A Review of Firms' Voluntary Disclosure Decisions With a Focus on Cheap-Talk Models

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Abstract: This paper reviews managers' decisions to voluntarily disclose information. The unraveling result is described, which suggests that managers would disclose all information under certain conditions. In particular, the paper focuses on managers' choice of non-verifiable voluntary disclosure in the light of cheap-talk models. Newman and Sansing (1993), Gigler (1994) and Stocken (2000), among others, have attempted to apply Crawford and Sobel's (1982) concept of cheap-talk models in disclosure settings. Assuming conditions when there are no apparent costs of misreporting, these studies examined the extent to which managers disclose truthfully and precisely, their incentives for doing so, and the resulting affects on disclosure quality, credibility and managerial reputation.

Keywords: voluntary disclosure, non-verifiable disclosure, disclosure principle, cheap-talk models

1. Introduction

Accounting information assists the capital market by enabling evaluation of a firm's investment opportunities and by monitoring the manager's use of debt and equity capital (Beyer et al., 2010). Due to separation of ownership and control, managers typically have more information and decision making rights on a firm's economic conditions than shareholders and other external stakeholders. The resulting information asymmetry calls for the need for manager to disclose a firm's financial performance to outsiders. Disclosure is the process of managers revealing or reporting a firm's economic and financial information to investors, competitors, customers, government and others (Scott, 2011). Such disclosures can either be mandatory if the time of issuance, content, etc. is enforced by regulation, or voluntary, when managers discretionarily choose to report their firm's performance or financial position to other relevant stakeholders (Beyer et al., 2010).

The degree to which a manager voluntarily discloses information can vary. Since a manager's incentives (i.e. typically to maximize compensation and reputation) differs from that of investors (i.e. typically to maximize share value), they do not always have an incentive to disclose truthfully. Full disclosure is a situation in which the manager reveals his information precisely and truthfully, or when the underlying private information can be inferred from the nature of the manager's disclosure (Trueman, 1994). Partial disclosure occurs when the manager signals a noisy message (Kasznik and Lev, 1995). Signaling occurs when a firm, truthfully or otherwise, attempts to reveal its intended actions. Noise is the influence of random factors on information disclosed, and is typically a situation when decision useful information is mixed with hype, inaccurate data or erroneous ideas (Black, 1986). Biased disclosure occurs when the manager intentionally manipulates the information in the message under conditions that do not allow precise reversal of the bias (Trueman, 1994; Hughes and Sanker, 2006).

This paper attempts to explain a firm's voluntary disclosure decisions. It begins by discussing the general attributes of voluntary disclosure and then critically reviews the assumptions of the disclosure principle, which illustrates when, why and how managers may choose to disclose voluntarily. Subsequently the paper analyzes a manager's disclosure decisions in the light of cheap-talk models. Cheap-talk is costless non-verifiable disclosure (Beyer et al., 2010). Different cheap-talk models (e.g. Newman and Sansing, 1993; Gigler, 1994; Stocken, 2000) are reviewed to explain

the manager's disclosure choices at times of conflicting interest between different stakeholders, the resulting credibility and reputational effects on voluntary disclosure, and the quality of such disclosures under litigation risks.

2. Academic Context

This section reviews existent theory on voluntary disclosure models, the conditions of the disclosure principle, and cheap-talk models.

2.1. Voluntary Disclosure Models

Models of corporate voluntary disclosure attempt to identify the management's optimal decision to report information when the management possesses private information about the firm's performance or profitability and when there is no apparent regulation enforcing a disclosure (Grossman and Hart, 1980). Voluntary disclosure models usually have two common characteristics. First, how the investor (or any other party receiving the information) will interpret a disclosure or non-disclosure plays a key role in the management's decision to report voluntarily. Rational investors perceive that managers disclose voluntarily only if it is beneficial to them. The perception and knowledge of investors on the management's incentives and the firm's financial position influences their interpretation of the presence or absence of voluntary disclosures (Beyer et al., 2010). Many voluntary disclosure settings assume that investors anticipate the context in which the manager decides whether or not to disclose. However in reality the investors may have limited or no knowledge of the process in which the manager obtains information, the manager's incentives and utility, or the firm's financial or operating environment (Beyer et al., 2010). Second, corporations are characterized by separation of ownership and management. It is the management and not the 'firm' that makes voluntary disclosure decisions. Hence disclosure decisions are affected by the management's utility or disutility resulting from costs and benefits of making the disclosure, which in turn depends on factors such as manager's compensation package or reputation in the managerial labor market (Beyer et al., 2010). Most models assume managers want to maximize the share price (i.e. the interest of shareholders and managers are aligned. However, managers may sometimes want to reduce share price, e.g. to reduce the exercise price of their stock option (Yermack, 1997) or to reduce political costs (Watts and Zimmerman, 1986). The disclosure principle rationalizes the managers' decisions to report voluntarily.

2.2. The Disclosure Principle

The disclosure principle identifies conditions under which managers voluntarily disclose all information, good or bad. Broadly speaking, the disclosure principle asserts that if managers possess information, and if rational investors know that managers have information, they would believe that if the information was favorable, then the managers would release it (Grossman, 1981). Hence if the managers do not release information, investors assume the worst and revise their beliefs about firm performance downwards, reducing the share price. A fall in share price would harm managers through lower remuneration and reputation, and hence lower value on the managerial labor market (Scott, 2011). As a result, firm managers have motivations to disclose their information in order to distinguish themselves from managers with less favorable information. This would lead to the unraveling of any information that is withheld, except the worst possible outcome, in which case disclosing the information would not make a difference, and hence managers would rather save the disclosure costs by not revealing it (Grossman and Hart, 1980; Grossman, 1981; Milgrom, 1981; Milgrom and Roberts, 1986). The different assumptions of this unraveling result of the disclosure principle are discussed below.

The first assumption of the unraveling result is that disclosures are costless (Walker, 1997; Beyer et al., 2010). If the disclosure is costly, managers should disclose it only if they are sufficiently favorable (i.e. they disclose that asset values are high and/or of low risk); otherwise the firm value will not be maximized (Jovanovic, 1982; Verrecchia, 1983). If disclosures are not made,

investors would assume that asset values are low and/or of high risk (Jorgensen and Kirschenheiter, 2003). However, this will not prompt managers to disclose sufficiently unfavorable news as they can obtain greater payoff by avoiding disclosure costs (e.g costs of printing and distributing information and arranging a conference call). Thus for a given disclosure cost there is a threshold level of disclosure, and managers will disclose information only when it exceeds the threshold. Investors cannot penalize the firm for not disclosing as they cannot tell if non-disclosure is a result of bad news or good news that is unable to exceed the threshold. Hence the disclosure principle fails (Verrecchia, 1983). Lower disclosure costs have lower threshold for information disclosure, and when disclosure costs are zero, the unraveling result holds (Scott, 2011).

The second assumption of the unraveling result is that investors know firms have information (Walker, 1997). If investors do not know whether firms actually have information, managers with unfavorable information would not make a disclosure as investors cannot distinguish them from firms that possess no information (Dye, 1985). Pae (2005) considers a situation where firms have two non-proprietary information forecasts, e.g. one of earnings and one of cash flow.[1] If the firm has developed both forecasts, a manager attempting to maximize firm value should disclose them only if they exceed disclosure thresholds. If one forecast is below the threshold and the other is above, the firm would only reveal the forecast that exceeds the threshold. If both forecasts are below the threshold, none will be revealed. If the firm develops only one forecast, it will only disclose it if the forecast exceeds the disclosure threshold. If a firm discloses nothing, investors cannot tell if the firm had developed both forecasts and they are below the threshold, developed one forecast and it is below the threshold, or if it had developed no forecasts at all (Pae, 2005; Scott, 2011). Hence the disclosure principle does not work as it had assumed that investors know the firm has information.

The third assumption of the unraveling result is that all investors interpret and react to the firm's disclosure in the same manner and these are known to the managers (Walker, 1997). Managers would disclose information not because they anticipate it as favorable but because the investors interpret it as favorable (Beyer et al., 2010). If investors are not uniform in their response to firm disclosures, then managers' uncertainty about investors' response is sufficient to violate the disclosure principle (Suijs, 2007). Also investors, though rational, may vary in terms of their level of sophistication in processing disclosed information, causing firms to be uncertain about how investors will react (Dye, 1998). With regard to this, Fishman and Hagerty (2003) assert that sophisticated investors can sufficiently process disclosed information where as unsophisticated investors, are unable to determine the impact of a disclosure on firm value. If the market is comprised largely of unsophisticated investors who are suspicious that only low value firms would make a disclosure, then firms would not disclose information.

The fourth assumption of the unraveling result is that managers want to maximize share price of the firm (Walker, 1997). If mangers have inside information about firm value, if the market knows that managers possess information, and it assumes that most managers want to maximize firm value, then a manager attempting to maximize firm value will disclose the information, unless it is extremely unfavorable (Scott, 2011). However, mangers may also want to minimize firm value, particularly before stock options are awarded, or when the firm is faced with high political costs (Aboody and Kasznik, 2000). Since the market assumes that most managers will want to maximize firm value, managers wishing to minimize firm value will not disclose information. This non-disclosure is interpreted by the market as the manager possessing bad news, and would reduce the firm value (Beyer et al., 2010). Thus the disclosure principle fails, as the value-minimizing managers will choose not to disclose.

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[1] Non-proprietary information is that information, if released, would not directly affect a firm's cash flows in the future, e.g. financial statement information, earnings forecast, audit, etc. In contrast, proprietary information are those, if released, would directly affect future firm cash flows, e.g. valuable patents, plans for strategic initiatives, takeover bids, mergers, etc (Dye, 1985).

The fifth assumption of the unraveling result is that individuals cannot commit ex-ante to a specific disclosure policy (Walker, 1997). In a market where all individuals are subject to the risk of incurring loss, individuals will demand insurance for to share risk. Prior to opening the insurance, if all individuals learn privately their probabilities of incurring a loss, those with low loss incurring probabilities will disclose it to lower the insurance premium. Insurers will then correctly anticipate that non-disclosures have a high risk of loss. Hence insurance premium will decrease for low-risk individuals and increase for high risk individuals, reducing risk sharing opportunities (Dye, 1985). Before receiving information, if everybody could pre-commit to a disclosure policy credibly, no disclosure would take place (as it would not make any difference) and insurance companies would charge everyone the same premium, resulting in risk sharing (Hirshleifer, 1971; Marshall, 1974).

The sixth assumption of the unraveling result is that firms can only make truthful disclosures (Walker, 1997). However, managers may not always need to make truthful disclosures. When information is communicated through informal communication channels in the capital markets, in the absence of audits, firms are not compelled to disclose truthfully. In such situations, managers will report whatever information makes investors value the firm closest to the managers' objectives (Fischer and Stocken, 2001). The extent to which investors can infer from such disclosures and the resulting strategies firm managers pursue often depends on whether the misrepresentation is costly or not (Beyer et al., 2010). Costly falsification models assume misreporting is costly, although managers are not bound to disclose truthfully. Usually these models assume the greater the extent of distortion managers make in their disclosure, the larger is the cost (e.g. Korn, 2004). In contrast, cheap-talk models assume that the manager does not have to carry any direct cost for disclosing inaccurately (e.g. Crawford and Sobel, 1982). The remaining of this paper describes cheap-talk models, and discusses non-verifiable voluntary disclosures from the context of cheap-talk models.

2.3. Cheap-talk Models

Cheap-talk can be defined as non-binding, unverifiable claims for which the manager bears no subsequent costs—it is disclosure by managers when there are no direct costs of misreporting (Scott, 2011). In such situations firm managers are inclined to report in such a manner that triggers investors to value the firm closest to the manger's objectives (Fischer and Stocken, 2001). Consequently, cheap-talk is non-informative as they do not reflect the information possessed by managers (Farrell, 1995). More specifically, in game theory context, Farrell (1993) defined a cheap-talk game as "a signaling game in which the players' payoffs do not depend on the sender's costless message but merely on the receiver's action it induces and the sender's private information" (Stocken, 2000, p.360). Most cheap-talk models uncover interdependencies among various parties in the corporate information environment (e.g. Crawford and Sobel, 1982; Gigler, 1994; Stocken, 2000). For instance, how much information firms can convey to shareholders depends on how such information will be conveyed by competitors, and their resulting reaction to disclosure. The extent of information conveyed to investors also depends on the interactions between these parties in future periods. This induces managers to misreport. Cheap-talk models also show that managers' private information being proprietary can encourage rather than discourage voluntary disclosure (Gigler, 1994).

Two primary purposes are served by cheap-talk models—communicating information and coordinating action (Farrell, 1995). The benefits of using cheap-talk model should however not be taken for granted. Cheap-talk models can both enhance and hinder communication. The seminal work on cheap-talk models is Crawford and Sobel (1982) who described a situation in which one party provides information (i.e. the sender) and another party (i.e. the receiver) chooses an action on the basis of that information, to his own advantage, if not also to the sender's advantage. It is plausible to assume that communication is not credible as the 'talk' is cheap. Nevertheless Crawford and Sobel (1982) showed that, if there is enough common interest, both parties want the receiver to know what the sender sends. For example, a firm making an advertisement about its opening and closing hours presumably wants the customers to come when the store is open; this is

also what the customers want. Hence there is little reason for the store to lie; the common interest causes the firm to disclose truthfully (Farrell, 1995). Nevertheless, Farrell (1995) also pointed out that cheap-talk may be non-credible, e.g. in the case when a firm makes a disclosure about demand shifts, which the competitor has little reason to believe. Crawford and Sobel (1982) assert that when there is not complete common interest, cheap-talk may be required to enhance credibility. For example, cheap-talk threats of a veto can affect US Congress bills (Matthews, 1989). Henceforth, cheap-talks can also assist various parties in coordinating actions, provided that different parties' interests are sufficiently aligned (Farrell, 1995). For instance, the advertisement on a store's opening and closing hours will assist the customers in visiting the store on working hours only, minimizing any potential disutility arising from the confusion about when the store will be open. However Farrell (1995) cautioned that when different parties' interests are not well aligned, cheap-talk may not coordinate actions.

3. Explaining Managers' Disclosure Choices with Cheap-talk Models

Cheap-talk models have been used to examine managers' disclosure decisions. Among others, Newman and Sansing (1993), Gigler (1994) and Stocken (2000) examined managers' disclosure choices in a setting of multiple stakeholders with conflicting interests, and the resulting impact on issues such as the reporting quality, disclosure credibility and reputational effects. These papers examined how conflicting user objectives affects the information content of the disclosure by assuming that the firm manager can choose not to reveal information truthfully, as the costs of falsifying information is endogenous. While there are no direct costs of disclosure in cheap-talk models, there could be indirect costs (Gigler, 1994). For instance, managers want to convince shareholders that the firm value is high, to increase their remuneration and reputation, but at the same time convince potential entrants that the firm is unprofitable—to deter entry. Since managers can only make public disclosures observable by both investors and potential entrants at the same time, they would not want to report either too optimistically, or too pessimistically. Hence their disclosure is informative (Fischer and Stocken, 2001).

Newman and Sansing (1993) developed a two-period cheap-talk model for three players with conflicting interests—an incumbent public firm, a potential entrant to the industry, and a representative shareholder. In the model, the incumbent firm has some private information that would influence future dividends. Shareholders would like to use the information to make optimal investment/consumption decisions and the potential entrant would want to use it to make better entry decisions. The game has two stages. First, the incumbent firm observes a state realization precisely and sends a costless message. Upon receipt of the message, the shareholder decides whether to finance consumption and the potential entrant decides whether to enter the market. Second, the state realization and entrant's decision jointly determines terminal dividend. The model assumed that shareholders are concerned about the true value of the shares to optimize their consumption. Proprietary costs were assumed to be constant and they occur if the potential entrant chooses to enter the firm. No binding commitments were allowed, players' utility functions and sequence of the games were assumed to be common knowledge and payoffs were non-transferable. Entry by competitor reduces terminal dividend, so the incumbent has incentive to deter entry. The stockholder's utility depends on the multi-period pattern of total consumption.

If the stockholder is concerned with two-period consumption, then the firm's message would not be credible as it has incentive to deter entry. Hence Newman and Sansing (1993) assumed that stockholders would engage in consumption smoothing by desiring to consume half the terminal dividend at the end of each period, making the incumbent's disclosure relevant to the shareholder. The model also assumed that the firm manager will to act in the shareholders' best interests, and that shareholders cannot structure the manager's compensation contract to induce the manager to commit a particular optimal disclosure policy ex-ante. If it was not for the potential entrant, the interests of the shareholders would be best served if the firm manager publicly discloses the firm value, so that shareholders could optimally plan their investments and consumptions.

However, if the incumbent firm fully discloses the share value, it may assist in entry. So the incumbent has to analyze the costs of the entrant if it decides to make an entry and the resulting loss of profits suffered by the incumbent firm to determine how it should report firm value.

Newman and Sansing (1993) assert that in a highly competitive industry, the entrant's cost of entry is very low, so it will enter, regardless of the information disclosed by the incumbent. Hence the firm has no incentive to lie. Similarly when the cost of entry is greater than any possible profits the potential entrant will never enter and hence the incumbent firm will disclose truthfully. If the potential loss for the incumbent firm following entry is huge, then firm managers would rather report an interval within which the firm value could lie, rather than reporting a precise number (Newman and Sansing, 1993; Gigler, 1994). This increases disclosure credibility; a precise number would be less credible as both shareholders and potential entrant knows that the incumbent firm has incentive to deter entry. In markets with a high value of non-entry, firms with very high or very low entry costs make more informative disclosures than those with moderate entry costs. As the value of non-entry decreases, disclosures that deter entry become more precise (Newman and Sansing, 1993).

4. Credibility of Voluntary Disclosure in Cheap-talk Settings

While it is plausible to assume that in a voluntary disclosure a manager may have the incentive to overstate profitability, in the absence of audit, such disclosures are not verifiable and hence is not credible (Fischer and Stocken, 2001). This reduced disclosure credibility reduces the incentive for a firm to make a voluntary disclosure, ceteris paribus.

Gigler (1994) demonstrated that the existence of proprietary costs encourages voluntary disclosures by enhancing credibility to these unaudited disclosures. Gigler (1994) modeled a firm's decision to disclose private information about its product's demand to a competitor and the capital market in the absence of independent verification. His model extends Newman and Sansing (1993) in two ways. First, it models the product market as a duopoly with asymmetric information, and that proprietary cost is a function of the firm's private information content. The firm would like to persuade the market the demand for the product is high, to increase the firm's share price. At the same time, it would want to convince the competitor that demand is low, to reduce the competitor's output and hence increase the informed firm's profits. Second, shareholders are allowed to sell their shares and hence are less concerned about the true value of the shares—they want the firm managers to overstate the firm's value to the capital market. Gigler (1994) suggests that since higher firm types enjoy greater profits then lower firm types, their shareholders are more willing to sacrifice product market share to retain equity in the firm then lower firm types. A key finding of the paper is that messages communicated privately to either the competitor or the capital market is not credible (Grinyer et al., 2004). However, the firm can forgo its benefits of overstating the demand to the capital market in exchange of the benefits of understating the demand to the competitors to make its disclosures more informative and credible to both parties (Gigler, 1994), resulting in what Farrell and Gibbons (1989) termed as 'mutual discipline'. This is because, in a single period model where the firm's interests coincides with the its information receivers, the firm's incentive to overstate the demand for its capital market is aligned with its incentive of understating its demand to the competitor, suggesting that a firm's best strategy is to completely disclose its demand.

Stocken (2000) examined manager's credibility of voluntary disclosure in the context of repeated cheap-talk game. In each stage of Stocken's (2000) model, a manager observes a noisy signal about the returns from an investment project. A noisy signal is information or implication of subsequent state realization in which the effects of random influences can be present (Black, 1986). Upon observing the noisy signal, the manager sends a costless message to the investor who has to decide whether to finance the project. Subsequently, if the project is financed, the firm provides a noisy signal about the project's return and the manager's private information in mandatory financial reports. The investor estimates the contribution of the project to the value of the firm. The greater

the firm value, the greater the payoff if the investor. The greater the investor determines the value of the project's contribution to be, the greater is the manager's payoff. In a single-stage game the investor determines whether to finance the project based on its expected value; there are no additional interactions between the firm managers and investors. In repeated game, the investor assesses the truthfulness of manager's voluntarily disclosed private information in light of the mandatory financial report. If it is appears that the manager has an incentive to disclose truthfully, the investor accepts the disclosure. Otherwise both parties reenter into the review phase or start a punish phase by following the single stage game strategies. For projects where an average risk-averse but opportunistic manager is faced with the prospect of large gains, Stocken (2000) concludes that the manager will always disclose truthfully, provided that he faces a sufficiently high discount factor (uncertainty in the payoff of the opportunity or of being terminated from employment), and the accounting system generating the mandatory financial report is sufficiently 'information' and 'measurement' useful in determining the manager's disclosure credibility,[2] and the review phase is sufficiently long to prevent the manager from acting opportunistically in the short-term horizon. Further, Stocken (2000) asserts that if the manger's gains from falsifying his private information are trivial, such conditions may not even be needed to trigger a truthful voluntary disclosure. Such truthful disclosures will ensure efficient capital allocation by the investor.

5. Reputational Effects of Voluntary Disclosure

In most models that examine the manager's reputational effects, the information sender's type is unknown to the receiver (Stocken, 2000). In a repeated cheap-talk game, Sobel (1985) analyzed the impact of manager's reputation on voluntary strategic disclosure. In the model, the sender's (e.g. manager) type is unknown to the receiver (e.g. investor). If the manager is a non-strategic type he always discloses his private information truthfully. If the manager is a strategic type he may misreport to maximize his expected payoff. Sobel's (1985) essential assumption is that the manager is obtains the private information accurately, which can be verified by the investor. Thus if the investor observes a different realization from the message issued by the manager, the latter's reputation is lost and no further communication takes place. Hence it is uncertain if efficient payoffs can be determined in repeated cheap-talk models; typically partial disclosure occurs in single-period cheap-talk models (Sobel, 1985). Similar conclusions were drawn by Frisell and Lagerlof (2007) who used the setting of a policymaker (receiver) consulting a lobbyist (sender). Kim (1996) devised a repeated cheap-talk model where the manager's type can change randomly in each period. The investor can verify the manger's type at some cost to both players (e.g. waiting for audited reports or observing state realization). Kim (1996) concluded that in a single period game no communication occurs but repeated cheap-talk games allow for interaction, due to reputational concerns of the manager, as possible current gains from opportunistic behavior can be offset by future losses in payoff from reputational damages.

Benabou and Laroque (1992) extended Sobel's (1985) model by assuming that the manager's disclosure is non-verifiable. In such a case, a manager can repeatedly manipulate his information without revealing whether he is a strategic or non-strategic type (Stocken, 2000). The manager's credibility is not hampered as the investor cannot detect the truthfulness of his reporting from the state realization. Further, an insider who is believed by the market can use his information asymmetry over investors for large personal gains in the short run (Benabou and Laroque, 1992). For instance, a manager who expects high returns for his firm's stock can engage in "silent" insider

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[2] A financial statement is information useful if it contains adequate and useful information based upon which investors can individually predict future firm performance. A financial statement is measurement useful if accountants undertake the responsibility to reliably incorporate current values in the financial statements proper, to better assist investors in predicting firm value and performance (Scott, 2011).

trading and buy large quantities of the stock.[3] But in the short term, to the extent that his voluntary disclosures are perceived by the market to be true, the manager can further maximize his earnings by forecasting a low return on the stock and then buying it at a depressed price. Of course, if the manager's information is perfect, its truthfulness can be verified ex-post, and any evidence of falsifying information will eventually hamper his reputation. Hence the manager has incentive to provide imperfect or partial information.

6. Quality of Voluntary Disclosure under Litigation Risk

Voluntary disclosures are generally infrequent and imprecise (Skinner, 1994). Hughes and Sanker (2006) devised a cheap-talk model to examine the quality of voluntary disclosure under litigation risk. The threat of litigations from shareholders can prevent managers from fully disclosing their expectations about future firm performance and share price—there is evidence that shareholder litigation is becoming increasingly widespread (Hughes and Sanker, 2006).[4] Managers vary in their degrees of aversion to litigation risk, a factor that determines the extent to which voluntary disclosures will be imprecise. As investors share the litigation damages with their attorneys, they are not completely insured against market losses. Hence the interaction between the manager's degree to litigation risk aversion and the investor's level of insurance coverage determines the quality of disclosure (Hughes and Sanker, 2006). If the price preferences of the manager and investors are aligned, full disclosure occurs. If the manager's price preferences are not consistent with the investors, partial disclosure occurs (Hughes and Sanker, 2006). For instance, if investors are highly insured they would prefer a high price but at the same time if the manager is highly litigation risk averse then the manager may prefer a low price. Given that the manager is aware of the investor's price preferences, the manager would provide a noisy signal, such as a range of prices rather than a point estimates. Such a disclosure (providing an interval) is cheap-talk, as the manager's signal is non-verifiable and the preferences of managers are different from that of investors (Crawford and Sobel, 1982; Newman and Sansing, 1993). Hughes and Sanker (2006) further asserted that when investors do not know manager's preferences, biased disclosure can occur.

7. Concluding Remarks

In recent years, disclosure research has substantially increased our understanding of the economic consequences of disclosure regulation and financial reporting decisions (Beyer et al., 2010). The presence of regulations or the threat of punishment alone cannot deter managers from misreporting. When there are no obvious costs of falsifying information, managers may attempt to maximize their payoffs and minimize their risks by misreporting, in order to induce the investors to value the firm closest to the managers' incentives. Managers may report a range of values rather than a precise number when they attempt to satisfy multiple objectives with one disclosure, such as for signaling good news to shareholders to increase firm value while simultaneously casting bad news to potential entrants to deter entry. To make disclosures credible, managers have to trade-off exaggerating good news to investors with understating bad news to potential entrants. The extent to which managers would disclose information often depends on the combination of the manager's aversion to litigation with the extent to which the investor is insured for the managerial misreporting. Reviewing disclosure policies in cheap-talk settings has helped to summarize these

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[3] Benabou and Laroque (1992) described 'silent' insider trading as one where "the insider does not only trade in anticipation of future price movements, but also distorts public information and prices (by) … withholding accurate information or even using real resources to falsify evidence" (p. 924).
[4] Such a phenomenon persists despite litigations such as Private Securities Reformed Act of 1995 by the SEC that attempted to provide "safe-harbor" to managers by restricting their legal liability for any forward-looking statements about the firm's prospects to situations where the forecasts were not made in good faith (Stocken, 2000). Korn (2004) showed that regulation alone cannot prevent a manager from misreporting.

various aspects of opportunistic managerial behavior, and the resulting investment and consumption choices made by investors and other stakeholders.

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