

# Efficient and Inefficient Sales of Corporate Control: The Case of Going Private

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This paper focuses on transactions in which a company's controlling block is transferred from an existing controller to a new controller, who proceeds to purchase the entirety of minority shares in order to take the company private. In particular, the paper addresses those transactions in which the new controller buys all of the target company's shares by means of a merger. The merger transaction structure enables constitution of different rights for the incumbent block holder than those established for the existing minority shareholders (this situation will be defined as adjusted market rule (AMR)). Alternatively, the merger may grant equal rights to the incumbent block holder as to the existing minority shareholders (this situation will be defined as adjusted equal opportunity rule (AEOR)).

The paper is based on the framework developed in Bebchuk (1994) for analysis of these sale-of-control transactions under the AMR and under the AEOR. This framework enables us to identify the circumstances in which each rule may fail to facilitate all efficient transfers or to discourage all inefficient transfers. This paper contributes to the framework by developing the model so as to accommodate the special case of going private, as well as ascertaining the implications of this deal structure on the efficiency of both AMR and AEOR.

## *The Research Design*

The paper follows the framework developed in Bebchuk (1994) for analyzing the social optimality of the AMR and the AEOR. According to this framework we assume a publicly traded corporation which operates in a timeline of three periods. In period 0, the company has an existing controlling shareholder ( $E$ ). In period 1, a potential new controller ( $N$ ) emerges.  $N$  wishes to acquire control in order to go private; however, she may or may not actually succeed in acquisition of control. In period 2, the company operates under the control of either  $E$  or  $N$ , depending on the merger's success in period 1. At the end of period 2, the company is liquidated. In period 1, the public company has  $n$  shares outstanding, and  $E$  owns a block of  $k$  shares,

consequently, the minority shareholders own together  $(n-k)$  shares. We assume that the block of  $k$  shares is granting  $E$  effective control.

According to Bebchuk's framework we define two additional parameters,  $W$  and  $B$ . Let  $W > 0$  denote the total value per share that will flow to shareholders in period 2. Of the total value that will flow to the company's shareholders, a fraction will flow to the controller as private benefits of control. Let  $B$  denote the value per share that will flow to the controller as private benefits of control. Therefore, the value that will flow to shareholders as shareholders is  $(W-B)$  per share.  $N$  and  $E$  may differ in either  $W$  or  $B$  or both. The difference in  $W$  may be attributable to different management aptitudes, while the difference in  $B$  may be attributable to a difference in  $N$ 's and  $E$ 's abilities to capture private benefits of control.

Let  $W_e$  and  $B_e$  denote the value of  $W$  and  $B$ , respectively, if the existing controller  $E$  retains its control in period 2. Let  $W_n$  and  $B_n$  denote the value of  $W$  and  $B$ , respectively, if  $N$  acquired control in period 2. Moreover, let  $\Delta W$  denote  $(W_n - W_e)$  and let  $\Delta B$  denote  $(B_n - B_e)$ . A transfer of control will be efficient if and only if  $N$  will lead to a greater total value of the firm, that is if and only if  $W_n > W_e$ , that is, if and only if  $\Delta W > 0$ . Finally, it is assumed that the parties will agree to a sale-of-control transaction only if it does not leave minority shareholders worse off, and makes both the outgoing and incoming controllers ( $E$  and  $N$ ) better off.

### *Evaluating the Adjusted Market Rule in the Case of Going Private*

Under the AMR, the existing controller is free to sell her controlling block at any price that the new potential controller is willing to pay her, while the minority shareholders may receive a different price for their shares. Without loss of generality, it is worth pointing out that the minority shareholders' transaction price will usually be lower than that of the controlling block holder, since the latter will demand additional compensation for the loss of private benefits of control.

A control block of  $k$  shares provides the existing controller with shareholder value of  $k(W_e - B_e)$ , as well as private benefits of control of  $nB_e$ . Therefore, the block's total value to the existing controller is  $kW_e + (n-k)B_e$ . The first term represents the controller's claim on her pro

rata fraction of the total value, and the second term represents the extent to which the existing controller receives more than her pro rata fraction of the value and the minority shareholders receive less than their pro rata fraction of the value. Thus, the control block's per share value is  $We + [(n-k)/k]Be$ .

Under the AMR, a transaction transferring  $n$  outstanding shares from  $E$  and the minority shareholders to  $N$  will occur only if the parties can agree to prices for the block and minority shares which leave both controllers better off, while assuring that minority shareholders will not be left worse off. This will be the case if and only if the share value to  $N$  at period 2 is higher than the weighted average share value to  $E$  and to the minority shareholders:

Proposition 1: Under the AMR a transfer of control will occur if and only if

$$(1) Wn > \frac{[kWe + (n-k)Be] + [(n-k)(We - Be)]}{n}$$

*Remark.* The left-hand side of (1) represents the maximum price at which the offer can be made so that the transaction does not impose a loss on  $N$ . Since  $W$  will have a value of  $Wn$  under  $N$ 's control, any price below  $Wn$  will leave  $N$  with a profit. Any offer at a price above  $Wn$  will impose a loss on  $N$ . The right-hand side of (1) represents the weighted average of the minimum prices at which  $N$ 's offer must be made to  $E$  and to the minority shareholders, respectively, in order that the transaction not impose a loss upon them.

Solving the inequality, it is possible to derive from Proposition 1 the following result:

Under the AMR a transfer of control will occur if and only if

$$(2) Wn > \frac{[kWe + (n-k)We]}{n}$$

or, equivalently, if and only if

$$(3) Wn > We$$

*Remarks.* (A) *Inefficient Transfers.* No inefficient transfer will occur under the AMR.  $N$  is purchasing all of  $n$  outstanding shares, and the transfer of control cannot leave minority shareholders worse off. Thus,  $N$  fully internalizes the externality usually imposed in sale-of-control transactions on the minority shareholders. This consequence is consistent with the

conclusions reached in Kahan (1993), by which the risk of undesirable control sales is lower when the fraction of shares sold is high.

(B) *Hold-up Problem and Efficient Transfers*. It might be claimed that offering the minority shareholders at least ( $We-Be$ ) will fail to attract them, since each minority shareholder may have incentive to hold out in the hope of ending up with minority shares in the  $N$  controlled company and therefore, the transaction will not occur<sup>1</sup>. However, since the deal structure assumed is a merger, it is enough to attract a majority of the shareholders, and thus this problem will not arise. Moreover, paying the minority shareholders at least their pre-acquisition value and using the merger deal structure promise us that an efficient transfer of control will not be blocked.

#### *Evaluating the Adjusted Equal Opportunity Rule in the Case of Going Private*

Under the AEOR, minority shareholders are entitled to the same sale terms as the block holder. Thus,  $N$  is required to offer all minority shareholders the same price paid to  $E$ .<sup>2</sup> Since  $E$  will only accept a transaction if it leaves her better off, the price requested by  $E$  will also be applied to the minority shareholders.

Proposition 2: Under the AEOR, a transfer of control will occur if and only if

$$(4) Wn > We + \left(\frac{n-k}{k}\right) Be$$

*Remark.* The left-hand side of (4) represents the maximum price at which the offer can be made so that the transaction does not impose a loss on  $N$ . Since  $W$  will have a value of  $Wn$  under  $N$ 's control, any price below  $Wn$  will leave  $N$  with a profit. Any offer at a price above  $Wn$  will impose a loss on  $N$ . The right-hand side of (4) represents the minimum price at which  $N$ 's offer must be made in order not to impose a loss on  $E$ . This price will not impose a loss on the

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<sup>1</sup> For models of the hold-up problem in tender offers see Grossman and Hart (1980) and Bebchuk (1989).

<sup>2</sup> In this part of the paper we deviate from the framework developed in Bebchuk (1994) that considers two versions of the EOR- the complete acquisition version and the proration version. Since we concentrate in the case of going private, the complete acquisition version is the only relevant one.

minority shareholders as well, since  $E$ 's per share value is higher than the minority per share value, for  $E$  has the ability of extracting private benefits of control.

We can write proposition 2 equivalently as:

$$(5) \Delta W > \left(\frac{n-k}{k}\right) Be$$

*Remarks. (A) Inefficient Transfers.* Under the AEOR, inefficient transfers will not occur. If the transaction takes place, minority shareholders will always be made better off, since they will receive at least the per share value of  $E$ , which is higher than the minority per share value. Since the transaction will also leave  $E$  better off, all of the transactions that occur under the AEOR will leave all parties better off. Therefore, all transfers of control under the AEOR are efficient.

*(B) Efficient Transfers.* Under the AEOR, an efficient transfer will not take place if and only if

$$(6) 0 < \Delta W < \left(\frac{n-k}{k}\right) Be$$

Under the AEOR,  $N$  must offer the same price to all shareholders, including  $E$ . Therefore,  $E$  cannot capture more than her proportionate fraction of the total value paid to existing shareholders in the transaction. It follows that under the AEOR some efficient transactions may be blocked. Even if the company's total value grows as a result of transferring control from  $E$  to  $N$ , the existing shareholder's proportionate share of the total transaction price may not adequately compensate her for the loss of private benefits of control. In particular, efficient transactions will be blocked when the rise in the company's total value is lower than the value of private benefits of control that flow to the minority under the AEOR. In this case, the existing shareholder will prefer to maintain control and continue reaping private benefits, even though the transaction would raise the company's total value.

*(C) Efficiency Costs.* The expected efficiency costs per share under the AEOR are

$$(7) C_{AEOR} = \text{prob}(0 < \Delta W < \left(\frac{n-k}{k}\right) Be) \times E[\Delta W | 0 < \Delta W < \left(\frac{n-k}{k}\right) Be]$$

*Comparison of the Adjusted Market and Equal Opportunity Rules in the Case of Going Private*

As demonstrated above, both the AMR and the AEOR perform well in terms of preventing inefficient transfers. According to the model's assumptions,  $N$  is purchasing all of  $n$  outstanding shares, and the transfer of control cannot leave minority shareholders worse off. Therefore,  $N$  fully internalizes the externality imposed by extracting private benefits of control. Nonetheless, in terms of facilitating efficient transfers, the AMR is superior to the AEOR. The AEOR prevents efficient transfers due to the higher price needs to be paid to minority shareholders. As a consequence, in any case, the AMR dominates the AEOR for transactions in which the company is taken private.