Structuring More-Effective Executive Severance Contracts*

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Abstract

Executive severance contracts that are contingent on a change in control, commonly referred to as golden parachutes, offer the potential to reduce the substantial agency costs that arise during a contest for corporate control. Prior research on golden parachute contracts shows that they do not impact shareholder wealth, other than through signaling an increased probability of a contest for control. This is not surprising given the structure of existing contracts that provides for a lump-sum payment that is small relative to the value of the firm. The objective of this paper is to develop a more-effective executive severance contract, that will align the interests of target firm managers and shareholders in the event that managers are called upon to sell the firm. We develop a model of an optimal contract that provides for a small lump-sum payment combined with a payment that is linked to the increase in the value of the firm achieved during the sale. This contract leads to an equilibrium that is Pareto optimal for managers and shareholders.

1. Introduction

It is well documented that successful mergers or takeovers are favorable events for target firm shareholders.[1] However, the senior-level managers of target firms often suffer loss of employment and possible diminished prospects for future employment.[2] It is not surprising that these managers often resist takeover offers even though evidence suggests shareholders will suffer if the managers are successful in defeating an offer. Hence, the potential for conflict between shareholders and managers intensifies when a firm becomes a takeover target. Even managers who have done a good job minding the firm for shareholders are likely to have agency problems when faced with evaluating the decision to sell the firm for the shareholders.[3] Although other principal-agent conflicts exist within the firm, few are as public or as well documented as those that arise during a contest for control.

Executive severance contracts that are contingent on a change in control, commonly referred to as golden parachutes, offer the potential to reduce the substantial agency costs that arise during a contest for corporate control. If ineffective, these contracts may represent just one more method for transferring wealth from the owners of a corporation to its managers. Prior research on golden parachute contracts shows that they do not impact shareholder wealth, other than through signaling an increased probability of a contest for control. This is not surprising given the structure of existing contracts that provides for a lump-sum payment that is small relative to the value of the firm.

The objective of this paper is to develop an optimal executive severance contract, that will align the interest of target firm managers and shareholders in the event that managers are called upon to sell the firm. We develop a model of an optimal contract that provides for a small lump-sum payment combined with a payment that is linked to the increase in the

value of the firm achieved during the sale. This contract leads to an equilibrium that is Pareto optimal for managers and shareholders.

The remainder of the paper proceeds as follows. In Section II we review relevant past literature on golden parachute contracts. In Section III we develop a model of how golden parachute contracts impact shareholder wealth, and utilize the model to develop an optimal golden parachute contract. Section IV summarizes and concludes the paper.

2. Golden Parachutes and Shareholder Wealth

Lambert and Larcker (1985) examine shareholder wealth responses to golden parachute announcements between 1975 and 1982 and report a positive average abnormal return of three percent.[4] They conclude that this evidence is consistent with their *Incentive Alignment Hypothesis* (golden parachutes mitigate the conflict between shareholders and management, making acceptance of a tender offer more likely and resulting in a positive shareholder wealth response).[5] The evidence is not consistent with their competing *Wealth Transfer Hypothesis* (golden parachutes increase the expected cost of acquisition and insulate managers from the discipline provided by the market for corporate control, making acceptance of a tender offer less likely and resulting in a negative shareholder wealth response).[6]

Lambert and Larcker limit their sample to firms that are not in play (not involved nor rumored to be involved in a contest for control) at the time of golden parachute adoption. In discussing their results, Jensen (1988, p. 39) states, "... [t]he evidence indicates that stock prices of firms that adopt severance pay contracts for managers on average rise about 3 percent when adoption of the contract is announced (Lambert and Larcker 1985). There is no easy way to tell what proportion of the effect is due to the market interpreting the announcement as a signal that a takeover bid is more likely and how much is due to the reduction in conflict between managers and shareholders."

Born, Faria, and Trahan (1993) extend Lambert and Larcker's results and test the *Takeover Signaling Hypothesis* suggested by Jensen (golden parachutes signal an increased probability of a forthcoming contest for corporate control, resulting in a positive shareholder wealth response). Similar to Lambert and Larcker, Born, Faria, and Trahan first examine the shareholder wealth responses to golden parachute adoptions by firms that are not in play. For adoptions reported in the *Wall Street Journal* during the period 1979-1984, they report a positive average abnormal return of two percent. This is consistent with Lambert and Larcker's findings.

Born, Faria, and Trahan then focus on firms that are in play at the time of the golden parachute announcement. Since these firms are already in play, the probability of being in play is one, and there is no takeover signaling effect associated with their golden parachute adoption.[7] Born, Faria, and Trahan find that there are no significant abnormal returns associated with golden parachute adoptions by firms that are in play at the time of adoption. Since there is no wealth effect for firms that are in play, the positive average abnormal returns found for not in play firms, can be attributed to a takeover signaling effect.

At this juncture, the empirical evidence suggests that once the firm is in play, announcement of a golden parachute has no systematic influence on shareholder wealth. This implies that the probability of the takeover succeeding, and the takeover premium, are unaffected by the golden parachute. Lack of a wealth transfer effect is not surprising given the

small size of the golden parachutes and the large premiums offered in the tender price.[8] Lack of an incentive alignment effect is not surprising given that all of the contracts examined by Born, Faria, and Trahan provide only for lump-sum payments to managers in the event of a change in control.

In the next section we develop a model of an optimal golden parachute contract, which provides for a portion of the payment to be a function of the takeover premium.

3. An Optimal Golden Parachute Contract

As noted above, Born, Faria, and Trahan (1993) find that all of the golden parachute contracts examined lacked any linkage between payment to managers and the final tender offer price. All of the contracts provided for only a lump sum payment upon a change in control; typically set at three years salary. The absence of this linkage provides no incentive for managers to shop for higher tender prices.

Golden parachute contracts should provide for the recovery of lost managerial wealth due to a change in control. However, a complete and riskless compensation scheme, similar to an insurance policy with no deductible, may be counterproductive. The lump-sum portion of the contract should recognize this problem by being kept below the actual loss to managers from a change in control. This co-insurance aspect will help encourage managers to run the firm in a manner that lowers the probability of takeover. However, it does nothing to encourage management to seek out the highest bid if the firm does become a target. An optimal golden parachute contract should also provide for this incentive alignment by making part of the payment to managers a positive function of the price received for surrendering control.

We now turn to developing a model of an optimal golden parachute contract. Lambert and Larcker (1985) specify the following model of the effect of golden parachute announcements on shareholder wealth:

$$R = V_a - V_b, \tag{1}$$

where R is the change in shareholder wealth due to the golden parachute announcement, V_a is the value of the firm with a golden parachute in place and V_b is the value of the firm without a golden parachute in place. The value of the firm with a golden parachute in place is equal to its value as an independent firm plus its net value as a takeover candidate. The value of the firm without a golden parachute in place is identical except that its net value as a takeover candidate is not reduced by the expected value of the golden parachute contract. More formally:

$$V_a = Z_a + (\{Z_t - Z_a\} - D)p_a q_a, \tag{2}$$

$$V_b = Z_b + (\{Z_t - Z_b\})p_b q_b, \tag{3}$$

where p_a and p_b are the probabilities of the firm receiving a tender offer with and without a golden parachute in place, respectively, qa and qb are the probabilities that the tender offer will be successful with and without a golden parachute in place, respectively, and Z_a and Z_b are the values of the firm under the control of management with and without a golden parachute in place, respectively. Z_t is the expected tender offer price and D is the expected value

of the golden parachute contract, which is non-negative. Substituting [2] and [3] into [1] and re-arranging obtains the following:

$$R = \{(1-p_a q_a)Z_a - (1-p_b q_b)Z_b\} + p_a(q_a - q_b)Z_t - p_a q_a D. \tag{4}$$

Unless the contract is structured correctly, however, there is no reason to assume that the price for surrendering control will be optimal from the shareholders' perspective. We now derive the conditions that must be satisfied in order to maximize the change in shareholder wealth associated a golden parachute contract.

Using [4] as the objective function, the objective of the firm is to design a contract that maximizes the change in shareholder wealth. In the simplest case, we assume adoption of the golden parachute has no signaling properties regarding the probability of a control contest being forthcoming (i.e., $p_a = p_b = p$). Additionally, we assume that qa experiences a discrete jump when the golden parachute is adopted (an upward jump would be consistent with the *Incentive Alignment Hypothesis*). However, aside from the discontinuity at adoption, q_a is unrelated to D (i.e., $dq_a/dD = 0$).

Consistent with the prescription of Jensen (1988), set the contract so as to encourage management to seek out a high price for surrendering corporate control as in:

$$Z_t = Z_t(D), \tag{5}$$

which is twice differentiable and satisfies the following conditions:

$$Z'_t > 0, \text{ and}$$

$$Z''_t(D) < 0. \tag{6}$$

The economic rationale for this function is that higher contract awards should motivate managers to procure higher takeover bid prices. It could be argued that the function reaches a global maximum and then declines, implying a degree of managerial overcompensation to the extent that managers lose incentives to seek out even higher bids.

Substituting [5] into [4], taking the partial derivative with respect to D, and setting the partial equal to zero yields the following first order condition,

$$R' = p\{[q_a - q_b]Z'_t - q_a\} = 0. \tag{7}$$

The optimal contract is achieved when the marginal benefit stemming from increased takeover bid prices due to the golden parachute (Z'_t) equals the marginal cost of the additional severance pay. The second order condition is satisfied by virtue of the sufficient condition for concavity (i.e., $Z''_t < 0$).

This basic case can be generalized even further by relaxing the signaling and alignment assumptions. Specifically, assume that q_a and p_a are increasing, concave and twice differentiable functions of D that satisfy the following conditions:

$$q_a = q_a(D), p_a = p_a(D), \text{ and}$$

$q'_a, p'_a > 0$, and   [8]

$q''_a, p''_a < 0.$

Assuming that managerial effort is not influenced by the adoption of the golden parachute (i.e., $Z_a = Z_b = Z$), the function to be maximized by the firm is:

$R = (Z_t - Z)(p_a q_a - p_b q_b) - Dp_a q_a.$ [9]

Totally differentiating with respect to D and setting equal to zero yields the following first order condition:

$R' = (Z_t - Z)p_a q'_a + (Z_t - Z)q_a p'_a + (p_a q_a - p_b q_b)Z'_t$

$- Dp_a q'_a - Dq_a p'_a - p_a q_a = 0.$ [10]

Examining each of the six terms of [10] individually, we observe that:

1.   the first term represents the marginal benefit due to the decreased managerial incentive to fight a takeover bid,

2.   the second term represents the marginal benefit arising from the signal of an increased probability of a contest for corporate control.

3.   the third term represents the marginal benefit generated by the higher expected tender offer price,

4.   the fourth term represents the marginal cost incurred to alter management's motivation to fight a takeover bid,

5.   the fifth term represents the marginal cost of signaling the increased probability of a contest for corporate control with the golden parachute contract, and

6.   the sixth term represents the expected direct costs associated with adoption of the golden parachute contract.

To elaborate, the first order condition [10] suggests that shareholder wealth will increase in three ways from a well-structured contract: 1.) by decreased managerial resistance to future takeovers, 2.) by an upward revaluation due to the takeover signal, and 3.) by an increased expected tender price due to incentive alignment. These benefits are offset by three costs: 1.) the compensation required to reduce managerial resistance to a takeover—the lump-sum payment, 2.) the cost of the signal—cost of adopting and administering the contracts, and 3.) the direct cost of any expected payments under the golden parachute—the payment tied to the increase in the offer price. When the marginal benefit to the firm's shareholders equals the marginal cost, firm value is maximized with respect to designing the optimal contract.

The second order condition is defined by:

$R'' = (Z_t - Z - D)(p_a q''_a + q_a p''_a) + (Z_t - Z - D)2p'_a q'_a$

$+ [2(Z'_{t-1}) + Z''_t](p_a q'_a + q_a p'_a).$ [11]

The first term in the second order condition is unequivocally negative, the second term is unequivocally positive, and the third term is unequivocally negative if $Z'_t<1$. Thus, under fairly reasonable assumptions, the overall expression is negative. This ensures that a local maximum can be achieved.

Maximization of the change in shareholder wealth associated with the adoption of a golden parachute contract does not ensure that the price for surrendering control (Z_t) will be maximized. This is not surprising, since most resolutions to principal-agent conflicts lead to less than ideal solutions. The relation between the price for surrendering corporate control (Z_t) and the golden parachute contract (D) is illustrated in Figure I. The golden parachute payout is comprised of a lump sum payment — independent of the value of the tender offer, and an incentive alignment component that is a function of the increase in the value of the tender offer. The value of the tender offer increases as the golden parachute is adopted and continues to increase as a result of the incentive alignment effect. However, diminishing marginal returns set in as it becomes increasingly difficult to elicit higher bids and the probability of a successful tender offer decreases at higher bid prices. Shareholder wealth is maximized when the marginal benefit of the golden parachute, to shareholders, is equal to its marginal cost.

Figure 1

**The Optimal Golden Parachute Payout (GP*)
When the Payout is A Function of
Tender Offer Value**
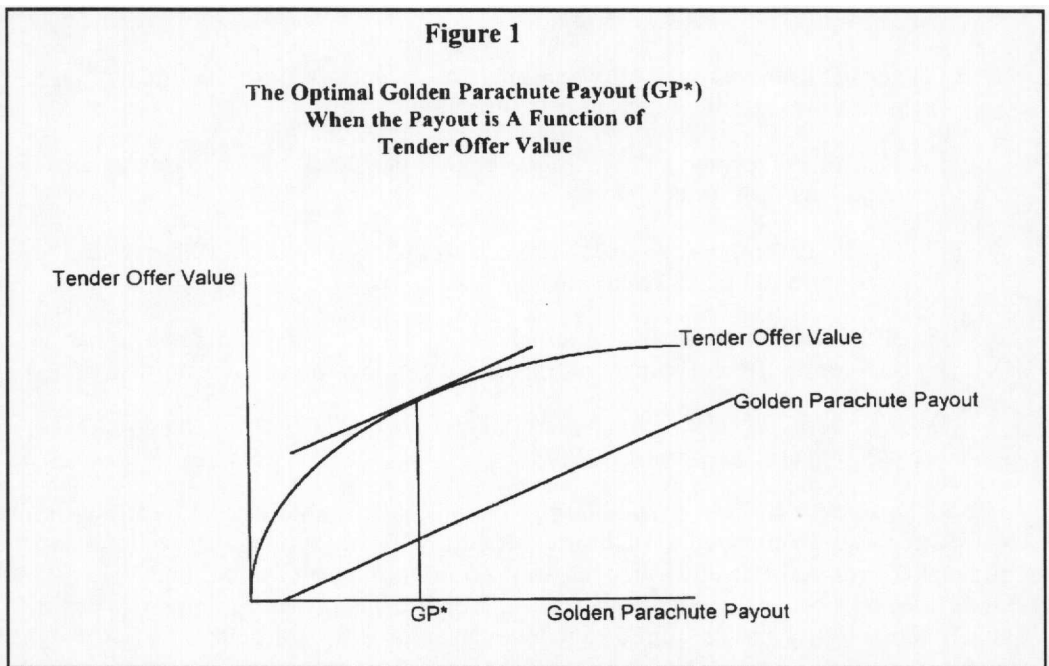
4. Summary and Conclusions

Given the substantial agency costs that are likely to arise when managers are called upon to sell the firm in the best interest of the shareholders, there is an opportunity for executive severance contracts, referred to as golden parachutes, to benefit shareholders. However, prior literature finds that golden parachutes do not appear to lead to better alignment of shareholder and management objectives. Existing golden parachute contracts are not structured to properly align these objectives. Similar to the contention of Jensen and Murphy

(1990) that it is not how much you pay managers but how you pay them, a golden parachute contract must be properly structured if it is to properly align the interests of managers and shareholders. Structuring the contracts so that the amount of payment is contingent on the price received by shareholders is a step in the right direction.

While properly structured golden parachute contracts offer a means to reduce the agency costs surrounding a contest for corporate control, they do not guarantee that a firm will be managed with the goal of shareholder wealth maximization. These contracts should be part of a package of properly structured executive compensation agreements designed to align the interests of shareholders and managers.

Endnotes

1. See Jarrell, Brickley, and Netter (1988) and Jensen and Ruback (1983).

2. See Hayes (1981), Perham (1981), Walsh (1988), DeAngelo and DeAngelo (1989), and Gilson (1989).

3. The distinction between managers "selling the store" versus "minding the store" and the increased agency problems associated with "selling the store" was raised by attorney Joseph H. Flom at a roundtable discussion on corporate takeovers held at Columbia University on October 31, 1987.

4. This result is intriguing in light of the negative stock price responses that appear to accompany announcements of anti-takeover measures. See Jarrell, Brickley and Netter (1988).

5. Knoeber (1986) argues that golden parachutes form a performance bond between shareholders and managers. While problematic to implement and structure, managers may be induced into accepting deferred compensation contracts, if there is some assurance that they will collect for superior performance at some point in the future. Changes in corporate control provide an opportunity for the winner to modify or cancel deferred compensation contracts with management. Thus, Knoeber argues that golden parachutes are a contractual response that bond shareholders to deferred managerial compensation contracts and may actually enhance managerial effort.

6. Born Faria, and Trahan (1993) refer to this as the *Managerial Entrenchment Hypothesis*.

7. Born, Faria, and Trahan (1993) find this result to be robust to using the Wall Street Journal or proxy date as the event date, eliminating firms with any other news announcements around the event date, and segmenting the sample by the type of event (rumor of takeover, hostile or unsolicited bid, and friendly bid).

8. Born, Faria, and Trahan (1993) report that the average size of a golden parachute contract is $12.7 million, while the average takeover premium is $586 million.

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