher-frequency information on institutional investor trades than do 13F filings in the United States. Institutional investor trading leads to subsequent increases in price efficiency, which the authors in turn link to improvements in future performance. These effects are stronger in the presence of multiple institutional investors. Gorton, Huang & Kang (2013) similarly find a positive association between the number of blockholders and price informativeness. Boehmer & Kelley (2009) use Granger causality tests to show a causal relationship between total institutional ownership and price efficiency, particularly when there is low ownership concentration (i.e., more institutional owners). Both the volume of trading and the level of institutional holdings in the absence of trading cause greater efficiency; that the level of holdings matters suggests that the threat of exit increases price informativeness.

Third, a number of papers show that blockholder purchases (sales) increase (reduce) the stock price. These price changes are permanent and thus likely result from the trade conveying information, rather than temporary price pressure effects due to downward-sloping demand curves accommodating a sudden change in supply. Scholes (1972) and Mikkelsen & Partch (1985) find

this result for secondary issues, and Holthausen, Leftwich & Mayers (1990) and Sias, Starks & Titman (2006) document that institutional trading has a permanent effect on stock prices. Collin-Dufresne & Fos (2014a) find that purchasers by eventual 13D filers, over the 60 days before the filing date, increase prices.

While the above papers study the effect of blockholders on financial markets (*I2*), another financial market test relates liquidity to blockholders. Fang, Noe & Tice (2009) use decimalization to show that liquidity causes increases in firm value, and Bharath, Jayaraman & Nagar (2013) show that this effect is stronger for firms with greater block ownership, measured by the share of all blockholders, the share of the largest blockholder, or the number of blockholders. This result supports the idea that blockholders improve firm value (*I2*). It is consistent with liquidity enhancing either exit (Admati & Pfleiderer 2009, Edmans 2009, Edmans & Manso 2011) or voice (Maug 1998; Faure-Grimaud & Gromb 2004) (*I1*). Supporting the former interpretation, Bharath, Jayaraman & Nagar show that the link between firm value and the interaction of liquidity and blockholdings is stronger when the manager has greater equity incentives.¹⁸ This interaction remains strong even in firms where the manager is entrenched and thus voice is less likely to be effective.

Edmans, Fang & Zur (2013) use decimalization to show that liquidity encourages the acquisition of blocks (either 13D or 13G filings) by activist hedge funds, as in the exit theory of Edmans (2009) and the voice theories of Kyle & Vila (1991), Kahn & Winton (1998), and Maug (1998). Supporting exit theories in particular, the effect of liquidity on block acquisition is stronger when the manager has greater sensitivity to the stock price. Moreover, liquidity increases the likelihood that the hedge fund blockholder files a 13G rather than a 13D.¹⁹ A 13G filing indicates that the blockholder will not be engaging in activism. Thus, it can suggest that the blockholder either is abandoning governance altogether or is governing through the alternative mechanism of exit. Supporting the latter explanation, liquidity is particularly likely to induce a 13G filing (rather than a 13D filing) where the manager has greater sensitivity to the stock price. Moreover, a 13G filing leads to a positive event-study reaction, positive holding period returns for the blockholder, and positive improvements in operating performance, particularly for firms with high liquidity. These authors then extend their analyses to all activists, which include institutions less effective at intervention or trading than hedge funds (e.g., owing to flatter compensation structures). The effect of liquidity on block formation continues to hold, but its effect on the choice of governance mechanism and the consequences of a 13G filing are weaker, again highlighting the importance of blockholder identity. Gerken (2014) similarly finds no correlation between liquidity and governance choices for blockholders in general (which includes nonactivists).

Roosenboom, Schlingemann & Vasconcelos (2014) study the link between liquidity and blockholder governance in the particular setting of M&A. Liquidity is correlated with lower M&A returns when there is a single blockholder (and thus governance through voice is most likely) but not when there are multiple blockholders (and thus governance through exit is most likely). Dimmock et al. (2013) study a different dimension of liquidity: the capital gains tax liability when

¹⁸High equity holdings will not induce the CEO to be sensitive to the current stock price if his equity has very long vesting periods, but vesting periods are typically short in practice (see, e.g., Kole 1997). A potential measure of incentives to increase the current stock price in particular is the amount of equity scheduled to vest in the short term (e.g., Edmans, Fang & Lewellen 2014; Edmans et al. 2014).

¹⁹Liquidity reduces the likelihood of a 13D filing, conditional upon block formation. However, this effect is outweighed by the positive effect of liquidity on the likelihood of a block being acquired in the first place. Thus, liquidity has an unconditionally positive effect on a 13D filing, as documented in Section 3.2.

selling a stake. Importantly, this liability varies across different investors in the same stock, depending on when they acquired their stake, thereby addressing omitted variables concerns. The authors find that a greater capital gains lock-in increases the likelihood of voting against management (a form of intervention) but reduces the likelihood of exit.

3.4. Evidence on the Costs of Blockholders

There are four main approaches to identifying a negative effect of blockholders on firm value.²⁰ The simplest one is to investigate the correlation between blockholdings and firm value or firm outcomes (such as liquidity) that are likely linked to firm value. Studies using this approach are covered in Section 3.1.

A second approach is to estimate the private benefits of control, i.e., the additional value that blockholders derive from ownership over and above minority shareholders. (Note, however, the earlier caveat that private benefits need not be at the expense of other shareholders.) Barclay & Holderness (1989) find that negotiated block trades (owned by insiders or outsiders) occur at a 20% premium to the market price, reflecting the private benefits of control. The premium is higher for firms with larger cash holdings, and thus greater potential for expropriation. Albuquerque & Schroth (2010) study block trades between 10% and 50% where the ownership of the buyer rises from below 20% to above 20%, which they estimate as the threshold required to enjoy private benefits. They estimate private benefits as 10% of the value of the block or 3–4% of the value of the target firm's equity. Private benefits create a deadweight loss, as firm value falls by \$1.76 for every \$1 of private benefit on average. They also find that block trades increase firm value by 19%, consistent with the finding by Barclay & Holderness (1991) that blockholder identity matters. Thus, the deadweight loss created by private benefit extraction is likely outweighed by the monitoring provided by blockholders.

Third, researchers can study firm outcomes where the blockholder is likely to be misaligned with minority shareholders. Faccio, Marchica & Mura (2011) hypothesize that undiversified large shareholders will be excessively conservative. They indeed find that the portfolio concentration of the largest shareholder is associated with reduced volatility of return-on-assets, consistent with the model of Dhillon & Rossetto (2014), although they do not investigate the effect on firm value. To identify causality, they study the effect of a block passing to a successor (who is typically less diversified than the previous owner) and the effect of acquiring additional firms to a portfolio (which increases diversification) on the risk-taking of existing firms. While they suggest that portfolio concentration reduces firm value, Ekholm & Maury (2014) find that portfolio concentration is positively related with future operational performance and stock returns, suggesting that investors have particularly strong incentives to monitor a stock that occupies a large part of their overall portfolio. The contrasting results can be reconciled by the fact that Ekholm & Maury's results are particularly strong for small shareholders. Such shareholders are more likely to face time or resource constraints in monitoring and thus particularly focus their efforts on their largest holdings.

A fourth approach is to examine the behavior of blockholders. Davis & Kim (2007) study the proxy voting behavior of mutual funds. At the fund family level, funds with more business

²⁰I use "firm value" to refer to the value of the firm available to minority shareholders. This equals the market capitalization of the firm in an efficient market, which Holderness (2003) refers to as "exchange value." It is a different concept from the total value of the firm available to all shareholders, which will include private benefits of control accruing to blockholders as well as to any managers who are shareholders.

ties (aggregated across all firms that they invest in) are more likely to vote with management. However, at the individual firm level, funds are no more likely to vote with the management of a client than a nonclient. Agrawal (2012) finds that pension funds affiliated with the AFL-CIO labor union become significantly less opposed to directors once the union no longer represents a firm's workers. Because opposition by AFL-CIO pension funds is negatively associated with valuations, this result suggests that they vote for directors who protect workers' interests at the expense of shareholders.

4. CONCLUSION AND DIRECTIONS FOR FUTURE RESEARCH

The effect of blockholders on corporate governance gives rise to a rich and varied literature, covering many topics in financial economics. Theoretical models examine topics such as the free-rider problem, informed trading and market microstructure, strategic information transmission, the trade-off between the ex post costs and ex ante benefits of monitoring, and the role of managerial and blockholder incentives. Empirical studies have linked blockholdings to both corporate finance outcomes (such as firm value, profitability, leverage, investment, and risk-taking) and financial market variables (such as liquidity and price informativeness), analyzed the market reaction to block trades, and estimated the private benefits of control. Identifying causal effects for either the consequences or determinants of blockholders is particularly challenging, and a number of approaches have been employed.

There are several potential avenues for future research. Starting with voice, recent empirical research has significantly enhanced our understanding of activism through the hand collection of data (e.g., 13D filings, private letters to management, and surveys), and further data entrepreneurship will hopefully shed even more light. In particular, although the theoretical literature typically assumes a single blockholder and an unspecified interventionist action, in reality there are several types of blockholders who engage in various forms of activism, which meet with different management responses. Gathering finer data (as recent papers focusing on activist hedge funds have done) will help us understand which types of activism are successful, under which circumstances, and by which blockholders. A particular challenge is to identify causal effects, due to the lack of instruments for blockholder presence or actions. Even a question as fundamental as the impact of blockholders on firm value remains unanswered.

The exit mechanism implies a new way of thinking about blockholders—as informed traders rather than controlling entities—that gives rise to a number of new research directions linking blockholders to microstructure and, more generally, corporate finance to financial markets. Future theories could incorporate more complex features of informed trading that have previously been analyzed in microstructure models which treat firm value as exogenous. Current exit theories consider a single trading round, but in reality there may be multiple periods across which the blockholder may trade on her information. Moreover, although some existing single-period models feature the blockholder being forced to trade owing to a liquidity shock (in addition to voluntarily trading on information), combining liquidity shocks with multiple periods and multiple informed traders may lead to additional interesting insights, such as the possibility of front running (e.g., Brunnermeier & Pedersen 2005). Empirical investigation of exit may similarly benefit from studying variables typically analyzed in the microstructure literature, such as trading volume, price informativeness, and the extent of information asymmetries between blockholders and the market (or the manager). In addition, the recent financial crisis has led to a number of regulatory changes (e.g., short-sale restrictions) that affect financial markets, and thus may be used to identify casual effects. Holden, Jacobsen & Subrahmanyam

(2014) provide a comprehensive review of empirical measures of liquidity that may be useful to test exit theories.

While voice and exit have largely been studied independently, it would be interesting to examine their interactions theoretically. The few papers that study voice and exit together assume the same blockholder engages in both, but in reality, different blockholders have expertise in different strategies. Moreover, it would be fruitful to study how voice and exit interact with other, nonblockholder governance mechanisms. For example, the manager's contract is a governance mechanism in itself and also affects the effectiveness of exit. It is typically taken as exogenous but in reality may be jointly determined with blockholdings. Moving to other nonblockholder governance mechanisms, Cohn & Rajan (2013) study how the board moderates conflicts between the activist investor and manager and show that, surprisingly, internal governance (by the board) and external governance (by the activist) can be complements. The aforementioned empirical papers by Cremers & Nair (2005) and Atanassov (2013) also study the interaction between blockholders and other governance channels.

For both voice and exit, a particular empirical challenge is that there is no widely accepted definition of a blockholder. Although most empirical papers define a blockholder as a 5% shareholder, theory models do not predict a discontinuity at 5%. Particular attention could be paid to how the effectiveness of governance depends on block size. In addition, other data sources such as 13F filings may allow researchers to consider blockholders with stakes below 5%. Such blockholders may still have incentives to engage in monitoring, particularly in large firms where their dollar stakes will be significant. Relatedly, even though the percentage stake is the most common measure of block size, the dollar stake may be more relevant, particularly in settings in which blockholder governance is likely to scale with firm size.

Our theoretical and empirical understanding of both voice and exit may be further enhanced by a consideration of agency problems at the blockholder level (as some recent papers have done). Many blockholders are agents themselves, who may have objectives other than shareholder value maximization. On the theoretical side, although existing papers focus on the private benefits of control, studying how private benefits affect the effectiveness of governance through voice or exit would be interesting. Empirically, gathering data on blockholder agency problems (e.g., the alignment of the blockholder with her target firm's performance, her concern for fund flows, and her ownership of other firms with business ties) is a potentially fruitful avenue.

There is also scope for both theory and empirics to study new categories of blockholders that have previously been overlooked. For example, index funds are increasingly important: Davis (2013) documents that, in 2011, BlackRock (proprietor of the iShares index funds) was the largest shareholder of one in five US-listed firms. They do not engage in discretionary trading and so cannot govern through exit, and they have historically been seen as nonactivist. However, they can engage in proxy voting, or their presence can facilitate activism by other blockholders (Mullins 2014). Similarly, researchers can analyze new practices that blockholders are recently beginning to engage in, such as empty voting (establishing separate positions in cash flow ownership and voting rights, for instance, through borrowing shares). See Brav & Mathews (2011) for a theoretical analysis and Hu & Black (2007) for empirics.

Overall, even though the literature on blockholders and corporate governance is nearly 30 years old, many new and exciting strands have recently been developed as a result of data entrepreneurship and the study of a new governance channel. These strands are still in their infancy, and there is substantial scope for future research to investigate not only channels of blockholder governance strands in and of themselves, but how they interact with other governance

mechanisms. I hope that this review will help stimulate this research going forward and look forward to learning from it.

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LITERATURE CITED

- Admati AR, Pfleiderer P. 2009. The “Wall Street Walk” and shareholder activism: exit as a form of voice. *Rev. Financ. Stud.* 22(7):2445–85
- Admati AR, Pfleiderer P, Zechner J. 1994. Large shareholder activism, risk sharing, and financial market equilibrium. *J. Polit. Econ.* 102(6):1097–130
- Aghion P, Bolton P, Tirole J. 2004. Exit options in corporate finance: liquidity versus incentives. *Rev. Finance* 8(3):327–53
- Aghion P, Van Reenen J, Zingales L. 2013. Innovation and institutional ownership. *Am. Econ. Rev.* 103(1):277–304
- Agrawal AK. 2012. Corporate governance objectives of labor union shareholders: evidence from proxy voting. *Rev. Financ. Stud.* 25(1):187–226
- Albuquerque R, Schroth E. 2010. Quantifying private benefits of control from a structural model of block trades. *J. Financ. Econ.* 96(1):33–55
- Antón M, Polk C. 2014. Connected stocks. *J. Finance* 69(3):1099–1127
- Atanassov J. 2013. Do hostile takeovers stifle innovation? Evidence from antitakeover legislation and corporate patenting. *J. Finance* 68(3):1097–131
- Back K, Li T, Ljungqvist A. 2014. *Liquidity and governance*. Work. Pap., Grad. Sch. Bus., Rice Univ.
- Baker GP, Hall BJ. 2004. CEO incentives and firm size. *J. Labor Econ.*, 22(4):67–98
- Barclay MJ, Holderness CG. 1989. Private benefits from control of public corporations. *J. Financ. Econ.* 25(2):371–95
- Barclay MJ, Holderness CG. 1991. Negotiated block trades and corporate control. *J. Finance* 46(3):861–78
- Barclay MJ, Holderness CG. 1992. The law and large-block trades. *J. Law Econ.* 35(2):265–94
- Baysinger B, Kosnik R, Turk T. 1991. Effects of board and ownership structure on corporate R&D strategy. *Acad. Manag. J.* 34(1):205–14
- Becht M, Bolton P, Röell A. 2003. Corporate governance and control. In *Handbook of the Economics of Finance*, ed. G Constantinides, M Harris, R Stulz, pp. 1–109. Amsterdam: Elsevier
- Becht M, Franks J, Mayer C, Rossi S. 2009. Returns to shareholder activism: evidence from a clinical study of the Hermes U.K. Focus Fund. *Rev. Financ. Stud.* 23(3):3093–129
- Becker B, Bergstresser D, Subrahmanian G. 2013. Does shareholder proxy access improve firm value? Evidence from the Business Roundtable Challenge. *J. Law Econ.* 56(1):127–60
- Becker B, Cronqvist H, Fahlenbrach R. 2011. Estimating the effects of large shareholders using a geographic instrument. *J. Financ. Quant. Anal.* 46(4):907–42
- Bennedsen M, Wolfenzon D. 2000. The balance of power in closely held corporations. *J. Financ. Econ.* 58(1–2):113–39

- Berle A, Means G. 1932. *The Modern Corporation and Private Property*. New York: Macmillan
- Bharath ST, Jayaraman S, Nagar V. 2013. Exit as governance: an empirical analysis. *J. Finance* 68(6):2515–47
- Bhide A. 1993. The hidden costs of stock market liquidity. *J. Financ. Econ.* 34(1):31–51
- Boehmer E, Kelley E. 2009. Institutional investors and the informational efficiency of prices. *Rev. Financ. Stud.* 22(9):3563–94
- Bolton P, von Thadden EL. 1998. Blocks, liquidity, and corporate control. *J. Finance* 53(1):1–25
- Bond P, Edmans A, Goldstein I. 2012. The real effects of financial markets. *Annu. Rev. Financ. Econ.* 4:339–60
- Boyson N, Mooradian R. 2011. Corporate governance and hedge fund activism. *Rev. Deriv. Res.* 14(2):169–204
- Boyson NM, Mooradian RM. 2012. *Experienced hedge fund activists*. Work. Pap., Sch. Bus., Northeastern Univ.
- Bradley M, Brav A, Goldstein I, Jiang W. 2010. Activist arbitrage: a study of open-ending attempts of closed-end funds. *J. Financ. Econ.* 95(1):1–19
- Brav A, Jiang W, Kim H. 2013. *The real effects of hedge fund activism: productivity, asset allocation, and industry concentration*. Work. Pap., Sch. Bus., Duke Univ.
- Brav A, Jiang W, Partnoy F, Thomas R. 2008. Hedge fund activism: corporate governance, and firm performance. *J. Finance* 63(4):1729–75
- Brav A, Mathews RD. 2011. Empty voting and the efficiency of corporate governance. *J. Financ. Econ.* 99(2):289–307
- Brockman P, Yan XS. 2009. Block ownership and firm-specific information. *J. Bank. Finance* 33(2):308–16
- Brunnermeier M, Pedersen L. 2005. Predatory trading. *J. Finance* 60(4):1825–63
- Burkart M, Gromb D, Panunzi F. 1997. Large shareholders, monitoring, and the value of the firm. *Q. J. Econ.* 112(3):693–728
- Burns N, Kedia S, Lipson M. 2010. Institutional ownership and monitoring: evidence from financial misreporting. *J. Corp. Finance* 16(4):443–55
- Bushee B, Goodman T. 2007. Which institutional investors trade based on private information about earnings and returns? *J. Account. Res.* 45(2):289–321
- Carleton WT, Nelson JM, Weisbach MS. 1998. The influence of institutions on corporate governance through private negotiations: evidence from TIAA-CREF. *J. Finance* 53(4):1335–62
- Chen X, Harford J, Li K. 2007. Monitoring: Which institutions matter? *J. Financ. Econ.* 86(2):279–305
- Claessens S, Djankov S, Fan JPH, Lang LHP. 2002. Disentangling the incentive and entrenchment effects of large shareholdings. *J. Finance* 62(6):2741–71
- Clifford CP. 2008. Value creation or destruction? Hedge funds as shareholder activists. *J. Corp. Finance* 14(4):323–36
- Clifford CP, Lindsey LA. 2013. *Getting what you pay for: blockholder monitoring, CEO compensation, and firm performance*. Work. Pap., Coll. Bus. Econ., Univ. Kentucky
- Coffee J. 1991. Liquidity versus control: the institutional investor as corporate monitor. *Columbia Law Rev.* 91(6):1277–368
- Cohn JB, Rajan U. 2013. Optimal corporate governance in the presence of an activist investor. *Rev. Financ. Stud.* 26(4):985–1020
- Collin-Dufresne P, Fos V. 2014a. Do prices reveal the presence of informed trading? *J. Finance*. Forthcoming
- Collin-Dufresne P, Fos V. 2014b. *Moral hazard, informed trading, and stock prices*. Work. Pap., Coll. Bus., Univ. Illinois
- Crane AD, Michenaud S, Weston JP. 2014. *The effect of institutional ownership on payout policy: evidence from index thresholds*. Work. Pap., Grad. Sch. Bus., Rice Univ.
- Cremers KJM, Nair VB. 2005. Governance mechanisms and equity prices. *J. Finance* 60(6):2859–94
- Cronqvist H, Fahlenbrach R. 2009. Large shareholders and corporate policies. *Rev. Financ. Stud.* 22(10):3941–76
- Dasgupta A, Piacentino G. 2014. The Wall Street Walk when blockholders compete for flows. *J. Finance*. Forthcoming
- Davis GF. 2013. After the corporation. *Polit. Soc.* 41(2):283–308
- Davis GF, Kim EH. 2007. Business ties and proxy voting by mutual funds. *J. Financ. Econ.* 85(2):552–70

- Dechow P, Sloan R, Sweeney A. 1996. Causes and consequences of earnings manipulation: an analysis of firms subject to enforcement actions by the SEC. *Contemp. Account. Res.* 13(1):1–36
- Del Guercio D. 1996. The distorting effect of the prudent-man laws on institutional equity investments. *J. Financ. Econ.* 40(1):31–62
- Del Guercio D, Hawkins J. 1999. The motivation and impact of pension fund activism. *J. Financ. Econ.* 52(3):293–340
- Demsetz H, Lehn K. 1985. The structure of corporate ownership: causes and consequences. *J. Polit. Econ.* 93(6):1155–77
- Dhillon A, Rossetto S. 2014. Ownership structure, voting, and risk. *Rev. Financ. Stud.* Forthcoming
- Dimmock SG, Gerken WC, Ivković Z, Weisbenner SJ. 2013. *Capital gains lock-in and governance choices*. Work. Pap., Div. Finance, Nanyang Tech. Univ.
- Dlugosz J, Fahlenbrach R, Gompers P, Metrick A. 2006. Large blocks of stock: prevalence, size, and measurement. *J. Corp. Finance* 12(3):594–618
- Dow J, Gorton G. 1997. Stock market efficiency and economic efficiency: Is there a connection? *J. Finance* 52(3):1087–129
- Duan Y, Jiao Y. 2014. The role of mutual funds in corporate governance: evidence from mutual funds' proxy voting and trading behavior. *J. Financ. Quant. Anal.* Forthcoming
- Edmans A. 2009. Blockholder trading, market efficiency, and managerial myopia. *J. Finance* 64(6):2481–513
- Edmans A. 2011. Short-term termination without deterring long-term investment: a theory of debt and buyouts. *J. Financ. Econ.* 101(3):621–40
- Edmans A, Fang VW, Lewellen KA. 2014. *Equity vesting and managerial myopia*. Work. Pap., Inst. Finance Account., London Bus. Sch.
- Edmans A, Fang VW, Zur E. 2013. The effect of liquidity on governance. *Rev. Financ. Stud.* 26(6):1443–82
- Edmans A, Gabaix X. 2009. Is CEO pay really inefficient? A survey of new optimal contracting theories. *Eur. Financ. Manag.* 15(3):486–96
- Edmans A, Gabaix X. 2014. *Executive compensation: a modern primer*. Work. Pap., Inst. Finance Account., London Bus. Sch.
- Edmans A, Gabaix X, Landier A. 2009. A multiplicative model of optimal CEO incentives in market equilibrium. *Rev. Financ. Stud.* 22(12):4881–917
- Edmans A, Goncalves-Pinto L, Wang Y, Xu M. 2014. *Strategic news releases in equity vesting months*. Work. Pap., Inst. Finance Account., London Bus. Sch.
- Edmans A, Levit D, Reilly D. 2014. *Governance and comovement under common ownership*. Work. Pap., Inst. Finance Account., London Bus. Sch.
- Edmans A, Manso G. 2011. Governance through trading and intervention: a theory of multiple blockholders. *Rev. Financ. Stud.* 24(7):2395–428
- Ekholm A, Maury B. 2014. Portfolio concentration and firm performance. *J. Financ. Quant. Anal.* Forthcoming
- Faccio M, Lang L. 2002. The ultimate ownership of Western European corporations. *J. Financ. Econ.* 65(3):365–95
- Faccio M, Marchica M, Mura R. 2011. Large shareholder diversification and corporate risk-taking. *Rev. Financ. Stud.* 24(11):3601–41
- Fang VW, Noe T, Tice S. 2009. Stock market liquidity and firm value. *J. Financ. Econ.* 94(1):150–69
- Farber D. 2005. Restoring trust after fraud: Does corporate governance matter? *Account. Rev.* 80(2):539–61
- Faure-Grimaud A, Gromb D. 2004. Public trading and private incentives. *Rev. Financ. Stud.* 17(4):985–1014
- Fos V. 2013. *The disciplinary effects of proxy contests*. Work. Pap., Coll. Bus., Univ. Illinois Urbana-Champaign
- Frydman C, Jenter D. 2010. CEO compensation. *Annu. Rev. Financ. Econ.* 2:75–102
- Gallagher DR, Gardner PA, Swan PL. 2013. Governance through trading: institutional swing trades and subsequent company performance. *J. Financ. Quant. Anal.* 48(2):427–58
- Gantchev N. 2013. The costs of shareholder activism: evidence from a sequential decision model. *J. Financ. Econ.* 107(3):610–31

- Gao GP, Moulton PC, Ng DT. 2014. *Institutional ownership and return predictability across economically unrelated stocks*. Work. Pap., Grad. Sch. Manag., Cornell Univ.
- Gerken WC. 2014. *Blockholder ownership and corporate control: the role of liquidity*. Work. Pap., Coll. Bus., Michigan State Univ.
- Goldman E, Strobl G. 2013. Large shareholder trading and the complexity of corporate investments. *J. Financ. Intermed.* 22(1):106–22
- Goldstein I, Guembel A. 2008. Manipulation and the allocational role of prices. *Rev. Econ. Stud.* 75(1):133–64
- Gorton GB, Huang L, Kang Q. 2013. *The limitations of stock market efficiency: price informativeness and CEO turnover*. Work. Pap., Sch. Manag., Yale Univ.
- Greenwood R, Schor M. 2009. Investor activism and takeovers. *J. Financ. Econ.* 92(3):362–75
- Grossman SJ, Hart OD. 1980. Takeover bids, the free-rider problem, and the theory of the corporation. *Bell J. Econ.* 11(1):42–64
- Heflin F, Shaw K. 2000. Blockholder ownership and market liquidity. *J. Financ. Quant. Anal.* 35(4):621–33
- Helwege J, Intintoli V, Zhang A. 2012. Voting with their feet or activism? Institutional investors' impact on CEO turnover. *J. Corp. Finance* 18(1):22–37
- Hirschman AO. 1970. *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States*. Cambridge, MA: Harvard Univ. Press
- Holden CW, Jacobsen S, Subrahmanyam A. 2014. The empirical analysis of liquidity. *Found. Trends Finance*. Forthcoming
- Holden CW, Subrahmanyam A. 1992. Long-lived private information and imperfect competition. *J. Finance* 47(1):247–70
- Holderness C. 2003. A survey of blockholders and corporate control. *Econ. Policy Rev.* 9(1):51–63
- Holderness C. 2009. The myth of diffuse ownership in the United States. *Rev. Financ. Stud.* 22(4):1377–408
- Holderness C, Sheehan D. 1985. Raiders or saviors? The evidence on six controversial investors. *J. Financ. Econ.* 14(4):555–79
- Holderness C, Sheehan D. 1988. The role of majority shareholders in publicly held corporations: an exploratory analysis. *J. Financ. Econ.* 20(1):317–46
- Holthausen RW, Leftwich RW, Mayers D. 1990. Large-block transactions, the speed of response and temporary and permanent stock-price effects. *J. Financ. Econ.* 26(1):71–95
- Hu H, Black B. 2007. Hedge funds, insiders, and the decoupling of economic and voting ownership: empty voting and hidden (morphable) ownership. *J. Corp. Finance* 13(2-3):343–67
- Jensen MC. 1986. Agency costs of free cash flow, corporate finance, and takeovers. *Am. Econ. Rev.* 76(2):323–29
- Kahn C, Winton A. 1998. Ownership structure, speculation, and shareholder intervention. *J. Finance* 53(1):99–129
- Khanna N, Mathews R. 2012. Doing battle with short sellers: the conflicted role of blockholders in bear raids. *J. Financ. Econ.* 106(2):229–46
- Klein A, Zur E. 2009. Entrepreneurial shareholder activism: hedge funds and other private investors. *J. Finance* 64(1):187–229
- Kole S. 1997. The complexity of compensation contracts. *J. Financ. Econ.* 43(1):79–104
- Konijn SJJ, Kräussl R, Lucas A. 2011. Blockholder dispersion and firm value. *J. Corp. Finance* 17(5):1330–39
- Kyle AS. 1985. Continuous auctions and insider trading. *Econometrica*. 53(6):1315–35
- Kyle AS, Vila J. 1991. Noise trading and takeovers. *Rand J. Econ.* 22(1):54–71
- Laeven L, Levine R. 2007. Complex ownership structures and corporate valuations. *Rev. Financ. Stud.* 21(2):579–604
- La Porta R, Lopez-de-Silanes F, Shleifer A. 1999. Corporate ownership around the world. *J. Finance* 54(2):471–517
- Lee P. 2005. A comparison of ownership structures and innovations of U.S. and Japanese firms. *Manag. Decision Econ.* 26(1):39–50
- Levit D. 2013. *Soft shareholder activism*. Work. Pap., Finance Dep., Univ. Penn.
- Lins KV. 2003. Equity ownership and firm value in emerging markets. *J. Financ. Quant. Anal.* 38(1):159–84

- Maug E. 1998. Large shareholders as monitors: Is there a trade-off between liquidity and control? *J. Finance* 53(1):65–98
- Maug E. 2002. Insider trading legislation and corporate governance. *Eur. Econ. Rev.* 46(9):1569–97
- Maury B, Pajuste A. 2005. Multiple large shareholders and firm value. *J. Bank. Finance* 29(7):1813–34
- McCahery J, Sautner Z, Starks LT. 2011. *Behind the scenes: the corporate governance preferences of institutional investors*. Work. Pap., Sch. Law., Tilburg Univ.
- McConnell JL, Servaes H. 1990. Additional evidence on equity ownership and corporate value. *J. Financ. Econ.* 27(2):595–612
- Mehran H. 1995. Executive compensation structure, ownership, and firm performance. *J. Financ. Econ.* 38(2):163–84
- Mikkelson W, Partch M. 1985. Stock price effects and costs of secondary distributions. *J. Financ. Econ.* 14(2):165–94
- Miller MH, Rock K. 1985. Dividend policy under asymmetric information. *J. Finance* 40(4):1031–51
- Mullins W. 2014. *The governance impact of indexing: evidence from regression discontinuity*. Work. Pap., Smith Sch. Bus., Univ. Md.
- Murphy, KJ. 1999. Executive compensation. In *Handbook of Labor Economics*, ed. O Ashfelter, D Card, Vol. 3, pp. 2485–563. Amsterdam: Elsevier
- Murphy, KJ. 2013. Executive compensation: where we are, and how we got there. In *Handbook of the Economics of Finance*, ed. G Constantinides, M Harris, R Stulz, Vol. 2., pp. 211–356. Amsterdam: Elsevier
- Narayanan MP. 1985. Managerial incentives for short-term results. *J. Finance* 40(5):1469–84
- Noe TH. 2002. Investor activism and financial market structure. *Rev. Financ. Stud.* 15(1):289–318
- Norli Ø, Ostergaard C, Schindele I. 2014. Liquidity and shareholder activism. *Rev. Financ. Stud.* Forthcoming
- Pagano M, Röell A. 1998. The choice of stock ownership structure: agency costs, monitoring, and the decision to go public. *Q. J. Econ.* 113(1):187–225
- Parrino R, Sias R, Starks L. 2003. Voting with their feet: institutional ownership changes around forced CEO turnover. *J. Financ. Econ.* 68(1):3–46
- Roe M. 1990. Political and legal restraints on ownership and control of public companies. *J. Financ. Econ.* 27(1):7–41
- Roosenboom P, Schlingemann FP, Vasconcelos M. 2014. Does stock liquidity affect the incentives to monitor: evidence from corporate takeovers. *Rev. Financ. Stud.* 27(8):2392–433
- Rubin A. 2007. Ownership level, ownership concentration and liquidity. *J. Financ. Mark.* 10(3):219–48
- Scharfstein D, Stein J. 1990. Herd behavior and investment. *Am. Econ. Rev.* 80(3):465–79
- Scholes M. 1972. The market for securities: substitution versus price pressure and the effects of information on share prices. *J. Bus.* 45(2):179–211
- Shleifer A, Vishny R. 1986. Large shareholders and corporate control. *J. Polit. Econ.* 94(3):461–88
- Sias R, Starks L, Titman S. 2006. Changes in institutional ownership and stock returns: assessment and methodology. *J. Bus.* 79(6):2869–910
- Song F. 2013. *Blockholder trading and monitoring, career concerns, and the bright and dark sides of investor “long-termism.”* Work. Pap., Coll. Bus., Penn. State. Univ.
- Stein JC. 1988. Takeover threats and managerial myopia. *J. Polit. Econ.* 96(1):61–80
- Stein JC. 1989. Efficient capital markets, inefficient firms: a model of myopic corporate behavior. *Q. J. Econ.* 104(4):655–69
- Stein JC. 1996. Rational capital budgeting in an irrational world. *J. Bus.* 69(4):429–55
- Winton A. 1993. Limitation of liability and the ownership structure of the firm. *J. Finance* 48(2):487–512
- Wruck K. 1989. Equity ownership concentration and firm value: evidence from private equity financings. *J. Financ. Econ.* 23(1):3–28
- Yan X, Zhang Z. 2009. Institutional investors and equity returns: Are short-term institutions better informed? *Rev. Financ. Stud.* 22(2):893–924
- Yermack D. 2010. Shareholder voting and corporate governance. *Annu. Rev. Financ. Econ.* 2:103–25
- Zwiebel J. 1995. Block investment and partial benefits of corporate control. *Rev. Econ. Stud.* 62(2):161–85