Chapter 1 Introduction

This study explores the relationships between information asymmetry, firm performance, capital market attributes/consequences, disclosure in general and voluntary disclosure of financial targets in particular.

A financial target is a commitment to achieving a specific financial goal within a certain time frame. Financial target-disclosing firms issue one or more specific goals or targets, such as (growth in) earnings, sales, ebitda, costs, or a measure of profitability. There exists extensive research on management expectations, but not on management targets. The primary difference between a target and an expectation is goal commitment: the unwillingness to abandon or lower a target.\(^1\) This means that once a target is issued, it will not be revised downward.

The main theoretical basis for this thesis is the principal-agent model, where information asymmetry exists between the principal (shareholders) and the agent (management) as a result of the separation of firm ownership and control. The agency problem was suggested by Berle and Means (1932) and formalized by Jensen and Meckling (1976) and Grossman and Hart (1983).

Mandatory disclosure and voluntary disclosure are mechanisms to reduce information asymmetry. Mandatory disclosures and voluntary disclosures serve two roles: to aid decision making, and to account for stewardship (Chen, 1975; Gjesdal, 1981). Since firms are not obliged to report forward looking information such as forecasts and targets, target disclosure is part of voluntary disclosed information. Target disclosure is therefore related to the fields of disclosure quality as well as the management forecast literature.

In this chapter, I briefly present the relation of voluntary target disclosure with existing literature. I conclude this chapter with my research questions.

1.1 Mandatory disclosure

Management has more information about the firm than its shareholders and can benefit from their information advantage in two ways. First, management can use its information advantage to increase the benefits of insider trading.\(^2\) This element of the agency

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\(^1\) For a further discussion between targets and forecasts, see section 1.3.

\(^2\) Or time the release of news in order to optimize the payoff from option grants (Aboody and Kasznik, 2000). Also, when shares are issued, an adverse selection problem arises. Furthermore, an adverse selection problem
problem is known as adverse selection or hidden information. The moral hazard - hidden action - problem relates to the difficulty that shareholders have in assessing management effort, which they cannot observe directly. Akerlof (1970) has shown that in addition to costs to individuals, costs to society exist because in the presence of information asymmetry either markets perform in a sub-optimal way or they cease to exist completely.

In order to reduce information asymmetry between management and shareholders, and thus to improve the functioning of the stock market, statutory disclosure is required by GAAP. In order for statutory disclosure to be useful, the disclosed information needs to be credible. Credibility is attained to some extent by external auditor certification and SEC enforcement. Examples of research on statutory disclosures include Clarke and Murray (2000), Collins et al. (1981) and Lev and Thiagarajan (1993). Kothari (2001) reviews research on the relation between stock prices and accounting information that suggests regulated accounting information provides valuable information to investors.

In creating accounting principles, standard setters make a trade-off between the costs and benefits of proposed standards. The benefits of disclosed information consist of reduced information asymmetry, which enables investors to better value the firm and/or assess management effort. The costs consist of direct costs of preparing and releasing the information as well as indirect costs such as the change in future cash flows resulting from the actions of others who also act on the information released. For example, information that is useful for investors to value the firm may also be useful for competing firms to update their strategy. Dye (1985) defines these costs as proprietary costs.

Hence, GAAP requires limited disclosure and the historical cost principle is an important basis for valuation since financial reporting relates to a period in the past.

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3 In the case of adverse selection, costs arise as investors buy shares at inflated prices. In the case of moral hazard, the costs consist of a reduced stock price as a result of management’s shirking.

4 Stock prices are bid down by investors unable to distinguish between cherries and lemons. Furthermore, allocation of capital is suboptimal, as too little (much) capital is flowing into cherries (lemons).

5 Not all information is audited. Interim results, and the management discussion and analysis are examples of unaudited information. Stock exchanges also have listing requirements. Furthermore, legal action against management can be taken by shareholders and by the firm.

6 Dye separates proprietary from nonproprietary information. Dye argues that the release of proprietary information affects the behavior of others, affecting future cash flows of the firm, whereas the release of nonproprietary information only affects investors’ believes about future cash flows. It can be argued, however, that all information is proprietary. For example, competitors may also enter (leave) the industry, when a company issues good news (bad news) regarding the earnings forecast, thus affecting cash flows. When stock price is used as a source of information on which market participants base their decisions, all information that could affect stock price is proprietary.

7 Even though IFRS is moving towards fair value accounting.
However, investors on the other hand are primarily interested in future profitability rather than past performance:

“(M)anagement should explicitly describe its strategies, plans, and expectations.”
Knutson, 1992.\(^8\)

In addition to statutory disclosure required by GAAP, management may voluntarily disclose additional information. In general, management is expected to do so whenever the benefits of voluntary disclosure – including a reduction of information asymmetry – exceed the costs of disclosure.

1.2 Voluntary disclosure

Microeconomic theory assumes that an individual makes a decision by choosing an alternative that maximizes his utility function. When this assumption is applied to the decision of whether to disclose or not\(^9\), management is expected (not) to disclose if (non)disclosure yields the highest utility outcome. This does not necessarily imply that management only voluntarily discloses additional information that qualifies as good news. It may very well be optimal to disclose bad news timely, for example by issuing an earnings warning in order to prevent a class action lawsuit and/or to mitigate a future stock price decline. Empirical evidence indicates that management manages earnings and lowers expectations in order to avoid negative earnings surprises (Matsumoto, 2002).

Management faces uncertainty when dealing with disclosure decisions. Uncertainty exists as to how the stakeholders will react to the information released. More importantly, when issuing forward looking information such as earnings guidance, uncertainty exists as to whether or not the forecasts will be met. Survey results from Graham et al. (2005) indicate that managers feel that missing their own earnings forecast is worse than missing the analyst earnings forecast, because missing their own forecast signals that management has little control over their firm. This is also supported by the findings of Skinner (1995), who reports that when management revises an outstanding forecast, the revision is most likely to be a downward revision rather than an upward revision. Jog and McConomy (2003) report that firms missing a forecast are penalized far beyond than that which would have been predicted.

\(^8\) The recommendations in a position paper on the future of financial reporting by the Association for Investment Management and Research (AIMR).
\(^9\) Disclosure decision: whether or not to disclose, and if so, which information, the level of detail, the medium, and the point in time.
had they not issued a forecast. However, it is important to note that the disclosure decision is not a stand-alone decision. Firms determine their disclosure policy together with their operational and strategic issues, accounting policy choices, etc. (Healy and Palepu, 2001).

In practice, various disclosure decisions are related. Papers that use disclosure quality rankings report that different elements of disclosure quality are positively correlated (see for example Lang and Lundholm (1993), Botosan (1997) and Miller (2002)). In the following discussion I focus on disclosing a single item for simplicity. The disclosure decision for a specific item involves several parameters.

First, management needs to decide on the level of detail, or specificity. For example, when management issues a press release in which it publicly announces an important agreement with another party, management decides whether or not to disclose the financial details of the agreement. In the case of earnings guidance, management can indicate the sign of the expected earnings change, a lower/upper bound, a range, a point estimate or a qualitative statement.

Second, the degree to which the disclosure binds future disclosure decisions may differ. Prior to the release of any information, investors have initial beliefs about management’s disclosure policy. Investors will update these beliefs when management discloses additional information, regardless of the contents of the disclosure. For example, when management schedules a conference call for the first time, investors will expect conference calls to be scheduled for future periods as well. Indeed survey results of Graham et al. (2005) indicate that managers try to avoid setting disclosure precedents that will be difficult to maintain. Leuz and Verrecchia (2000) investigate German firms that voluntarily adopted International Accounting Standards (IAS), which require more disclosure than German GAAP. Investors expect management to continue to report under IAS and will perceive abandoning IAS as a negative signal.\(^\text{10}\)

Anecdotal evidence suggests that abolishing a policy of issuing short term earnings guidance also has adverse consequences. In a press release by Coca-Cola on December 12, 2002, Coca-Cola pointed out that their commitment to long term growth in earnings of 12% would continue, while at the same time they announced that they would stop to issue guidance for the short term:

"Establishing short-term guidance prevents a more meaningful focus on the strategic initiatives that a company is taking to build its business and succeed over the long

\(^{10}\) In 2005 IFRS has become mandatory for listed firms in the European Union.
run,” Coke’s chairman and chief executive, Douglas Daft, said in a prepared statement. "We are managing this business for the long term.”

WSJ.COM WRAP: Coca-Cola Stops Issuing Earnings Estimates.

However, skeptics interpreted the decision to abolish short term guidance as Coca-Cola withholding bad news since Coca-Cola repeatedly missed analysts’ forecasts in the prior year.\(^\text{11}\)

Third, management needs to decide on the means with which to communicate the information to investors. In the United States, after Regulation Fair Disclosure (Regulation FD), all information that is price-sensitive needs to be disclosed through channels that are publicly accessible. Thus, price-sensitive information can be included in the annual report, press release or in a conference call. Management can still organize private meetings with institutional investors under the restriction that no price sensitive information is shared.\(^\text{12}\)

Fourth, management needs to decide on timing of the disclosure. They can do so in a way that maximizes firm value or in a way that opportunistically transfers wealth from shareholders to themselves. An example of the former is the disclosure of good news prior to issuance of shares in order to limit dilution. Regarding the latter issue, results of Aboody and Kasznik (2000) show that managers delay disclosures of good news and accelerate disclosure of bad news prior to fixed stock option awards.

1.3 Analytical disclosure literature

1.3.1 The Disclosure Principle and the Revelation Principle

The two important principles that underlie the mechanics of voluntary disclosure are the Disclosure Principle and the Revelation Principle. The former predicts that management will fully disclose all information voluntarily whereas the latter suggests that every contract entered into with management can be (re)written in such a way that management truthfully reveals all information.

*The Disclosure Principle*


\(^{12}\) Even though no price sensitive information is shared, institutional fund managers highly value these meetings as they have the opportunity to meet management face to face and “seeing the white’s of their eyes” (Roberts et al., 2006, p. 281).
Milgrom (1981) models a ‘persuasion game’, where a seller – the salesman – provides information to a decision maker – the buyer – in order to influence his decision. The salesman may report or conceal information about his product, but he cannot misreport it. Milgrom shows that the equilibrium consists of a situation where the salesman always fully discloses his information. The mechanism that provides this full disclosure is that the buyer will be suspicious to the withholding of any information and will interpret this as unfavorable to the product. At a sequential equilibrium, the price that the buyer is willing to pay becomes so low, that the initial unfavorable information becomes favorable at some point. This mechanism that results in full voluntary disclosure has been named as the Disclosure Principle (Dye, 1985) in the literature.

The setting of Milgrom’s persuasion game is an adverse selection problem which can be generalized to the agency problem between shareholders and management. Hence, one could jump to the conclusion that the Disclosure Principle predicts that management always fully discloses all information, which means that no regulation requiring mandatory disclosure is needed. However, the following four conditions need to be met in order for the Disclosure Principle to hold: (1) there is no cost of disclosure, (2) the buyer/shareholder knows that the seller/management has information, (3) the seller/management cannot lie, and (4) information is interpreted homogeneously (Grossman, 1981; Grossman and Hart, 1980; Milgrom, 1981). Since these four conditions are hardly ever met, full voluntary disclosure is seldom observed in practice.

Vast literature exists that relax the various assumptions of the Disclosure Principle. Examples of this research include Verrecchia (1983) and Wagenhofer (1990), who introduce the notion of the cost of disclosure. Dye (1985) models a situation where investors are not sure about the existence and/or the quality of information held by management. Korn and Schiller (2003) examine management’s behavior when strategic misreporting is part of management's action set, and Dutta and Trueman (2002) analyze the setting where there is uncertainty about the interpretation of the disclosed information by investors. These analytical papers result in partial disclosure equilibria, which is consistent with observed non-disclosure in practice.

The Revelation Principle

According to the Revelation Principle (Myerson, 1979), any contract can be rewritten in such a way that it induces management to full disclosure, without having an effect on
management’s compensation. The following assumptions underlie the Revelation Principle: (1) communication is costless, there are no information processing costs for the principal and no contract complexity costs exist; (2) agents cannot collude\textsuperscript{13}; and most importantly (3) the principal commits upfront to a mechanism that implies that he cannot renegotiate it later (Mookherjee, 2006).

Dye (1985) points out three reasons as to why the revelation principle does not hold in the voluntary disclosure context:

“First, suppose that, subsequent to one agent’s announcement of the true value of his private information, the other agents could recontract so as to take advantage of this newly revealed information. Recognizing this possibility, each agent may fail to disclose his private information completely.” (Dye, 1985, p. 139)

The other two reasons are that in practice agents are incapable of communicating all dimensions of their private information and that it is costly to rewrite contracts or to send messages.

1.3.2 The cost of equity capital

Does a theoretical basis for a relation between voluntary disclosure and the cost of equity capital exist?\textsuperscript{14} Only recently has there been research that links the two concepts together. The most widely used model to estimate the cost of equity capital is the Capital Asset Pricing Model (CAPM). About 75% of CFOs use the CAPM as their primary method to estimate their cost of capital (Graham and Harvey, 2001). However, the drawback of the CAPM is that it involves only a single risk driver, which is known as beta.\textsuperscript{15} Informational assumptions underlie the CAPM, which include that managerial agency problems are diversified away (Welch, 2005). As a result, only market risk remains to be priced. This implies that within the CAPM, choices that affect information asymmetry, such as the choice for an investment bank or an auditor, accounting choices and voluntary disclosures, do not affect the cost of equity capital of a firm.

The validity of the CAPM has been questioned, as other risk factors also have explanatory power in explaining and predicting stock returns.\textsuperscript{16} The main additional risk

\textsuperscript{13} In the voluntary disclosure context: managers across different firms cannot collude.

\textsuperscript{14} In this context, disclosure also entails information/reporting quality/precision in this context.

\textsuperscript{15} In this model, the cost of equity capital for a firm equals the risk free rate plus beta multiplied by the market premium.

\textsuperscript{16} The title of Fama and French (1996) – ‘CAPM is Wanted, Dead or Alive’ – illustrates the issue.
factors that empirical finance research has identified are size, book-to-market and momentum (Fama and French, 1992 and 1993; Carhart, 1997). However, none of these additional risk components factor in information.

Two analytical papers explicitly model a link between information and the cost of equity capital. I will first discuss Easley and O’Hara (2004) (EOH), followed by Lambert et al. (2007) (LLV).

EOH first stress the importance of information for the functioning of markets. They quote Arthur Levitt, former chairman of the SEC:

“Quality information is the lifeblood of strong, vibrant markets. Without it, investor confidence erodes. Liquidity dries up. Fair and efficient markets simply cease to exist.”

EOH continue by posing the following question:

“If information matters for the market, why then should it not also matter for the firms that are in it?”

Hence, EOH provide an analytical model in which information asymmetry is positively related to the cost of capital. The rationale behind their model is as follows. Multiple stocks exist with two types of investors: investors with private knowledge and investors without such knowledge. Investors who possess private knowledge update their portfolio with respect to their knowledge whereas the uninformed investors end up holding too little of the winning stocks and too much of the losing stocks because they are unable to update their portfolio. Thus, in order to compensate for their disadvantage, uninformed investors require a higher rate of return.

Hence, the analytical model of EOH stages an adverse selection problem between shareholders (the uninformed) and management (the informed). Management has the ability to use their information advantage to trade with the uniformed when new shares are issued and by insider trading. The model predicts that when comparing two stocks that are identical except for the fact that they each have a different mix of public and private information, the

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17 Theoretical work relating information and liquidity includes Diamond and Verrecchia (1991).
19 Note that this risk cannot be diversified away. When an uninformed investor adds additional stocks to his portfolio, these stocks are also expected to underperform.
stock with more private information and less public information will have a higher cost of equity capital.\textsuperscript{20}

On the other hand, Lambert et al. (2007) (LLV) model the link between disclosure and the cost of capital through cash flows.\textsuperscript{21} Each firm makes an investment choice in order to maximize stock price. Stock price, in turn, relies on the quality of the disclosure. Thus, when new shares are issued, the amount that investors are willing to pay is affected by the quality of information. This way, information quality not only affects the market’s perception but also the actual future cash flows.

LLV show that that higher quality information reduces the assessed variance of a firm’s cash flow and also that information quality changes decisions, which changes the ratio of expected cash flow to nondiversifiable covariance risk and hence influences a firm’s cost of capital. The latter effect cannot be diversified away.\textsuperscript{22} Also LLV’s model results in a testable relation between disclosure and the cost of equity capital.

The main difference between the two models is the source of risk. In EOH’s model, risk exists because of the possibility that management initiates trades because of stock mispricing. This risk is reduced when management releases additional information, which reduces mispricing. In LLV’s model, risk is present because of potentially ‘bad’ investments by management. Risk in LLV is reduced with credible signals about future cash flows. Thus, EOH model adverse selection, whereas in LLV agency problems are ignored.\textsuperscript{23}

In addition to reducing adverse selection, voluntary disclosure also has the potential to reduce the moral hazard problem. Ferreira and Rezende (2007) (FR) study the disclosure of strategic information. They explain why managers disclose key strategic information by showing that managers face a trade-off when deciding whether to disclose their private information to outsiders or not. On the one hand, by disclosing their intentions, managers commit themselves to a particular strategy, which provides strong incentives for workers to

\textsuperscript{20} Hughes et al. (2007) argue that there is no support for a risk premium demanded by uniformed investors: “In fact both informed and uninformed investors exploit liquidity traders whose demands are manifested in an assumption of noisy supply” (p. 708).

\textsuperscript{21} It can be argued that a relation between risk and cash flows also exists in EOH. If the equity cost of capital for some firm is lowered, then the number of positive NPV project will increase, as the hurdle rate is reduced. Thus, a reduced cost of equity capital increases expected future investments.

\textsuperscript{22} The intuition is as follows: Risk, given cash flow expectations, can be diversified; however, in LLV, risk is correlated with cash flow expectations.

\textsuperscript{23} Management in LLV is assumed to maximize stock price. The ‘bad’ investments do not reflect a moral hazard problem, but are the result of chance.
undertake strategy-specific investments. On the other hand, this commitment may inadvertently result in inefficient use of resources. In addition, the firm’s action set will be reduced after disclosure to outsiders, since it will be difficult for management to walk away from their commitment without losing their credibility. In this setting disclosure is a credible signal that reduces information asymmetry due to moral hazard.\textsuperscript{24}

1.4 Empirical disclosure literature

Analytical disclosure literature generally assumes that the substance of the disclosure can be incorporated into the value of the firm directly. For example, in Verrecchia (1983), management signals the true market value of the firm to investors. In reality managers do not disclose the market value of the firm. Instead, disclosures can be comprised of an array of information. For example, when management issues an earnings forecast, this forecast can be for the current quarter, a next quarter, the current year, the next year, long term, etc. Management may issue one forecast or several forecasts at the same time. Each forecast can be qualitative, directional, a range or a point estimate. Instead of solely issuing guidance on earnings, management may also issue one or more additional forecasts, such as forecasts for sales, profitability measures, leverage/interest coverage ratios, operating or free cash flows, etc. Moreover, management can issue forecasts for non-financial data such as sales volume and industry specific ratios.

Furthermore, analytical papers are generally silent on the channel through which the information is communicated. However, cost-benefit properties, such as credibility and value relevance, may be correlated with the channel through which the information is communicated. Empirical work exists for the different channels: the financial statements (Leuz and Verrecchia, 2000), conference calls (Tasker, 1998; Frankel et al., 1999), investor meetings (Roberts et al., 2006) and disclosure quality studies where all disclosures are aggregated into a single measure (Botosan, 1997; Healy et al., 1999; Botosan and Plumlee, 2002; Miller, 2002).

This section summarizes empirical disclosure literature most closely related to financial target disclosure, which includes studies of disclosure quality (where aggregate

\textsuperscript{24} Adverse selection can also be reduced with the disclosure of new information, since it gets incorporated into the stock price.
measures of disclosure are investigated) and the management earnings forecast (also referred to as ‘guidance’) literature.

Empirical studies examine various capital market attributes and consequences such as stock return and (updated) beliefs about earnings and risk, whereas analytical research models generally revolve only around stock price. Thus, an explanation of the relation between the maximization of stock price and the components of stock return precedes the summary of the empirical papers.

1.4.1 Maximizing stock price and return decomposition

Assuming efficient markets, finance theory expresses the value of a stock price \( P_t \) at time \( t \) as the present value of expected future dividends, \( E_t[d_{t+}] \), with the equity cost of capital, \( r \), as the discount factor, which is assumed constant. I use \( d_{t+} \) as a shorthand for \( E_t[d_{t+}] \):

\[
P_t = \sum_{j=1}^{\infty} \frac{d_{t+j}}{(1+r)^j}
\]

However, a firm’s stock price is not only affected by a change in beliefs about future dividends, but also by a change in beliefs about the equity cost of capital. Thus, voluntary disclosure potentially could alter beliefs about future dividends as well as beliefs about the equity cost of capital. When management decides to disclose some information, \( f \), they do so by anticipating what the investors’ reaction will be. However, investors also have their prior beliefs about management’s incentives and endowments, which they take into account when reacting to the release of new information. Assuming there are no agency costs, management chooses \( f \), subject to potential restraints such as truthful disclosure, so that investors’ conjectured beliefs about future dividends and the cost of capital result in a maximum stock price.\(^{25}\)

\[
\max_f \hat{P}_t = \sum_{j=1}^{\infty} \frac{\hat{d}_{t+j}}{(1+\hat{r}_{t+j})^j}
\]

Furthermore, I define the marginal benefit of disclosing \( f \), \( V(f) \), as the difference between \( \hat{P}_t(f) \) and \( P_t \). For positive values of \( V(f) \), disclosure increases stock price. I decompose the change in stock price the following way:

\(^{25}\) Variables with a caret, "\(^{\wedge}\)" denote conjectures.
\[
V(f) = \max_j \hat{P}_t - P_t = \sum_{j=1}^{\infty} \frac{\hat{d}_{t+j}}{(1+\hat{r})^t} - \sum_{j=1}^{\infty} \frac{d_{t+j}}{(1+r)^j}
\]
\[
= \sum_{j=1}^{\infty} \frac{\hat{d}_{t+j}}{(1+\hat{r})^t} - \sum_{j=1}^{\infty} \frac{d_{t+j}}{(1+r)^j} + \left( \sum_{j=1}^{\infty} \frac{d_{t+j}}{(1+\hat{r})^t} - \sum_{j=1}^{\infty} \frac{d_{t+j}}{(1+r)^j} \right)
\]
\[
= \sum_{j=1}^{\infty} \frac{\hat{d}_{t+j} - d_{t+j}}{(1+\hat{r})^t} + \sum_{j=1}^{\infty} \left( \frac{d_{t+j}}{(1+\hat{r})^t} - \frac{d_{t+j}}{(1+r)^j} \right)
\]
(A)

The first term in equation (A) is the present value of the conjectured change in expected future dividends, discounted by the revised equity cost of capital. The second term is the present value that arises due to the conjectured change in the equity cost of capital. Hereafter, I refer to these two elements as cash flow news and risk news, respectively. Thus, when \( \hat{P}_t(f) > P_t \) (\( \hat{P}_t(f) < P_t \)), voluntary disclosure increases (decreases) stock price.

This specification facilitates the study of a decision making process that involves a tradeoff between cash flow news and risk news in order to maximize stock price. For example, a positive NPV project corresponds to a positive present value of incremental future dividends, thus increasing stock price. Another example is switching from a small auditor to a large auditor, which can increase the stock price if the higher fees – negative cash flow news – are more than compensated through lowered risk.26

The tradeoff between cash flow news and risk news in equation (A) is not complete. It assumes that management maximizes current stock price, whereas in practice, management may also take future stock price into account. For example, management would never issue an earnings warning if management were always to maximize current stock price.27 Another example is the way management compensation is structured, which usually consists of a short term component (usually earnings based) and a longer term component (usually stock/options based) (Murphy, 1998). The longer term component of the compensation package forces management to also think about the future value of the stock price and not just the maximization of current stock price. Despite this shortcoming of equation (A), the tradeoff

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26 Equation (A) also has corresponding empirical equations. The equivalent regression equation in an event study can be represented as:

\[
\text{abnormal stock return} = \alpha + \beta \text{ unexpected earnings} + \gamma \text{ unexpected risk} + \epsilon
\]

Where abnormal stock return is actual stock return minus expected stock return. When a proxy for unexpected risk is not included, an omitted correlated variable problem exists.

27 As discussed before, when future stock price is also taken into account, issuing ‘bad news’ may soften a later stock price decline and/or reduce a litigation threat (Skinner, 1994).
between cash flow news and risk news is sufficient to relate the empirical disclosure literature to the analytical disclosure models.

### 1.4.2 Disclosure quality

Disclosure quality measure is an overall measure of the quality of corporate communications with investors. Since it is a score of overall disclosure and can be labeled as a firm characteristic, the short window event study method is not suitable for these studies. Instead, long window/association studies are used. Six main disclosure quality studies are summarized in this section. The contribution of each study is viewed via its relation to equation (A), i.e., whether a relation of disclosure is found with stock return or either of the two components of the equation (the cash flow news or risk news) or not. Three of these studies (Lang and Lundholm, 1993; Healy et al., 1999; Botosan and Plumlee, 2002) have used the ratings of the Association for Investment Management and Research (AIMR) and the other three (Botosan, 1997; Miller, 2002; Francis et al., 2008) have used self-constructed measures of disclosure quality.

The AIMR disclosure quality metric is constructed using a yearly survey amongst their members. Analysts rate the quality of firms’ disclosures on three categories: (1) required published information, (2) published information not required, and (3) other aspects, which include items such as quality and accessibility of Investor Relations, company-sponsored field trips and presentations to analysts. Discussion of the short- and long-term goals of the company is included in the section about the required published information. Guidance is not explicitly mentioned in the checklist. However, press releases and ‘addresses to analysts groups’ are included in the second category of non-required information (Healy et al., 1999, appendix).

Lang and Lundholm (1993) investigate the determinants of the AIMR disclosure quality score. They find that disclosure quality is increasing in firm size, decreasing in value relevance of earnings, and increasing in stock return. They also find that firms with high disclosure quality are more likely to issue new debt or equity.

Healy et al. (1999) (HHP) find a significant improvement in stock performance and an increase in institutional ownership in both the first year of the disclosure increase as well as

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28 Taken from the Corporate Information Committee’s Annual Reviews of Corporate Reporting Practices; formerly known as the FAF Reports.
29 However, it is noted that this information could be included in several areas of the report (Healy et al. (1999), p. 514).
30 Measured as the correlation between earnings and stock returns.
in the following year. However, HHP do not further decompose stock returns into cash flow news and risk news as shown in equation (A), so it is not clear what is driving the stock return.

Botosan and Plumlee (2002) (BP) document a negative relation between the disclosure level in the annual report and the cost of capital, but also mark an increase in the cost of equity capital for firms that timely disclose information. Thus, they focus on a proxy for the equity cost of capital, which would actually have been one of the inputs for equation (A). They do not consider the relation between disclosure and stock return or earnings.

Miller (2002) examines disclosure quantity for 80 firms. For these firms he measures the number of press releases using the Dow Jones News Retrieval Service currently known as Factiva. His results show that increased disclosure is correlated with periods of increased earnings. Also each disclosure item is placed in one of six mutually exclusive categories, including ‘earnings and sales’ forecast. The results remain statistically significant for each of the six categories.

Botosan (1997) shows a negative relation between a self constructed measure of disclosure quality and the cost of equity capital, but only for firms with a low number of analysts following. The disclosure quality measure ‘DRANK’ is based on five categories with ‘management forecasts relating to market share, sales and profitability’ (FRANK) listed as one of the categories. The results for DRANK and FRANK are similar, which indicates that firms’ disclosure decisions are positively correlated for the five categories that Botosan considered. Similar to BP (2002), Botosan does not relate her research to stock returns, but to a proxy of the cost of equity capital instead.

Francis et al. (2008) also focus on the cost of equity capital. They create a sample using Botosan’s (1997) coding scheme with two modifications. First, they focus on items that are voluntary in nature. Second, they add an additional category of “other financial measures” which include non-GAAP measures of performance. They report a negative relation between disclosure and the cost of capital, like BP and Botosan (2002). However, when they control for earnings quality, earnings variability and the absolute value of accruals, this relation is substantially reduced or disappears completely.

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31 They also document an increase in analyst following and a decrease in the bid-ask ratio, although the latter only at a significance level of 10%.
32 As a potential explanation, the authors state that more frequent disclosure may increase stock price volatility and thus result in a higher cost of equity capital.
33 Financial targets per se are not considered an element of the FRANK category.
In summary, the main disclosure quality papers have focused on different elements of equation (A). If findings across these papers could be summarized in a nutshell, then increases in disclosure are associated with higher stock returns (HHP), which are caused by cash flow news (Miller). However, the evidence for the relation between disclosure and cost of equity capital is mixed. While Botosan (1997) finds a negative relation between disclosure and the cost of equity capital for firms with low analyst following (again repeated by BP for annual report disclosures), BP find that more timely disclosure increases the equity cost of capital.

1.4.3 Management earnings forecasts

Since disclosure quality is an overall measure of the quality of corporate communications, it is higher for firms that issue earnings forecasts. Miller (2002) reports that increased ‘sales and earnings forecast’ disclosure precedes periods of earnings increases. Thus, on average, forecasts convey good news. Hence, management earnings forecast literature examines properties of these forecasts and the stock market reaction to the release of such information, where, in terms of equation (A), abnormal stock return is regressed against unexpected earnings.

This section summarizes the various properties of the management earnings forecast and examines both research that investigates why management issues forecasts and research that investigates the credibility of earnings forecasts.

Properties of management earnings forecasts include: forecast specificity, the length of the forecast horizon, the sign of the unexpected earnings, initial forecasts versus revised versions, and the forecast error. Of these properties, forecast specificity has been researched most extensively. A forecast’s specificity is either bounded, within a range, a point estimate or the forecast is qualitative.

Baginski and Hassell (1997) and Bamber and Cheon (1998) find that a longer forecast horizon is associated with less precision. Also, Bamber and Cheon (1998) find forecasts to be less specific in highly competitive industries. In addition, Clarkson et al. (1994) find that firms in highly competitive industries with good news are less prone to issue a forecast. These results are consistent with high proprietary costs of voluntary disclosure for firms in

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34 Although they cannot be generalized as such since AIMR Reports focus on firms with high-quality and improving disclosure practices, while explicitly excluding firms with problematic or poor disclosure practices (HHP).
35 A maximum or minimum is given.
36 The number of days between the date the forecast is issued and the fiscal period end date.
highly competitive industries. Furthermore, specificity is decreasing with earnings volatility (Skinner, 1995) and decreasing in firm size (Baginski and Hassell, 1997). Several studies (Skinner, 1994; Baginski and Hassell, 1997; Soffer et al., 2000) have investigated the relation between the sign of the unexpected earnings – good news/bad news – and specificity and have reported mixed results. Skinner (1994) finds that good news forecasts tend to be point and range estimates and that bad news forecasts tend to be qualitative statements. Baginski and Hassel (1997) find no relation between the sign of the news and specificity. Soffer et al. (2000) find that point and range estimates tend to be bad news. Results are also mixed with respect to the number of analysts following (Baginski and Hassel, 1997; Piotroski, 2002). Baginski and Hassel (1997) report a positive relation between the number of analysts and specificity, whereas Piotroski (2002) finds a negative relation.

What is the motivation behind management choosing to issue a forecast? In general, forecasting firms are larger (Kross et al., 1994; Eng and Mak, 2003), have higher and more stable earnings rates (Kross et al., 1994) and their earnings are more informative about firm value (Lennox and Park, 2006). Ruland et al. (1990) find that the tendency of management to release forecasts in an effort to move prevailing market expectations toward management beliefs (Ajinkya and Gift, 1984) is a small factor and that the ownership structure (Eng and Mak, 2003) and new shares offerings are the most important factors explaining management forecasts (Skinner, 1995).

Francis et al. (2008) find that disclosure quality based on voluntary disclosures in the annual report is positively related with earnings quality, whereas issuing management forecasts is not related.

Corporate governance structures also play an important role when it comes to issuing management earnings forecasts. Firms with effective governance mechanisms are more likely to make a management forecast, especially when the sign of the unexpected news is negative (Karamanou and Vafeas, 2005). Firms with higher institutional ownership are more likely to issue a management earnings forecast. However, when institutional ownership is concentrated, firms are less likely to issue forecasts (Ajinkya et al., 2005). Furthermore, lower managerial ownership and significant government ownership are associated with increased disclosure (Eng and Mak, 2003). Chen et al. (2007) compare family firms with

\[37\] A higher percentage of voting stock held by directors and officers is associated with a reduced probability of issuing a forecast.

\[38\] More effective board and audit committee structures.
non-family firms and find that family firms provide less voluntary disclosure of both good and bad forward-looking information.

In addition, Brown et al. (2006) investigate whether or not managers herd when they decide on voluntarily disclosing expenditure forecasts. They find that managers are more likely to disclose their expenditure plans when peers have signalled a decrease in future capital spending and when prior peer forecasts are more specific. In addition, they find that less reputable managers exhibit greater tendencies to herd in their disclosure decisions.

In line with equation (A), previous research has found that the stock market reaction is correlated with the sign of the cash flow news as well as the magnitude of the cash flow news (Ajinkya and Gift, 1984; Waymire, 1984). Large earnings surprises cause stock price volatility to increase in the 15 day period after the release (Piotroski, 2002). Pownall et al. (1993) find no statistically significant difference in forecast specificity and stock price volatility, whereas Piotroski (2002) finds that specificity is negatively correlated with stock price volatility, i.e., the more specific the guidance is, the lower the volatility. In addition, the absolute market response for a unit of earnings surprise is higher when investors perceive management as more credible.

Management credibility is an important factor when examining a firm’s voluntary disclosure. As opposed to the financial statements, management forecasts are unaudited. Therefore, management forecasts may be less credible than mandatory disclosed information. Nonetheless, empirical research indicates that management forecasts are credible where the extent of the credibility is tested through market reaction to unexpected earnings. If voluntary disclosure had lacked any credibility, there would have been no market reaction at all. Pownall and Waymire (1989) indicate that management forecasts, on average, are associated with larger stock price reactions compared to mandatory disclosures. Hence, the authors conclude that forecasts are an effective way for management to communicate relevant information to investors. Also, the forecast contains relevant information for analysts as Shen (2008) documents that analysts who cover a firm that issues a management earnings forecast provide more accurate earnings forecast revisions for other firms in the same industry than analysts who do not cover the firm that issued the forecast. Ng et al. (2008) document an underreaction to management earnings forecasts which is smaller when credibility is higher.

Herding is broadly defined to include any similarity or convergence in behavior brought about by the interaction of individuals or firms (Brown et al., 2006 and Hirshleifer and Teoh, 2003).
In the situation where management earnings forecast differs from analyst earnings forecast, investors appear to place greater weight on the management forecast (Hansen and Noe, 1999). Williams (1996) shows a positive relation between the usefulness of a prior forecast and the stock market reaction to a following forecast. This suggests that management indeed establishes a forecasting reputation over time.

Mercer (2004) makes a distinction between the credibility of the disclosure and the credibility of management itself, which influences the former. When assessing the credibility of a disclosure, investors take several factors into account like management incentives at the time of disclosure, internal/external assurance and characteristics of the disclosure itself, such as precision, venue, timing, inherent plausibility and the amount of supporting information. Thus, credibility is a complicated issue to dissect.

Karamanou and Vafeas (2005) report that the market reaction to management forecast announcements is related to board and audit committee characteristics—especially when the forecast signals good news. This evidence suggests that investors have greater confidence in good news forecasts that undergo the scrutiny of more effective boards and audit committees.

Skinner (1994) finds a higher market response for bad news, which implies that investors interpret bad news as more credible. Hutton et al. (2003) examine the interaction of management earnings forecasts and supplementary information. They find that ‘bad’ news forecasts are always informative and that ‘good’ news forecasts are only informative when accompanied by verifiable forward looking information. They include additional expectations as verifiable forward looking information such as forecasts of sales, margins, earnings before income and taxes, cash flows, and growth rates.

In an experimental setting, Hirst et al. (2007) find that disaggregate forecasts are more credible than ‘bottom line’ earnings forecasts. In addition, they find that disaggregation enhances credibility through increases in the perceived precision of management’s beliefs, perceived clarity of the forecast and perceived financial reporting quality.

With respect to some factors, previous research has produced mixed evidence. Ajinkya et al. (2005) find that forecasting firms have a larger proportion of outside directors, whereas Eng and Mak (2003) find the opposite. Kross et al. (1994) find that forecasting firms are highly leveraged whereas Eng and Mak (2003) find that firms with lower debt have

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40 In their experiment the disaggregate forecast consists of a forecast of all the items on the income statement (sales, cost of goods sold, etc.).

41 A potential explanation for the difference in findings is that the sample of Eng and Mak (2003) consists of firms listed on the Singapore Stock Exchange. Also, Eng and Mak use a disclosure index, whereas Ajinkya et al. (2005) consider management earnings forecasts.
greater disclosure. The finding of Kross et al. (1994) that forecasting firms display lower
growth rates does not generalize to all voluntary disclosures since Frankel et al. (1999) find
that high growth firms are more likely to hold conference calls. Thus, prior research has
much to reconcile about the nature of firms that issue management earnings forecasts. Since
Eng and Mak (2003) examine firms listed on the Singapore Stock Exchange, some of the
differences may be related to institutional differences between countries.

1.5 Financial targets

With the disclosure of a financial target the firm commits to the achievement of
specific financial goals within a certain time frame. Target-disclosing firms issue specific
goals or targets, such as (growth in) earnings, sales, ebitda, costs, or a measure of
profitability. Guidance-issuing firms, on the other hand, issue management forecasts that
provide information about the expected outcome of the company’s operations, such as the
expected level of earnings, sales, or cost reductions in a certain period of time.

The differentiating factor between a target and an expectation is that a target implies
goal commitment, whereas an expectation does not. Goal commitment is defined as an
unwillingness to abandon or lower a goal (Campion and Lord, 1982). This attribute, which is
lacking in a forecast, has the potential to reduce information asymmetry in several ways.

First of all, goal commitment can reduce adverse selection to a larger extent than a
forecast. In particular, disclosing a target signals that management has precise information
about future profitability and/or that management is ‘in control’ of the firm. Skinner (1995)
shows that when management has disclosed a forecast, this forecast is more often revised
downwards, than it is revised upwards. Skinner argues that firms revise their forecast
downward to prevent class action suits. An alternative explanation is offered by the survey
results of Graham et al. (2005). Their findings indicate that managers feel that missing their
own earnings forecast signals that they are not in control of their firm. It is likely that revising
their forecast downwards harms their reputation to a lesser extent than missing their initial
forecast. The act of goal commitment – the unwillingness to abandon or lower a goal –
therefore signals a reduced probability of a subsequent revision: i.e., a target of $1.00
earnings per share signals that it is more likely to be met than a forecast of $1.00.

Second, goal commitment can potentially reduce moral hazard presuming
management would be willing to exert more effort in order to meet a target than a forecast.

42 ‘Target(s)’ and ‘financial target(s)’ are used interchangeably.
However, another potential moral hazard problem can arise at the same time if this is the case: when it is clear to management that the target cannot be met by exerting effort, management can shift that extra effort into earnings management (Kasznik, 1999; Schweitzer et al., 2004).

Another indication that a target differs from a forecast is provided by Indjejikian et al. (2009). On a survey of 793 firms on target setting within the firm, they find a low frequency of negative earnings targets and a very high frequency of zero earnings targets, suggesting that management is reluctant to set negative earnings targets. Extending their finding to voluntary disclosure by management to investors, it would indicate that management would rather disclose a loss forecast, than publicly commit to a loss.

In general, for a signal to have informational value, it must be costly for ‘low quality’ type of firms to use it. For target disclosure this means that, in expectation, the benefits of issuing and meeting a target for ‘high quality’ firms exceed the costs of missing the target. If in expectation, the benefits were to exceed the costs for ‘low quality’ firms as well, then all firms would always issue targets. In such a setting, investors would ignore target information. Since in practice only some firms issue targets, it is likely that target disclosure is a useful signaling instrument.

In summary, a target can signal higher future earnings and higher management competence compared to a forecast; potentially reduce information asymmetry; and be a more credible signal than a forecast. However, a target’s incremental costs can include an increased possibility of earnings management (Kasznik, 1999); increased probability of higher litigation costs for the firm (Skinner, 1994); and reputational damage if the target is not met or abandoned (Graham et al., 2005).

Previous literature has not made the distinction between target disclosure and management forecasts. Analytical disclosure papers are generally simplified for computational ease, for example by assuming that there are no agency problems between shareholders and management. The differences between a target and a forecast, as discussed above, need to be explicitly modeled. To my knowledge, there exists no such analytical paper. With the exception of Ferreira and Rezende (2007), who model voluntary disclosure of

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43 For example, big audit firms have higher audit quality because of their ‘deep pockets’. For a firm with ‘bad’ accounting, it will be costly to switch to a big audit firm, because the big audit firm will not approve the firm’s accounting (Scott, 2006).

44 Resulting in a larger market reaction per unit of unexpected earnings.
strategic information, which could be applied to target disclosure. Nevertheless, it could be argued that a forecast contains strategic information as well.

Empirical disclosure papers have not investigated target disclosure, with the exception of Cools and Van Praag (2003). In their exploratory study, Cools and Van Praag have investigated the association between corporate target disclosure and stock returns, where they find evidence that setting one quantified target is value relevant compared to disclosing no targets or multiple targets. Analysis of data gathered by an additional survey indicates that usage within the firm (‘rolling out’) of the one target can also be value relevant.

Thus, in the empirical disclosure literature, many of the target firms may have been inadvertently categorized as forecasting firms. In this dissertation, I specifically examine the properties of target disclosing firms and capital market consequences/attributes. Overall, I expect target disclosure to be a stronger signal with respect to future earnings than a forecast and an important instrument in reducing information asymmetry.

1.6 Research questions

The primary difference between a target and a forecast is goal commitment, which is the unwillingness to lower or abandon the target. If the cost in terms of a damaged reputation or litigation costs of missing a target is higher than the cost of missing a forecast, then targets are expected to constitute a stronger signal than a forecast would with respect to future earnings, as well as reducing information asymmetry. This implies that management at the time of the target disclosure is more certain of meeting the target, and/or that management is willing to exert more effort in order to meet the target.

As opposed to management earnings forecasts, financial target disclosure has hardly been researched. Target setting within the firm, however, is a common object of investigation. I therefore believe examining target disclosure by management is relevant and interesting.

The results presented in the paper of Cools and Van Praag (2003) indicate that target disclosing firms outperform other firms. However, many questions remain. The questions addressed in this dissertation are the following: Is disclosing a target a stronger signal than a forecast? And is signaling multiple targets even better? Does it signal strength in future earnings, or does it reduce risk? To which extent is missing a target punished by the stock market? Is there a differential announcement effect of a target versus a forecast? Is the effect conditional on other news which is released at the same time with the target? Is target
disclosure incorporated into the stock price at the time of announcement, or is it included in the stock price over the period it is realized?

There are other relevant questions that I do not address. I do not investigate what is driving management’s decision to disclose or not. I also do not consider how easy or difficult it is for management to meet the targets.

The remainder of this dissertation is organized as follows. In chapter 2, I investigate target disclosure by Dutch firms, where I test for a differential effect between a single target and multiple targets. I also consider the realization of the targets. In chapter 3, I compare the stock price, short and long term stock returns and the equity cost of capital for target disclosing firms versus guidance firms with a listing in the U.S. In chapter 4 I conduct an event study, comparing target disclosing firms with forecasting firms where I control for unexpected earnings. Finally, I summarize and discuss the findings in chapter 5.