

CHAPTER 2 LITERATURE REVIEW

Agency Theory

Agency theory (Jensen and Meckling, 1976; Fama and Jensen, 1983; Fama, 1980) states that agency costs arise from the conflict of interest between a principal and an agent. This conflict results, for example, when managers, who are responsible for important decisions of the firm, are not the primary claimants of the firm's net assets, and thus do not bear a major share of the wealth effects of their decisions. Agency theory divides the costs of such arrangements into structuring costs, monitoring costs, and costs of bonding a set of contracts. Costly control procedures, such as the use of contracts, are necessary to align the actions of the managers (the agent) with those of the residual claimants, the shareholders (the principals). Agency theory stresses that such means of contracting reduce agency costs by coordinating the goals of the principal and the agent. As Jensen (1994) states clearly, "Managerial decisions designed to strengthen organizations often meet with opposition from colleagues, employees... providing managers with incentives to compromise their decisions." He goes on to say that the best way to increase the chances of managers making the best decisions possible is to ensure that the incentives (trade-offs) they face encourage them to move in the correct directions. Overall, the goal of the agent is to increase shareholder wealth, which in turn should result in improved firm performance and value.

Compensation plans are a form of contract designed to link the goals of the shareholders with those of the CEO or other key executives. According to agency theory, compensation plans should be designed so that managers have sufficient incentives to make decisions that maximize shareholder wealth and thus reduce the manager-shareholder agency problem. Lewellen et al. (1987) found evidence that compensation packages are, at least in some respects, designed such that agency costs are reduced. They determined that compensation contracting is aimed at controlling risk exposure and limiting horizon problems.¹

According to agency theory, if a compensation package reduces agency costs, or is believed by shareholders to do so, the adoption of a compensation package by a firm should result in an increase in shareholder wealth. Also, compensation-governed decisions made by management should lead to improved firm performance.

¹ Lewellen, et al, measured the importance of projects with a long economic life by using the proportion of fixed assets to total assets. The larger the ratio, the longer the average economic life of the firm's existing tangible investments. Options on future profitability were measured by the ratio of market value of firm equity to book value at fiscal year end. They found the longer the average life of the investments and the greater the importance of future profitable growth opportunities, the smaller the relative weight of short-term compensation in the executive's compensation package.

Empirical Evidence Related to Shareholder Wealth Changes

Several studies have analyzed the market's response to the adoption of, or a change in, some form of compensation plan. Most of these studies are built on the theory that the adoption or change in a compensation plan is viewed as favorable by shareholders. Relying on agency theory, shareholder views should be favorable, as the adoption or change in a compensation component should result in improved shareholder wealth brought on by improved firm performance. Results of these studies have been conflicting however.

Larker (1983) looked at the securities market reaction and the growth in capital investments for firms adopting performance plans in comparison to similar non-adopting firms. He found both increased capital investment and a favorable securities market reaction for adopting firms. He points out that the favorable market reaction is not necessarily an indication that the market has a favorable view of the plans; rather, the response may be due to corporate strategy changes that are coincident with the adoption.

Brickley et al. (1985) found a positive market reaction when examining the market response around the announcement of proposed changes in long-term compensation packages. The changes considered were the adoption of a performance plan, the adoption of a restricted stock plan, and the adoption of a stock option plan. The study concluded that the stock market views these types of compensation changes and adoptions favorably. Adoptions of short-term plans were considered by Tehranian and Waegelein (1985). They found positive abnormal returns in the month of the announcement, ten months after the announcement, and four months prior to the announcement. Tehranian and Waegelein believe their results emerged either because managers reacted to the incentives and increased earnings, or because managers knew earnings would be higher and strategically obtained a short term bonus plan.

In a more recent study, Gaver et al. (1992) examined market reaction to the adoption of long-term compensation plans based on accounting goals. They found no significant reaction during a two-day announcement period. They suggest the lack of market reaction could be due to market participants viewing the adoption of long-term incentives as a relatively minor change in the compensation contract. In their study, most of the adopting firms had pre-adoption contracts for bonus and stock options. In another recent study, Kumar and Sopariwala (1992) found positive abnormal returns for a two-day window around the proxy statement announcement date. Their sample consisted of large firms, and they contend there is a difference in their results and those of Gaver et al. because the Gaver et al. study included smaller firms for which information is impounded more slowly.

In summary, the results of studies measuring market response to the adoption of a compensation component have been unable to completely clarify the question of how adoptions, or changes, are perceived by the markets, nor therefore how they affect firm performance.

The Relationship Between Compensation Plans and Accounting Measures

Incentives are typically not based solely on increasing shareholder wealth. Incentives can also be expressed in terms of improved firm performance. According to Holmstrom (1979), an appropriate measure of the principal's objective in an agency relationship is the measure of shareholder wealth. It is not a perfect measure of the CEO's performance however. Holmstrom argues that optimal compensation contracts should also be based on any variables that provide incremental information that can be used in evaluating the CEO's unobservable actions. Accounting measures of firm performance are an example of these types of variables.

Others (e.g., Healy, 1985; Dechow and Sloan, 1991) have argued that basing compensation on accounting measures is counterproductive as this may motivate managers to make decisions that will increase their own wealth but may not necessarily increase shareholder wealth. Kaplan and Atkinson (1989) give examples of ways in which a manager can increase reported earnings yet possibly decrease firm value. These examples include producing goods in excess of demand to absorb fixed costs in inventory; repurchasing debt or selling preferred stock at a discount; switching to straight-line depreciation or the flow through method for investment credit for financial reporting; selling off assets whose market value is in excess of book value; purchasing other companies under terms that permit use of pooling of interests method; and increasing the leverage of the firm by issuing debt and acquiring assets whose returns exceed the after-tax debt cost but are below the risk-adjusted cost of capital.

Generally accepted accounting principles significantly strengthen the argument pertaining to the ability of managers to manipulate accounting variables in order to increase their own wealth positions. For example, GAAP require investments in intangible cost, such as R&D and advertising costs, to be expensed in the period in which they are incurred. The expected future payoffs associated with these expenditures are not recognized until the period in which they are realized. Consequently, executives whose compensation is tied to earnings can boost their short-term compensation by rejecting investments to develop intangibles, even though this will reduce long-term cumulative earnings.

Empirical researchers have looked at management's ability to affect its pay by making specific decisions that directly impact accounting measures used in evaluation. Healy (1985) looked at the association between managers' accrual and other accounting procedure decisions and their income reporting incentives. He found that bonus schemes create incentives for managers to select accounting procedures and accruals to maximize the value of their bonus awards. The results also suggest that there is a high incidence of voluntary changes in accounting procedures during years following the adoption or modification of a bonus plan.

Dechow and Sloan (1991) examined whether earnings based performance measures provide executives with incentives to focus on short-term performance (i.e., the horizon problem). Specifically, they looked at the change in R&D expenses for CEOs in their final year of office. They found that such CEOs spend less on R&D, implying that firms' contracting procedures do not completely eliminate opportunistic managerial behavior. Despite the apparent ability of managers to increase their wealth at the expense of the firm's value, a large percentage of compensation plans includes incentives that are based on accounting measures. In 1995, for

example, 61% of the 350 largest U. S. companies had long-term performance plans based on accounting measures (Mercer et al. 1996).

Because of the controversy surrounding management's ability to manipulate accounting variables, it is not obvious that compensation packages containing accounting-based measurements are achieving the desired goal of improved firm performance. The conflicting results regarding shareholder response to the adoption of such plans do not add clarification. Shareholders may be judging these plans as capable of meeting desired goals, but they may be misconstruing the ability of these type of plans to work.

Performance Plans and Restricted Stock

Compensation packages typically contain both short-term and long-term components. Short-term plans are usually based on some measure of annual earnings. Long-term plans can be based on either the performance of the firm's stock, or on accounting measures. In 1991, long-term incentives (including stock options, restricted stock, and performance shares) made up 36% of executive compensation (Pavlik et al. 1993). Performance plans are one type of long-term incentive based on accounting measures. The length of the award period is usually from three to six years with the majority (59%) of the top Fortune 200 companies using a three-year cycle (Kanter, 1991).² It is not uncommon for a new plan to be established every couple of years. These new plans have a separate set of goals and different payoff dates. The purpose of long-term plans is to lengthen the decision horizon of the executive. Overlapping plans may extend the decision making horizon beyond the award period associated with any one plan. Such plans should provide managers with the incentives to select investment opportunities and other activities that increase long-term performance measures and the value of the firm.

Performance plans typically take the form of performance shares or performance units. With performance shares, a fixed amount per share is determined at the beginning of the period, to be paid at the end of the award period. The per-share measure is based on an accounting measure such as EPS growth. With performance units, a fixed amount per unit is also established at the beginning of the measurement period. The units are based on a non-market share value such as book value per share. The biggest difference between performance plans and other long-term plans is that the goals or targets of performance plans are explicitly stated in terms of growth in accounting-based measures over the award period and not in terms of stock growth.

Restricted stock is one of the newest compensation methods.³ Restricted stock is the grant of stock, or stock units, for the attainment of a certain vesting period. Typically the goal is to provide an incentive for the executive to stay with the firm. Sometimes a shorter restriction period is attached with the attainment of certain performance conditions. In either case, it seems appropriate that the executive would want to make decisions that would increase the value of the firm and thus the value of the restricted stock compensation.

² 32% of the companies used four year cycles and the remaining 9% used five-year and six-year cycles.

³ It first was used in 1974 and has gained in popularity and use over the years.

Recent Developments Affecting Compensation

Over the past several years there have been developments that affect how companies create, view, and manage contracts. Beginning in 1994, tax laws have denied companies a tax deduction for non-performance related executive compensation over \$1 million. For tax purposes, stock options are considered performance related as long as they are not issued “in the money”, i.e., with an exercise price less than the fair market value of the underlying stock on the date of the grant. Therefore, discounted options and non-performance based restricted stock also fall under this \$1 million cap.

A recent decision by the Financial Accounting Standards Board may also impact compensation contract composition. Initially, the FASB proposed requiring that non-performance based stock options granted to employees be reported as compensation expense on the income statement. In a thorough review of the impact of the FASB Exposure Draft related to accounting for stock options, Coopers & Lybrand comment on the number of companies that would be affected by the proposed change in accounting. The review states that in a 1992 survey conducted by Coopers & Lybrand 70% of companies with annual revenues over \$1 billion and 41% of those with annual revenues under \$100 million provide long-term stock-based incentives to executives. Of all companies surveyed, approximately 74% of stock based compensation consists of non-performance based stock. Due to pressures from government sources and industries, as well as extreme difficulty determining the best approaches to measuring options, FASB opted to require only footnote disclosure at the current time.(Lowenstein, 1995)

A third concern in this area is that of public image. Shareholders, employees, and the general public have been vocal over the income paid to some corporate heads. According to compensation consultants Pearl Meyer & Partners Inc., in 1995 the heads of 30 major corporations “received compensation that was 212 times higher than the pay of the average American employee.” This is almost a fivefold increase since 1965.⁴ Shareholder activists have had a definite effect on some compensation schemes. For example, Meredith Corp.’s 1993 proxy called for a year of change, marked by the introduction of “a redesigned program increasing the tie of executive compensation to long term financial performance” (Mercer, 1994). Some executives agree with activists, Stanley Gault, chairman of Goodyear, and member of two other corporate boards. Regarding the relationship between pay and performance, Mr. Gault states, “In too many cases, top management has been rewarded when the company didn’t do well.” (Mercer, et al. 1996)

New tax laws, additional disclosures, and public image may cause many companies to consider switching to other forms of compensation and in particular to including more performance based plans in their compensation packages. Studies (Larker, 1983; Brickley et al. 1985; Tehranian and Waegelein, 1985; and Kumar and Sopariwala, 1992) have shown that, overall, shareholders perceive the adoption of a performance plan as positive.⁵ Shareholder perceptions may not be accurate, however, because studies have failed to ascertain if long-term

⁴ As another point, CEOs’ salaries and bonuses grew 10.4% in 1995 while U.S. wages and benefits climbed 2.9% during that same period.

⁵ There have been no studies tying the adoption of restricted stock to increased shareholder wealth.

incentives such as performance plans or restricted stock improve overall firm performance and thus shareholder wealth. It is possible that, over time, increased shareholder wealth is due to overall improvements in the market or general industry trends and not necessarily to management decisions. This may be particularly true of the largest component of many compensation packages - non-performance based stock options. As pointed out by John Byrne (1993) in a Business Week article on executive pay, "Inside every boardroom, the key issue is how best to link pay to performance." He goes on to say that the typical approach, stock options, may be "rewarding CEOs whose stock rises along with the tide." Thus, prior to firms implementing new performance-based plans in lieu of stock options, the value of those plans to the firm should be assessed. Unfortunately, previous research has not provided substantial guidance in this area.

Problems With Linking Compensation To Performance

There may be several explanations for why prior compensation research has not answered the question concerning the association between compensation and firm performance. The most significant reason is that the question has not been addressed directly. Attempts to date have primarily examined one feature of one accounting measure. Studies have failed to tie various measures of performance to increased compensation. The outcome of one measure is not sufficient grounds on which to reach a definitive answer concerning the association between awarding compensation and improving firm performance. Another problem has been that the one accounting measure that has been examined has been predicted to be equally important for all firms in the sample, regardless of industry. All firms are not the same and thus experience different production environments (Ely, 1991). Results may improve when performance measures are tailored for a specific industry. In performing this type of analysis it is important to take into consideration the strength of the industry within the economy; whether the industry is in a growth, stable, or declining phase; whether the industry moves in the same direction as the general economy (cyclical) or is it contra-cyclical, moving against the general direction of the economy; whether industry competition is regional, national or international; and whether industry success is based on price, quality, image, distribution, or some other factor. Comparing the same accounting measure across industries is unlikely to capture these differences.

In a comprehensive evaluation of accounting research on compensation, Pavlik et al. (1993) state "in examining and reporting on the associations between compensation and performance, most studies implicitly assume that incentives are necessary to motivate superior performance." Pavlik et al. also point out that few studies have directly tested the proposition that future performance should improve with stronger links between pay and performance. Studies such as Abowd (1990), Crystal (1993), Gerhart and Milkovich (1990), Kahn and Sherer (1990) and Pearce et al. (1985), found only weak and inconsistent evidence that rewarding managers based on current performance improves future performance. These studies either used general performance measures such as those found in compensation contracts or they relied on subjective performance measures.⁶

⁶ This study differs by using industry specific performance measures that are not typically found in compensation contracts but are considered indicative of improved firm performance.

According to the Pavlik et al. (1993) analysis, agency theory suggests that compensation should be contingent on more than one performance measure and further predicts that the relative importance of alternative performance measures should be a function of their precision and sensitivity to the manager's performance. Pavlik et al. point out that stock returns are affected by many economic factors and thus may be too noisy and insensitive to link to a manager's actions. Accounting measures, on the other hand, can be created and tailored to capture different aspects of a firm's circumstances and appear to capture both short-term and long-term aspects of performance not adequately captured by either general or relative measures of stock return. Pavlik et al. suggest that a taxonomy of accounting performance measures should be developed. They write that explaining the circumstances under which the measures can be usefully incorporated into executive compensation contracts would contribute significantly to compensation research. In addition, examining long-term incentive plans may provide insights into how and when to incorporate accounting measures in long-term contracts, as well as explain which factors influence the relative usefulness of accounting and stock market information in longer-term contracts.

This study attempts to rectify some of the deficiencies in compensation research by exploring the ways accounting numbers can be tailored to differing circumstances in order to provide performance measures that better capture managerial performance. This is accomplished by working within specific industries.

If compensation plans work as intended and reduce the agency problem, after a company adopts a long-term compensation plan there should be measurable improvements in the measures that are indicative of long-term performance for that firm. Adhering to this reasoning, a general question arises: does the adoption of a performance plan or a restricted stock plan improve a firm's performance? This general question is further developed into testable hypotheses in the next chapter.