The Hidden Costs of Private Benefits of Control: Value Shift and Efficiency

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I. INTRODUCTION AND INQUIRY ................................................................. 719

II. FRAMEWORK OF ANALYSIS .................................................................. 721
   A. Focus of Analysis: Value-Shift Aspect of Private Benefits of Control .... 721
   B. Disparities in Private Benefits of Control: Maximum Limit and Actual Size ... 722
   C. Two Competing Regimes on Control Transfer .................................... 723
   D. Payoffs to the Initial Owner Through an IPO .................................... 724
   E. Example and Assumptions ................................................................. 724

III. ANALYSIS AND DISCUSSION ................................................................. 726
   A. Irrelevance of Value-Shift and Efficiency ........................................ 726
   B. Relevance of the Value-Shift Under the Market Rule ....................... 726
   C. Relevance of Value-Shift Under the Equal Opportunity Rule .......... 728
   D. Discussion and Application ............................................................... 731
   E. Limits of Analysis ........................................................................... 732
      1. Sustainability of the Controlling Shareholder Structure ................ 732
      2. Discrepancy in Efficiency Level Among Controllers (The Market Rule) .... 733

IV. CONCLUSION ....................................................................................... 734

I. INTRODUCTION AND INQUIRY

This paper examines how two legal regimes governing transfers of control (the “Market Rule” and the “Equal Opportunity Rule”) affect the initial public offerings (IPOs) through their influence on private benefits of control. Not only ex post efficiency costs, but also the value-transfer nature of private benefits may thwart efficient IPOs by creating a wedge between discounted stock priced to reflect private benefits of control and the value that the initial owner will really capture. As this paper shows, the two legal regimes generate this wedge through different mechanisms that center, respectively, on competition in the market for control block (for the Market Rule) and asymmetric information about private benefits of control (for the Equal Opportunity Rule).

As economic researchers have found, the controlling shareholder structure, as opposed to diffuse ownership, dominates corporate ownership around the world.1 Even in

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1. See, e.g., Rafael La Porta et al., Corporate Ownership Around the World, 54 J. FIN. 471, 474 (1999) (finding that controlling shareholders are present in most large companies); Rafael La Porta et al., Law and
the United States, where large companies are commonly diffusely held, IPOs generally create an ownership structure in which initial owners retain majority ownership. As is well-known, controlling shareholders can extract private benefits of control, which influence patterns of ownership structure and external financing by impeding controlled firms from issuing equity to investors and dissuading existing controllers from breaking up their control block.

La Porta, et al. have found that the magnitude of private benefits of control correlates negatively with the incidence of IPOs as well as the size of equity market. Given this recent finding, an obvious but important question is: “What features of private benefits of control hamper controllers from taking IPOs, and equity financing in general?” A generic response would be that private benefits of control reduce the value of public shares, which results in a corresponding discount in the stock price, thus discouraging initial owners from selling their stock. This answer may not follow, however, given that the discount for private benefits in pricing stock in an IPO merely reflects the private benefits of control that he or she will eventually capture.

Private benefits of control may undermine the value of a company because their extraction (or the possibility of their extraction) generates suboptimal decisions. This efficiency-costs aspect of private benefits of control clearly impedes an initial owner from taking her firm public, given that this owner must internalize the entire wealth effects of private benefits of control so long as the stock market anticipates these effects.

Inherent in private benefits of control, however, is the transfer of value from minority shareholders to the controlling shareholders (the value-shift aspect). In contrast to the efficiency-costs aspect of private benefits, it is not entirely clear whether (and if so how) the value-shift aspect of private benefits of control also impedes IPOs. Shifts in value alone that do not impose efficiency costs do not affect returns to initial owners so

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2. It is recognized that IPOs usually involve a severe extent of asymmetric information between initial owners and the market concerning the real value of the issuing firm and that initial owner’s retention of a large block of shares after the IPO serves to mitigate the problem. See Hayne E. Leland & David H. Pyle, Informational Asymmetries, Financial Structure, and Financial Intermediation, 32 J. FIN. 371 (1977) (arguing that by retaining a significant ownership stake in the firm, entrepreneurs can signal project quality since false representation can be costly); see also William L. Megginson & Kathleen A. Weiss, Venture Capitalist Certification in Initial Public Offerings, 46 J. FIN. 879 (1991) (finding that venture capitalists retain significant portions of their holdings after the IPO).

3. Empirical evidences suggest that there are substantial private benefits of control. See, e.g., Michael J. Barclay & Clifford G. Holderness, Private Benefits from Control of Public Corporations, 25 J. FIN. ECON. 371, 372 (1989) (suggesting the premise that “premiums paid for large-percentage blocks reflect the private benefits that accrue to the block owner” and finding that “trades of large-percentage blocks of common stock are typically priced at substantial premiums to the exchange price,” that the block-trade prices average 20% above the post-announcement exchange price, and that “[the average premium is $4 million, which represents 13% of the block-purchase price and 4% of the value of the firm’s equity”).


5. See, e.g., id. at 1132; Mark J. Roe, Corporate Law’s Limits, 31 J. LEG. STUD. 233, 238 (2002).

6. See Michael C. Jensen & William H. Meckling, Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, 3 J. FIN. ECON. 305, 313 (1976) (observing that the price which minority shareholders will pay for shares will reflect the effect of the divergence between the manager’s interest and theirs).
long as stock prices truly reflect these shifts. Thus, the value-shift aspect of private benefits does not necessarily hinder initial owners from going public. Accordingly, the critical question is: How is the value-shift aspect of private benefits reflected in the IPO pricing?

This paper sheds light on the value-shift nature of private benefits. Part II sets up the framework of analysis. From the widespread recognition that controllers differ in their ability to extract private benefits, we may distinguish the maximum limit from the actual size of private benefits that a particular controller will divert. Part III presents the analyses for each rule, which respectively show how the value-shift nature of private benefits alone cuts the payoffs that the initial owner may realize through an IPO. The two rules yield disparate mechanisms because they differ in whether they allow the initial owner to sell, after the IPO, the control block, in order to augment the size of private benefits. Irrelevance of the value-shift aspect of private benefits to the initial owner’s payoffs will serve efficient IPOs. In this respect, while the Market Rule is well suited to a fully competitive market for control, the Equal Opportunity Rule requires symmetric information concerning the size of private benefits. If the value-transfer aspect of private benefits hampers an otherwise efficient IPO, it constitutes a hidden cost of private benefits of control.

II. FRAMEWORK OF ANALYSIS

A. Focus of Analysis: Value-Shift Aspect of Private Benefits of Control

Private benefits of control influence the value of stock held by minority shareholders as well as the value of control blocks since these benefits constitute transfer of value from minority to controlling shareholders and may affect the total value as well. Private benefits of control have two features: a “value-shift” aspect and an “efficiency-costs” aspect. The value-shift aspect of private benefits refers to the value that is transferred from non-controllers to controllers, regardless of its impact on the total value. Typical examples of private benefits of control, such as interested party transactions, expropriation of corporate opportunities, and trading on inside information, involve shifting value from public shareholders (or the company) to controlling shareholders. It follows that value shifts are the fundamental feature of private benefits of control.

While not every extraction of private benefits of control imposes efficiency costs, much attention has been paid to the efficiency-costs aspect of private benefits. For example, Bebchuk et al. have shown that the existence of private benefits of control may lead to suboptimal decisions on project choice and scope of company. The controllers

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7. The power to freeze out minority shareholders is also thought of as a means of extracting private benefits by creating a greater possibility of insider trading. See Lucien Arye Bebchuk & Marcel Kahan, Adverse Selection and Gains to Controllers in Corporate Freezeouts, in CONCENTRATED CORPORATE OWNERSHIP 247, 248 (Randall K. Morck ed., 2000).

may, it is explained, prefer a project that is inefficient but provides more chance of private benefits of control. The controlling shareholder may also benefit from control without undermining or diverting value of a company or public shareholders. Synergies and non-pecuniary benefits are examples.

There is no doubt that the efficiency-costs aspect serves as an impediment to IPOs since the market pricing mechanism necessarily imposes these costs on initial owners. In contrast, the value-shift aspect alone will not necessarily affect an initial owner’s decision to undertake an IPO as long as market prices, at the time of the IPO, truly discount for the private benefits that the initial owner will eventually extract from the firm. The focus of the analysis that follows is on the value-shift aspect of private benefits in an attempt to shed light on possible mechanisms by which even the value-shift aspect functions as an impediment to otherwise efficient IPOs.

B. Disparities in Private Benefits of Control: Maximum Limit and Actual Size

Law and economics scholars recognize that controllers differ in their ability to divert private benefits of control, which generates disparities in the sizes of private benefits of control that they actually extract. Given such discrepancies, we may make a distinction between the maximum limit of private benefits (up to which one may potentially extract) and the actual size of the private benefits that a particular controlling shareholder diverts in reality.

The “maximum limit” of private benefits for a particular company represents the maximum amount of private benefits that can potentially be siphoned off from the company. The determinants of the maximum limit include the quality of law and enforcement, the industry and type of business, the amount of liquid assets in the firm, the size of the company, and the extent of competition in the output market.

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9. See Henry Hansmann & Reinier Kraakman, The End of History for Corporate Law, 89 GEO. L.J. 439, 460 (2001) (positing that controllers may select projects that maximize their own private returns over returns to the firm). Moreover, the incentives to divert the value-shift aspect of private benefits may cause suboptimal decisions, which also constitutes the efficiency-costs aspect. See Lucian Arye Bebchuk, Rent Protection and Evolution of a Firm's Ownership Structure (September 1999) (unpublished manuscript, on file with author).

10. See Barclay & Holderness, supra note 3, at 374 (noting that private benefits need not come from the firm's cash flows, such as nonpecuniary control amenities for individual blockholders or synergies in production for corporate blockholders).

11. See supra note 7 and accompanying text.

12. See, e.g., Lucian Arye Bebchuk, Efficient and Inefficient Sales of Corporate Control, 109 Q. J. ECON. 957, 963 (1994) (comparing the market and equal opportunity rules); Sanford J. Grossman & Oliver D. Hart, One Share-One Vote and the Market for Corporate Control, 20 J. FIN. ECON. 175, 180 (1988) (suggesting an example in which “the incumbent's private benefit is 1, while the rival's exceeds 1”); Milton Harris & Arthur Raviv, Corporate Control Contests and Capital Structure, 20 J. FIN. ECON. 55, 61 (1988) (noting that the expected present value of the benefits to the incumbent depends on the management's ability).

13. See BEBCHUK, supra note 8, at 14.

14. See Barclay & Holderness, supra note 3, at 385 (predicting that private benefits will increase with firm size and with the amount of cash and marketable securities in the firm); Michael C. Jensen, Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers, 76 AM. ECON. REV. 323 (1986) (positing that excessive cash flow increases agency costs).

15. Intense competition in the product market is thought of as one of the major constraints of managerial
Maximum limits are objective, and therefore independent of the identities and characteristics of particular controlling shareholders.

By contrast, the "actual size" of private benefits hinges substantially on the capability of particular controlling shareholders to divert private benefits.16 For example, the ability to engage in self-dealing or expropriate corporate opportunities depends significantly on whether the controlling shareholder owns an entity or resources in lines of business complementary to those of the controlled company.17 Controlling shareholders may also vary in the degree of their willingness to risk reputational damage or the possibility of legal sanctions resulting from their diversion of private benefits.18

Once we recognize the disparity in actual private benefits among different controllers within the parameter of the maximum limit, this question may naturally ensue: How much of private benefits of control will be reflected in the pricing of minority stock (i.e., discount for private benefits)? It implies the possibility of wedge between the discount for private benefits and the amount of private benefits that the initial owner will capture.

C. Two Competing Regimes on Control Transfer

Rules governing the sale of a control block differ according to whether or not they entitle minority shareholders to join the sale of a control block by a controlling shareholder. The Market Rule, which is widely adopted in the United States, allows controlling shareholders to sell their control blocks without letting minority shareholders share in the gains. Conversely, the other regime, labeled the Equal Opportunity Rule, entitles non-controlling shareholders to participate in or otherwise benefit from the control transaction, thereby preventing the controlling shareholder from monopolizing the gains.19 Thus far, the literature has focused on identifying which rule deters opportunistic sales of control blocks (i.e., sales to suspected looters and sales to divert corporate opportunities),20 and which rule facilitates value-increasing sales of control. In this vein, Bebchuk has analyzed, from an efficiency perspective, that the Market Rule facilitates efficient sales but fails to deter inefficient sales, whereas the Equal Opportunity Rule stops inefficient sales but also impedes some efficient sales.21

In contrast to such conventional efforts that have concentrated on the ex post impact of the rules, the analysis of this paper sheds light on the ex ante effects that the rules may have upon an initial owner's decision concerning whether to go public in conjunction

agency costs. See Roe, supra note 5, at 263. Product market competition may also serve to limit the private benefits of control in that the competition reduces the abnormal profits that the controlling shareholder may divert. Id.

16. See supra note 13 and accompanying text.
17. See Bebchuk, supra note 12, at 963.
18. See Bebchuk et al., supra note 8, at 305 (posing that reputation serves as a potential constraint on agency costs, including private benefits of control).
20. See Perlman v. Feldman, 219 F.2d 173 (2d Cir. 1955) (holding that the seller of the control block had siphoned off for personal gain the corporate advantages to be derived from a favorable market situation).
21. See Bebchuk, supra note 12, at 957.
with private benefits of control. Interestingly, the analysis reveals that the legal regimes that govern control transfer after IPOs influence a priori the very creation of a control block through the IPO. To this end, we will consider the respective implications that the two rules have for how the stock market will discount for private benefits control at the IPO. What makes the difference is that the Market Rule enables incumbent controlling shareholders to augment private benefits of control (beyond their ability) via sale of control. Conversely, under the Equal Opportunity Rule, the increase in value diversion from public shareholders should accompany larger elevation of efficiency for a control sale to occur. Hence, minority shareholders will not incur losses from an increase in private benefits.

D. Payoffs to the Initial Owner Through an IPO

In deciding whether to go public, the initial owner will compare the payoffs from an IPO with the value of maintaining the status quo. The payoffs to the initial owner, once he or she takes the firm public, consist of two parts: the proceeds from the offering of the stock at IPO and the value of the resulting control block. The proceeds from the public offering of the shares are the outcome of market valuation based on public information concerning the expected cash flows to public shareholders. The size of private benefits is a critical factor in such market valuation (note that private benefits constitute value transfer from public shareholders to the controller), and thus the proceeds from the public offering depend substantially on how much private benefits of control the stock market expects to be extracted.

A non-negligible discrepancy may arise between what the stock market predicts to be diverted and what the controlling shareholder will really capture. Such disparity cuts the proceeds from a public offering, thereby forcing the initial owner to keep the company private even if going public is more efficient. The analysis in Part III shows that the ways the disparity arises depend on the legal rules governing sales of control blocks.

Next, the value of a control block is basically comprised of three subsets: expected value of the resulting public company \(x\), private benefits of control \(y\), and private costs of control \(z\). Furthermore, the value of a control block may also include potential gains from the sale of control by augmenting private benefits of control under the Market Rule.

E. Example and Assumptions

For the analysis, we assume Company \(A\) is currently a private company, wholly owned by its initial owner \(I\), who is contemplating an IPO. The timing of events is shown in Figure 1. At time 0, the Initial Owner \(I\) considers whether to go public,

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22. Private costs of control are mainly comprised of the risk-bearing and liquidity costs incurred by the controlling shareholder. In retaining the control block, the controlling shareholder loses the liquidity and the opportunity of diversification that can eliminate or reduce firm-specific risk, which constitutes the private costs of control. See Barclay & Holderness, supra note 3, at 380, 394 (contending that block discount suggests that block ownership involves private costs that other shareholders do not bear, such as underdiversified personal portfolios or the threat of litigation brought by minority shareholders, and finding that "some blocks are actually priced at discounts, presumably to compensate the purchaser for the expected net private costs of being a corporate insider during times of financial distress").
retaining \(a\%\) of stock that will provide him or her with complete control after the IPO, or to remain private (the public company arising from an IPO will have a concentrated ownership structure). If \(I\) chooses to remain private, the events end at time 0. At time 1, \(I\) will consider whether to sell control block to \(N\), or to stay in control. At time 2, \(I\) or \(N\) (depending on whether control block is sold at time 1) will divert private benefits of control. At time 3, the company \(A\) will be liquidated, with the proceeds to be distributed pro rata to its shareholders.

**Figure 1**

**Timing of Events**

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>(I) decides whether to go public</td>
<td>Control block is either sold or held</td>
<td>Private benefits are diverted</td>
<td>Company liquidated</td>
</tr>
</tbody>
</table>

Let

- \(V_p = \) total value of \(A\) as a public company,
- \(V_c = \) total value of \(A\) as a closely held company,
- \(\Delta V = V_p - V_c\) (net efficiency gain of the IPO; \(V_p\) reflects all of the benefits and costs of the IPO). The IPO is efficient if, and only if, \(\Delta V > 0\).
- \(B = \) private benefits of control\(^{23}\)
- \(B_I, B_N: \) the actual size of private benefits to be extracted by \(I\) and \(N\),
- \(B_M: \) the maximum limit of private benefits, \(B_V: \) discount for private benefits in market pricing, and
- \(\alpha = \) controller's shareholding ratio after the IPO, i.e., \((1-\alpha)\) will be sold at the IPO.

It is assumed for our analysis that

1. The Initial Owner, \(I\), will make his or her decision concerning the IPO and the sale of his or her control block, solely on the basis of the financial return (that is, non-pecuniary benefits from control are not considered), that
2. \(V_p\) remains constant, regardless of who is the controlling shareholder and of the size of private benefits of control (i.e., no efficiency-costs aspect of private benefits), and that
3. The stock market, assumed to be informationally efficient\(^{24}\), has complete information on all the variables except the actual size of private benefits of control to be extracted by \(I\).

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23. Here, private benefits of control represent net amount after deducting private costs of control.
III. ANALYSIS AND DISCUSSION

A. Irrelevance of Value-Shift and Efficiency

When it comes to the value-shift aspect of private benefits, irrelevance serves efficiency. If the value-shift aspect is neutral (irrelevant) to the payoffs of the initial owner through the IPO, his or her interest associated with the IPO will be aligned with efficiency. Conversely, where the value-shift aspect becomes relevant to the payoffs, the initial owner’s incentive may diverge from efficiency.

Suppose that the stock price in the IPO incorporates I’s actual size of private benefits of control precisely (i.e., \( B_f = B_V \)), and that there is no possibility for I to benefit from the sale of his or her control block after the IPO. Then, I’s payoffs through the IPO will be equal to \( \{\alpha(V_P - B_f) + B_f\} + (1 - \alpha)(V_P - B_f) \).

The first term, \( \{\alpha(V_P - B_f) + B_f\} \), is the value to I of the control block, and the second term is the proceeds from the public offering. The value of the control block may be rearranged to \( \alpha V_p + (1 - \alpha)B_f \), which clearly shows that the value of the control block consists of I’s share of the total value (\( \alpha V_p \)) and the pure portion of private benefits of control to be diverted from public shareholders \((1-\alpha)B_f\).\(^{25}\)

The Initial Owner I will accept the IPO when the following inequality is true: \( \{\alpha(V_P - B_f) + B_f\} + (1 - \alpha)(V_P - B_f) > V_C \), rearranging \( V_P - V_C = \Delta V > 0 \).

The equation clearly demonstrates that the size of private benefits of control will not affect (i.e., be irrelevant to) I’s payoffs through the IPO, and hence, that his or her decision of whether to go public is solely guided by the efficiency level (\( \Delta V \)) of IPO.

In sum, the value-shift aspect of private benefits will be irrelevant to the decision on IPOs, if and only if, the market discount for private benefits is equal to what the initial owner may eventually capture directly, via control transfer, or otherwise. This irrelevance condition is met: (1) when the actual size of private benefits of control remains constant, not being able to increase via control transfer, and the stock market has complete information on the actual size of private benefits; or (2) when the initial owner can capture up to the maximum limit of private benefits via control transfer, irrespective of his or her actual size of private benefits.

B. Relevance of the Value-Shift under the Market Rule

Overview: The Market Rule does not entitle minority shareholders to participate in, or benefit from the sale of a control block. It follows that an existing controlling shareholder may be able to sell the control block to a new controller with higher ability (or readiness) to extract private benefits of control, in order to benefit (wholly or partially) from greater expropriation of public shareholders (beyond his or her own

\(^{25}\) Given that private benefits of control diminish the cash flows of a company that are available pro rata to all shareholders, including the controlling shareholder, we can divide private benefits of control into two components having different characteristics. One is the portion that is conceptually shifted from the controlling shareholder itself, which reduces its pro rata cash flow. The other is the portion that is extracted from minority shareholders and that may be regarded as true private benefits.
competence). The prospect of such increase in private benefits through the sale of the control block causes the market valuation to be based on the maximum limit of private benefits, rather than on the actual size. Once the IPO is taken by an initial owner who can actually capture only a low level of private benefits, the then controlling shareholder comes to have an opportunist incentive to sell his or her control block to those buyers who will extract a higher level of private benefits. By this process, the control block will end up being sold by a controlling shareholder whose actual private benefits are equal, or close, to the maximum limit. Predicting this process of maximization of private benefits, the stock market will discount minority stock prices to reflect extraction of the maximum possible private benefits, regardless of the private benefits that the initial owner will actually divert. On the other hand, the initial owner cannot sell his or her control block for a price corresponding to the maximum possible private benefits (i.e., the reservation value for buyer) unless the market for the control block is fully competitive. We may notice an obvious contrast that, while the market valuation (discount for private benefits) is made on the basis of the maximum limit of private benefits, the initial owner cannot grab up to the maximum limit. This mechanism makes the initial owner prefer to remain private.26

Analysis: In our example, at time 1, \( I \) may be able to, and will, sell the control block (i.e., \( \alpha \% \) of stock) to a new controller (\( N \)) who will extract private benefits of control up to the maximum limit (\( B_M \)). Retained by \( I \), the value of the control block is \( \alpha V_p + (1 - \alpha)B_t \). If transferred to \( N \), the value of control will increase to \( \alpha V_p + (1 - \alpha)B_M \), which constitutes the reservation value of the buyer in the control transaction. As such, the price of the control block will be bargained for somewhere between the two different values of the control block, depending substantially on the degree of competition in the market for the control block. Given the assumption that \( I \)'s decision is solely guided by financial return, \( I \) will sell the control block to \( N \) under the Market Rule.

As the actual size of private benefits to be extracted (at time 2) increases through such opportunistic sale of the control block, the value of public shares (which hinges on the proceeds from liquidation at time 3) diminishes from \((1 - \alpha)(V_p - B_t)\) to \((1 - \alpha)(V_p - B_M)\). The prospect of such depression of stock value can be a priori reflected in pricing for the IPO. As such, at the outset the public shares will be priced at \((1 - \alpha)(V_p - B_M)\), by incorporating the maximum limit (i.e., \( N \)'s actual size) of private benefits of control.

Consider the impact of such valuation on \( I \)'s payoffs through IPO. When \( I \) chooses to take Company \( A \) public under the Market Rule, his or her payoffs will consist of two components: the stock price at the IPO and the price of the control block sold to \( N \). Under the Market Rule, \( I \) will elect to go public if, and only if, \((1 - \alpha)(V_p - B_M) + \{\alpha(V_p - B_t) + B_t\} + \beta(1 - \alpha)(B_M - B_t)\} > V_C\), where \( \beta \) represents the ratio of \( I \)'s share in the increase in private benefits via control transfer. Rearranging, \( \Delta V > (1 - \beta)(1 - \alpha)(B_M - B_t)\). The right-hand side of the inequality is the surplus gained by the new controller (\( N \)) from the

26. This process may be understood as an application of the Backwards Induction Theory that is presented in game theory. In a dynamic game with complete information consisting of multiple stages, player 1 selects a strategy at the first stage in anticipation of the strategies to be adopted by each of the players at the following stages, assuming that all players are rational. The analysis begins by anticipating the strategy to be taken at the last stage, based on which strategy is anticipated to be taken at the immediately previous stage, and so on. Through this process, player 1 decides the strategy at the first stage. See generally ROBERT GIBBONS, GAME THEORY FOR APPLIED ECONOMICS, 57-61 (1992).

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control transaction. Given the efficiency gain of the IPO being $\Delta V$, as $\beta$ or $\alpha$ increases, or as the discrepancy between $B_M$ and $B_L$ diminishes, the initial owner $I$ is more likely to elect the IPO. A competitive market for the control block serves to increase the incidence of efficient IPOs under the Market Rule since $\beta$ may positively correlate with the degree of competition in the market for control.27

The Market Rule has opened the possibility for the initial owner to increase private benefits beyond his or her own ability through control transfer. The possibility produces two conflicting outcomes: a deep market discount for private benefits and an opportunity to recoup this discount. On one hand, recognizing the prospect of sale of control, the stock market will a priori discount public stock at the IPO by the maximum limit, instead of by the actual size, reducing the initial owner's payoffs from IPO. On the other hand, the initial owner has an opportunity to make up for such market discount by capturing surplus from the sale of control. But, the initial owner may not necessarily capture up to the maximum limit via control transfer as long as the market for the control block is not fully competitive. The surplus that the new controlling shareholder will take serves as an externality to the initial owner's decision concerning the IPO.28 Hence, an IPO whose efficiency gain is not greater than the new controller's surplus will fail. Accordingly, the Market Rule is better suited to an economy in which there is a competitive market for control blocks. Under the Market Rule the stock market will focus on the objective variable (i.e., the maximum limit), rather than a subjective one (the actual size) for which asymmetric information is likely to prevail.

In short, the Market Rule may cause the stock price to incorporate the maximum limit of private benefits, rather than the actual size of the initial owner, and thereby make the value-shift aspect of private benefits relevant to the IPO. The relevance of the value-shift aspect to the Initial Owner's decision on whether to go public hinges on the degree of competitiveness in the market for control blocks.

C. Relevance of Value-Shift Under the Equal Opportunity Rule

The Equal Opportunity Rule empowers public shareholders to participate in, or otherwise share gains from, the sale of a control block. The Initial Owner $I$ may not be able to increase private benefits of control (without efficiency enhancement) by selling his or her control block to a new controller with higher ability to extract private benefits of control. Note the assumption that the total value remains constant, regardless of who is the controlling shareholder. Hence, no control transfer may happen under the Equal Opportunity Rule that allows an efficient (i.e., value-increasing) transfer alone. As such, the stock price at the IPO will not reflect the possibility of increased private benefits via control transfer.

Will the market price, then, precisely reflect the actual size of private benefits that $I$ will divert? It may not necessarily be the case. Asymmetric information may exist.

27. See Luigi Zingales, *Insider Ownership and the Decision to Go Public*, 62 REV. ECON. STUD. 425, 426 (1995) (observing that when the market for controlling blocks is not fully competitive the incumbent "will not be able to extract the buyer's full reservation value").

between the initial owner and outside investors with regard to the magnitude of private benefits of control that the initial owner will siphon off. The asymmetry indicates that the initial owner knows the actual size of private benefits while investors lack this information. Such a situation is plausible given that the determinants of the actual size of private benefits (i.e., the ability to divert private benefits) are largely subjective in nature.\textsuperscript{29} Asymmetric information may hinder the initial owner from taking the IPO that is efficient, because of adverse selection.\textsuperscript{30}

Suppose that the stock market knows only that the actual sizes of private benefits of control ($B_i$) are uniformly distributed between 0 and $B_M$.\textsuperscript{31} (We assume for simplicity that all actual size levels have the same probability.) Then, the question would be, "How much will the stock market discount for private benefits of control in valuing the stock at the IPO under such asymmetric information?" This is where the adverse selection problem arises.

\textit{Overview}: Under the Equal Opportunity Rule, the initial owner may not increase private benefits of control through the sale of his or her control block. It follows that the payoffs from the IPO are highly dependent on the actual size of private benefits. The higher the actual size of private benefits, the more likely an owner is to undertake an IPO. On the other hand, the stock market tends to discount with more private benefits under the asymmetric information. Accordingly, only those initial owners who will extract larger private benefits can find the IPO profitable in spite of such deep discounts. Conversely, initial owners with modest actual size of private benefits will not proceed with the IPO.

\textit{Analysis}: A basic approach that we may capture from studies associated with adverse selection is as follows. Under asymmetric information, the equilibrium point (here, the market discount for private benefits) of the variable unknown to the market (for which asymmetric information exists) will be set at such level where the equilibrium point is equal to the expected value of the values of the variable for those parties who will find the equilibrium point acceptable.\textsuperscript{32} We may find the equilibrium discount for private benefits with the following two-step approach.

\textit{Step 1}: For any particular level of $B_V$ (market discount for private benefits), the distribution and expected value of $B_i$ of those initial owners who will elect the IPO with the $B_V$ can be identified. It follows that investors may infer that the initial owner’s acceptance of an IPO (under a certain $B_V$) suggests that her expected payoffs should be at

\textsuperscript{29} See INES MACHO-STADLIER & J. DAVID PEREZ-CASTRILLO, AN INTRODUCTION TO THE ECONOMICS OF INFORMATION, 103 (2d ed. 2001) (positing examples where the agent has more information than the principal concerning certain aspects regarding his personal characteristics).

\textsuperscript{30} The adverse selection problem is "present when, before signing of a contract, the party that establishes the conditions of the contract has less information than the other party on some important characteristics affecting the value of the contract," which is the actual size of private benefits in this example. \textit{Id.} at 101.

\textsuperscript{31} The extent of asymmetric information may be limited, meaning that the stock market may have some limited information on the actual size of private benefits. Here, for the simplicity of analysis, the stock market is assumed to have no information on the actual size of private benefits.

least $V_C$, which yields the range of the actual size of private benefits.

Assume that the stock price is offered based on a certain amount of discount for private benefits of $B_V$. Given that $B_V$ leads the market price to be $(1 - \alpha)(V_p - B_V)$, the condition for $I$ to accept the IPO with $B_V$ will be \( \{\alpha(V_p - B_I) + B_I\} + (1 - \alpha)(V_p - B_V) > V_C \). The left-hand side of the inequality represents the payoffs to $I$ through the IPO with the discount for private benefits of $B_V$. (Note that the Equal Opportunity Rule does not allow the sale of control to just increase private benefits.)

Rearranging $B_I > B_V - \frac{\Delta V}{1 - \alpha}$ it follows that, for any particular level of $B_V$, the $B_I$ of those initial owners who will accept the IPO is equally distributed between $B_V - \frac{\Delta V}{1 - \alpha}$ and $B_M$, and that hence the expected value of such $B_I$ will be $0.5(B_V - \frac{\Delta V}{1 - \alpha} + B_M)$.

It follows that the larger the efficiency gain of the IPO ($\Delta V$) is, the lower the minimum level of private benefits to be diverted by those initial owners who would find the IPO acceptable. The intuition behind the finding is that the efficiency gain may offset the loss from the deep discount for private benefits in the event where the discount exceeds the actual size of private benefits.

**Step II:** The equilibrium discount ($B_V^*$) will be determined at the level where the expected value of $B_I$ corresponding to $B_V^*$ (i.e., $B_I$ of those initial owners who will accept the discount of $B_V^*$) is equal to $B_V^*$. That is, $B_V^* = 0.5\{B_V^* - \frac{\Delta V}{1 - \alpha} + B_M\}$,

rearranging $B_V^* = B_M - \frac{\Delta V}{1 - \alpha}$. If the market discount for private benefits deviates from the equilibrium, the discount will be different from the expected value of private benefits of those initial owners who are ready to accept the discount. With the equilibrium discount for private benefits, the initial owner will accept the IPO if the following inequality is true: \( \{\alpha(V_p - B_I) + B_I\} + (1 - \alpha)(V_p - B_V^*) > V_C \), rearranging,

$B_I > B_M - \frac{2\Delta V}{1 - \alpha}$. The inequality indicates that the scope of $B_I$ of those initial owners who will proceed with the IPO will be distributed between $B_M - \frac{2\Delta V}{(1 - \alpha)}$

and $B_M$. The degree of adverse selection may be mitigated by the efficiency gain from an IPO, and by the magnitude of the control block. That is, the equilibrium discount of stock price for private benefits diminishes as the efficiency gain from the IPO increases, or as the shareholding ratio of the control block increases. This may partly explain why only the minority portion of stock is sold at IPOs. When the efficiency gain is zero, the adverse selection becomes dramatic in that the discount for private benefits will be the maximum limit and only those initial owners who will expropriate private benefits up to the maximum limit will elect the IPO. Once a company becomes public after the IPO, the asymmetric information on private benefits of control may lessen. In short, under the Equal Opportunity Rule, the level of an IPO’s discount pricing may differ from the actual size of private benefits owing to asymmetric information about the size of their benefits. The adverse selection may be mitigated by the efficiency gain of the IPO and the significance of the control block.
D. Discussion and Application

Under each of the polar rules governing sales of control blocks, there is a separate mechanism by which the value-shift aspect of private benefits can frustrate efficient IPOs. These polar rules impact not only the way the stock market reflects (by discount) private benefits of control into pricing at the IPO, but also the ability of the initial owner to cope with such discount for private benefits. Consider the Market Rule. On the one hand, the stock market will discount by the maximum limit, predicting private benefits to be maximized through control transfer allowed under the Market Rule. On the other hand, the initial owner can partially offset such deep discounts by selling control to a new controller who is able to take larger private benefits. The extent to which the value-shift aspect of private benefits hinders efficient IPOs under the Market Rule depends on how much of the discount the initial owner may recoup the discount via control transfer, which, in turn, hinges on the competitiveness of the market for the control block. Accordingly, as the market gets more competitive, the value-shift aspect of private benefits will be less relevant to the initial owner’s decision on the IPO, which means that the value-shift aspect will be less likely to discourage otherwise efficient IPOs. Therefore, the Market Rule is better suited to an economy with a competitive market for control blocks.

The Equal Opportunity Rule has its own problem, even though it does not allow the initial owner to maximize private benefits via a control sale and thus prompts the stock valuation to concentrate on the actual size of private benefits. The discount for private benefits is potentially severe in the event where asymmetric information, which creates an adverse selection problem, is acute. Unlike under the Market Rule, the initial owner is not given the opportunity to offset such deep discount via a control sale. Hence, the Equal Opportunity Rule works well when investors have more information on private benefits, regardless of the competitiveness in the market for control.

Figure 2 may be an effective way to illustrate the suitability of the rules for each market condition. On the x axis is the competitiveness of the control market. On the y axis is the degree of symmetric information on private benefits. As shown in the lower right corner of the figure, the Market Rule is better than the Equal Opportunity Rule when the market for the control block is highly competitive and the degree of symmetric information is low. As shown in the upper left corner, the Equal Opportunity Rule dominates when market competition is low but the symmetric information is high. Both rules work well when both symmetric information and market competition are high.
Market Conditions and Rules Control

<table>
<thead>
<tr>
<th>Symmetric Information</th>
<th>High</th>
<th>Equal Opportunity Rule</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>None</td>
<td>Market Rule</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td>High</td>
<td></td>
</tr>
</tbody>
</table>

Market Competition

Moreover, we may link our analysis to the distinction between the market-based (arm's-length) system and the relationship-based system. One may argue that the market-based system tends to have a more competitive market for control blocks but sustains a greater degree of asymmetric information on private benefits (i.e., the lower right corner of the Figure 2). The relationship-based system has the reverse mix of market competition and symmetric information (the upper left corner of the Figure 2). Accordingly, the Market Rule works well with the market-based system, whereas the Equal Opportunity Rule works well with the relationship-based system, in terms of facilitating efficient IPOs. If we consider the market for control blocks in the United States to be relatively (though not fully) competitive, the prevalence of the Market Rule in this country can be viewed as suitable to the market condition.

E. Limits of Analysis

1. Sustainability of the Controlling Shareholder Structure

One of the premises in this analysis is that the controlling shareholder structure resulting from the IPO will be sustained until the value of the company is realized by liquidation. It is more plausible, however, that after the IPO the initial owner (i.e., the then controlling shareholder) will consider whether to break up or maintain the control block, on the basis of the financial return from the respective alternative. If the controlling shareholder structure after the IPO is expected to be ephemeral and the control block is supposed to be dispersed, our analysis works differently.

What will determine the controlling shareholder's decision on whether to break up or not? In theory, the controlling shareholder will compare the payoffs from breaking up with the payoffs from maintaining the control block. The breakup of the control block will create a diffuse ownership structure. It follows that the payoffs from the break up hinge on the efficiency level of diffuse ownership, which in turn largely depends on the

34. See Zingales, supra note 27, at 426 (positing that the market for controlling block is not fully competitive since it is restricted to a few large investors who derive private benefits).
magnitude of managerial agency costs. Assuming the non-existence of the efficiency-costs aspect of private benefits, the initial owner I will choose to break up the control block if and only if, $\alpha(V_p - A_M) > \alpha(V_p - B_I) + B_I + \beta(1 - \alpha)(B_M - B_I)$ (for the Market Rule), and $\alpha(V_p - A_M) > \alpha(V_p - B_I) + B_I$ (for the Equal Opportunity Rule) where $A_M$ is managerial agency costs. The left-hand side of the inequalities is the proceeds from break up of the control block (i.e., the value of the dispersed control block given diffuse ownership). But, the inequalities can be met only in the highly unlikely case in which both $A_M$ and B are zero. Thus, without the efficiency-costs aspect of private benefits, the controlling shareholder is very unlikely to break up control block.

If we relax the assumption to introduce the efficiency-costs aspect of private benefits (let it be C), then the decision concerning breakup will depend on the relative sizes of $A_M$, C, and B. The initial owner I will choose to break up the control block if the following inequalities are true: $\alpha(V_p - A_M) > \alpha(V_p - B_I - C) + B_I + \beta(1 - \alpha)(B_M - B_I)$ (for the Market Rule), and $\alpha(V_p - A_M) > \alpha(V_p - B_I - C) + B_I$ (for the Equal Opportunity Rule). If the inequalities are true and the stock market forecasts them at the time of the IPO, then the stock market will make little or no discount for private benefits at the IPO. (Note that the odds of no such discount will be proportionate to the ratio of control block $\alpha$ as long as the sum of B_I and C is greater than $A_M$.) Accordingly, the IPO stock will be priced at $(1-\alpha)(V_p - A_M)$, which is the expected value of the stock under the prospective diffuse ownership structure (to be taken at Time 1).

2. Discrepancy in Efficiency Level Among Controllers (The Market Rule)

The analysis is based on the premise that the efficiency level of the company remains constant regardless of who keeps the control block. Given this premise, the control block will be sold to those who will extract up to the maximum limit of private benefits of control under the Market Rule (i.e., the maximization of private benefits). In the real world, however, the total value of a firm may differ from controller to controller. The value of a controlled company depends significantly on the competence and diligence of the controlling shareholder to manage the company or to monitor managers. Moreover, the initial owner who has founded the company may well have

35. Managerial agency costs arise from the divergence of interests between shareholders and management. See generally Jensen & Meckling, supra note 6, at 308 (positing that if both the principle and the agent are "utility maximizers there is good reason to believe that the agent will not always act in the best interests of the principle" and that "there will be some divergence between the agent's decision and those decisions which would maximize the welfare of the principle").

The initial owner sustains managerial agency costs ex ante in that the price of stock is decreased by the expected size of managerial agency costs; consequently, the initial owner has a compelling incentive to deploy effective arrangements to contain managerial agency costs. Professor Mark Roe stresses the importance of managerial agency costs to ownership structure, observing that owners tend to remain as blockholders if they expect that managerial agency costs would be very high after full separation, and that high managerial agency costs thus preclude separation irrespective of the quality of corporate law. See Roe, supra note 5, at 234 (contending that legal institutions play only an indirect role in containing managerial agency costs with social, economic and political institutions playing the primary role in this arena).

36. The controlling shareholder personally manages the company or just monitors professional managers. For empirical evidence from Germany on the effect of controlling shareholder's existence, see Jeremy S. Edwards & Alfons J. Weichenrieder, Ownership Concentration and Share Valuation: Evidence from Germany (CESifo Working Paper Series No. 193, 1999) (on file with Author) (finding, for a sample of
accumulated firm-specific expertise and a reputation that significantly contributes to the value of the company. In such a case, the value of the company may not be maintained if the control block is sold. If such impact is large enough, the stock market will a priori; expect that the initial owner will not sell his or her control block to increase private benefits under the Market Rule. Therefore, the stock market will focus on the actual size under the Market Rule as well.

IV. CONCLUSION

We have analyzed mechanisms by which merely the value-shift aspect of private benefits of control impedes efficient IPOs. Interestingly, the mechanisms of such impediment vary depending on which rule governs the sales of control block. Ex post, the legal rules determine whether the initial owner may utilize the sale of control block to overcome the boundary of his or her ability to extract private benefits. Not surprisingly, the stock market a priori reflects the possibility of such opportunism into the stock price at the time of IPOs.

The primary contribution of this paper may be the finding that irrelevance of the value-shift aspect of private benefits, which serves efficient IPOs, requires different market conditions for each rule. The Market Rule nicely fits with a fully competitive market for control blocks that will make the initial owner fully offset the deep discount for private benefits at the IPO. By contrast, the Equal Opportunity Rule is better suited with symmetric information on how much will be extracted by the initial owner, which will diminish the discount for private benefits.

102 German listed corporations, that the net effect of equal increases in both the control and cash-flow rights of the largest shareholder is typically beneficial for minority shareholders and that a change from completely dispersed ownership of a large company to ownership by a single shareholder can double the value of the company’s shares).