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Qualitative Un-Verifiable Disclosures to Inform or Mislead: Insights from Insider Trading Activity

By *Elena Beccalli, Saverio Bozzolan, Enrico Laghi and Marco Mattei*

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Qualitative un-verifiable disclosures to inform or mislead: insights from insider trading activity

Elena Beccalli
Università Cattolica del Sacro Cuore (Milan) and
London School of Economics and Political Science (London)

Saverio Bozzolan (*)
LUISS University (Rome)

Enrico Laghi
University of Rome, La Sapienza

Marco Mattei
University of Rome, La Sapienza

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(*) Corresponding Author
Saverio Bozzolan
Department of Business and Management
LUISS University
Viale Romania, 32
00198 Roma

e-mail: sbozzolan@luiss.it

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Abstract

Existing literature has extensively investigated if un-verifiable narrative disclosure (qualitative disclosure) gives incremental information or increases the opacity to investors. Empirical studies consistently provide evidence that qualitative disclosure is perceived useful as it has significant effects on analyst forecast revision and share prices. But these results leave unanswered the question whether managers come up with qualitative disclosure to inform or mislead investors. To disentangle this issue, we investigate whether qualitative disclosure truthfully represents the rational expectations of the manager responsible for the disclosure. Grounding on signaling theory, we consider two signals coming from the same manager: one (the insider trading) is the costly signal whilst the other (the qualitative disclosure) is the cheap signal and we verify if they are coherent. Our results suggest that the cheap signal is not aligned with the costly signal suggesting that qualitative disclosure is used to mislead investors and not to offer incremental information, irrespective on how this disclosure is considered by market participants.

Keywords: Signaling theory, Impression management, Insider trading, Letter to Shareholder, Ethics

JEL codes: G11, G14, G30, M41

1. INTRODUCTION

In recent years we have observed the increasing importance of un-verifiable narrative disclosure (hereafter: qualitative disclosure) within the firm reporting package, as remarked by the call for more narrative and descriptive disclosures by regulatory bodies (i.e. AICPA, 1994). Studies have analysed qualitative disclosure in Annual Reports or in SEC mandatory filings (Davis and Tama-Sweet, 2012; Li, 2010; Feldman et al., 2010; Smith and Taffler, 1995), and in other voluntary disclosure such as managerial earnings forecasts (Kravet, Muslu, 2013; Baginski et al., 2012), earnings announcements (Davis et al., 2012) or conference calls (Davis et al., 2014; Larcker and Zakolyukina, 2012). In general, empirical evidence has consistently shown that qualitative disclosure is value relevant over and above quantitative – verifiable disclosure. This result has been obtained looking at the effects of qualitative disclosure on analyst forecast revision or share prices.

In order to disentangle whether managers use qualitative disclosure to increase transparency (informative disclosure) or to strategically make the firm more opaque to exploit information asymmetries for achieving personal advantage (misleading disclosure), we adopt a different perspective. We investigate whether qualitative disclosure truthfully represents the rational expectations on the firm outlook that the manager responsible for the disclosure has, instead of studying the effects of qualitative disclosure on market participant and on share price as in previous literature. We focus on qualitative disclosure in the Letter to Shareholders (hereafter: LTS), and our evidence shows that the author of the LTS (hereafter: Author) uses qualitative disclosure to mislead investors since her insider trading activity is not aligned with the content of the information sent through qualitative disclosure. We also find that not all

insiders benefit from these information advantages, since it is limited to the Author and not extended to other board members.

We ground our study on signalling theory and cheap talk models. We argue that qualitative disclosure (the cheap signal of the insiders' expectations about firm performance) truthfully represents insiders' expectations only when the characteristics of qualitative disclosure are aligned with how the insiders trade firm share (the costly signal of the insiders' expectations). We contend that there is the willingness to inform (mislead) investors through qualitative disclosure when insiders trade firm shares in the same (opposite) direction suggested by the information sent through qualitative disclosure. In the first case insiders buy (sell) shares before showing positive (negative) expectations in the disclosure and, in the other, they buy (sell) shares before showing negative (positive) expectations in qualitative disclosure.

We analyse this relationship looking at the association between qualitative disclosure in the LTS of Italian listed companies for the years 2008 - 2010 and insider trading of the Author. Italy is a good setting for this research design because in Italy qualitative disclosure is not subjected to any regulation and it is completely voluntary. Litigation costs are also low in Italy (La Porta et al., 1999) and, consequently, qualitative disclosure in the LTS can be seen as "a real" cheap talk, so being significantly different from other costly signals as insider trading. We find that before the release of the LTS the insider trading made by the Author is not coherent with the qualitative disclosure in the LTS. We interpret this result as the evidence that qualitative disclosure is conducted to mislead investors. In order to test further our main result, we investigate the association between the insider trading of the Author after

the release of the LTS (when the qualitative disclosure becomes public) and insider trading by board members other than Author and her family members (hereafter: Directors) both before and after the release of the LTS. We find that insider trading of the Author significantly changes after the release of the LTS, being no more associated with qualitative disclosure. We also find no significant association between insider trading of Directors before the release of the LTS and qualitative disclosure in the LTS. This result implies that their insider trading, if any, depends on their own interpretation of private information that is different from the information sent through the LTS with qualitative disclosure. After the release of the LTS, when qualitative disclosure becomes public, the insider trading of the Directors is still not aligned with the qualitative disclosure in the LTS but with the insider trading of the Author before the release of the LTS. We argue that Directors, who have access to firm private information, follow the indication of the costly signal coming from the Author through insider trading instead of the cheap signal from qualitative disclosure in the LTS.

To our knowledge, this paper is the first to explicitly assess the informativeness of qualitative disclosure directly disentangling if it truthfully represents expectations of the Author or it is made to mislead investors. This issue is of extreme importance because qualitative disclosure tends to be un-regulated and un-audited leaving room to its misuse with a low risk to be detected. Our paper differs from existing literature as we establish a direct link between the cheap (the disclosure) and the costly (the insider trading) signal sent by the insiders. We contribute to the literature about the role of qualitative disclosure showing that what matters is not its effects on analyst forecast or on share price but its coherence with the costly signal sent. Our evidence of the missing alignment between the cheap and the costly

has a very negative implication for the relevance of qualitative disclosure. Our study also contributes to the impression management literature to separate value relevant from misleading qualitative disclosure. Previous literature (Patelli and Pedrini, 2014) argues that impression management is found when the qualitative disclosure is not aligned with firm future performance. We contend that this is neither a sufficient nor a necessary condition. There is not a necessary condition because future performance can be managed as well, through accrual or real earnings management significantly reducing the significance of the association. There is not a sufficient condition because at the time of the disclosure the Author can have indeed positive expectations about firm performance and she represents this outlook in qualitative disclosure, but it does not automatically imply that expectations effectively become good performance. Therefore, qualitative disclosure can be conducted with the truthfully aim to inform investors, since Author's expectations are sincere, even when observed future performance is not coherent with qualitative disclosure.

The paper proceeds as follows. The next section provides literature review and hypothesis development. Section 3 presents the research design and section 4 contains results and additional analyses. Section 5 presents some robustness checks. Section 6 discusses the results and concludes the paper.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

It is well known that insiders are able to exploit their superior knowledge to expropriate wealth from less informed market participants and that insiders can strategically manipulate disclosures to their own advantages (Clatworthy and Jones, 2001). In this vein,

there are two perspectives on the role of qualitative disclosure (Merkl-Davies and Brennan, 2007). The information perspective holds that managers use qualitative disclosures to reveal their private expectations about the firm performance (Baginski et al., 2000). The impression management perspective holds that managers misreport information and that such opportunistic behaviour is driven by private incentives proposed by agency theory (Ramanna and Watts, 2012). The preparers of disclosures may seek private benefit by taking advantage of the information asymmetry. Since managers decide the information to be disclosed (Merkl-Davies and Brennan, 2007), they may "cook the books" (earnings management) or manipulate the disclosure to enhance the perception of performance or minimize the repercussions of negative news (Schleicher and Walker, 2010). The Letter to Shareholders allows its author discretion regarding what information to include (Smith and Taffler, 2000). Even if it is partially subject to regulation or auditing, as its content must be consistent with the financial statements, the Letter to Shareholders has considerable potential as a tool for impression management (Kohut and Segars, 1992) since the author decides on both the content (what is included) and the narrative (how the content is presented).

When the user of the disclosure is not able to evaluate whether it is believable or not, an insider can take advantages of information asymmetry and might have incentives to disclose misleading information. We rely on the signalling literature to disentangle whether qualitative disclosure truthfully represent the expectations of the Author, thus being informative, or are conducted to mislead investors. Signalling theory predicts that a signal is credible when it is costly, but not when it is a cheap talk. Therefore a manager is credible in revealing unverifiable private information about the firm when sending a signal is costly.

Spence (1973) proposes that high-ability workers signal their characteristics by investing in education. The implicit assumption is that having a high-level education represents high ability and it is costly to achieve. Leland and Pyle (1977) show that the percentage of ownership retained by owners in a security offering increases the credibility particularly when the firm's expected profitability is lower. Filatotchev and Bishop (2002) find that leaders of a young firm in an IPO choose prestigious directors for the Board to send a message to potential investors about the firm's legitimacy. Zhang and Wiersema (2009) show that the CEO might signal the unobservable quality of their firm through the observable quality of the financial statements. In a related context, Beneish and Vargus (2002) argue that earnings management (interpreted as the not costly signal) is informative when the direction of the earnings management is consistent with the direction of insider trading (the costly signal) and show that abnormal accruals are more persistent when accompanied by insider buying. Jaggi and Tsui (2007) show document positive association between earnings management and insider selling.

Provided that the annual report is published near the end of the first quarter of the following year, the Author has a wealth of information concerning first quarter performance by when the annual report comes out (Yuthas et al., 2002). Insiders (the Author and the Directors) are the only ones with access to this information about the outlook of future performance and it can be diffused in the LTS to increasing firm transparency or could be managed to making the firm more opaque.

Referring to signaling theory, we identify *(i)* the qualitative disclosure in the LTS as the cheap signal because it is un-regulated and un-audited, leaving room to its misuse with a

low risk to be detected and *(ii)* the insider trading of the Author before the release of the LTS (which is based on the same set of information available when the LTS is written) as the costly signal. Because a signal is credible only when it is costly, we argue that insider trading represents the Author sincere view about the firm. When a signal is not costly, in order to become credible, the signal should be transmitted through a reliable communication channel, but this is not the case for qualitative disclosure. Qualitative disclosure is neither audited nor revised by third parts, and this implies that there is not an assurance that a reliable communication channel is set. We argue that insiders might be using qualitative disclosure (the cheap signal) to offer a bias view of the firm outlook and that the Author engages in ethical discourse with shareholders when the view shown in the LTS through qualitative disclosure is aligned with how she operates over firm shares. If there is not coherence between the two signals, then we can sustain that the cheap signal (qualitative disclosure) is not aligned with the costly signal (insider trading). This would suggest that the Author is not engaging in ethical discourse with shareholders because she is trying to divert the perception of market participants about the firm.

For these reasons, we contend that the Author is involved in activity aimed to cheat investors: *(i)* if, before the release of the LTS, her insider trading activity is not aligned with the qualitative disclosure in the LTS; and *(ii)* if, after the release of the LTS, her insider trading is not associated with the qualitative disclosure in the LTS. Our hypothesis is as follows:

H1: Qualitative disclosure in the LTS is made up to misleading when:

H1a: Before the release of the LTS, the insider trading activity of the Author is not aligned with the message sent through qualitative disclosure;

and

H1b: After the release of the LTS, the insider trading activity of the Author is not associated with the message sent through qualitative disclosure.

3. RESEARCH STRATEGY

Sample selection

Our study is based on 253 LTS from 78 unique firms listed on the Milan Stock Exchange over the years 2008 - 2010. This setting is reasonable for our purposes because of ownership concentration and insider domination of the boards in Italian listed firms. CONSOB (2013) reports that the largest shareholder owns on average 46.8% of the shares whilst the other relevant shareholders own about 16.6%. Families are the ultimate controlling agent for the 60% of Italian listed companies (26% of market capitalization) while the State controls the 8.9% of listed companies (41.7% of market capitalization). Italy is one of the countries with the highest levels of private benefit of control (Dyck and Zingales, 2004), and this situation does not ameliorate in the last years since corporate governance reforms still have not had significant effects. Directors typically represent the dominant shareholders, and dominant stakeholders are paying little attention to the interests of minority shareholders (Barker, 2010). The level of monitoring is also weak: a survey fielded by Spencer Stuart (2011) reports that, in 2010, even in the thirty-eight larges Italian listed firms, independent directors are not in the majority among board members. The same survey reports that, in the

US and the UK, the percentage of independent directors is 84 percent and 94 percent, respectively.

One issue of single-country studies is the generalizability of the results. Italy represents a good setting for several reasons. First, litigation costs and investor protection are lower in Italy than in other countries (LaPorta et al., 1999), so insiders can use other mechanisms different from insider trading to extract rents. Long-term family ties, that characterize most of the Italian firms, reduce the room for speculative insider trading since they are expected to look at long-term shareholder value (see among others Berrone et al., 2010). Since Italian listed firms are mostly family controlled, executives are less exposed to the risk to be fired when firms do not perform well (Gómez-Mejía et al., 2003). As a consequence, the incentives of an Author to engage in misleading disclosure tend to be lower in Italy than in other countries. All these elements reduce the incentives of misleading disclosure and of insider trading. If we find evidence of misleading disclosure in such a setting, we contend that these results might be extended to other settings where the incentives are higher.

Firms included in the analysis met four requirements: *(i)* firms should be listed on the Milano Stock Exchange in 2008 - 2010; *(ii)* firms have prepared a formally addressed communication to shareholders with the explicit reference Letter to Shareholders; *(iii)* the LTS is signed by a single person; *(iv)* insider trading, financial and governance data is available. Sample selection is described in Table 1.

INSERT TABLE 1 ABOUT HERE

Measurement of qualitative disclosure

As qualitative disclosure, we consider the tone of disclosure because it is considered an impression management technique (Brennan et al., 2009). Merkl-Davies and Brennan, 2007). It consists of positive (rather than neutral or negative) language, keywords, and statements to convey a positive view of performance (Brennan and Merkl-Davies, 2011; Garcia-Osma and Guillarmon Saorin, 2011). We measure disclosure tone through a manual coding in order to obtain a full understanding of the meaning of the information. We coded keywords that had positive or negative connotations: a phrase is relevant if it contains a keyword that had either a *positive* or a *negative tone*. The tone is determined on the basis of the phrase meaning: the phrase containing "decrease of loss" is classified as positive, although each word alone would be associated to a negative sentiment.

To address the issue of coding reliability, we started defining a coding procedure and ran a pilot test to a sub-sample of fourteen LTS chosen to include firms of different size and industry. The results of the pilot test were compared; misalignments identified and solved by revising the coding rules. Then we conducted another round of test resulting in more than 95% of agreement that suggests reliable coding procedure.

Our measure of disclosure tone is labeled *OPT* and computed as follows:

$$OPT_t = \frac{\text{Positive Phrases}_t}{\text{Total Phrases}_t}$$

We also considered the use of pessimistic tone, calculated as follows:

$$PESS_t = \frac{Negative\ Phrases_t}{Total\ Phrases_t}$$

Then, we determined the net optimism by subtracting the pessimistic tone from the optimistic tone:

$$NETOPT_t = OPT_t - PESS_t \quad (5)$$

Measurement of insider trading

We have obtained the ownership and governance data (i.e. board composition and board functioning) from the CONSOB (Italian Financial Market Regulator). Information about the biography of the Author is drawn from the Annual Report to which the LTS refers. We have obtained the raw data about insider trading using the Factset data-base that reports the share trading activity of each company. Then we have matched this data with the share trade activity conducted by the Author and the Directors to find out the exact amount of insider trading. We have also checked for insider trading conducted by the Author and Directors through their family members (spouse and relatives) and through firms they directly control in order to find out whether they were involved in insider trading in an indirect way. We consider a firm as "under the direct control" of an insider when she explicitly is a controlling shareholder or an executive director.

Following prior research (Beneish et al., 2012; Beneish and Vargus, 2002) we construct a person-firm-specific measure of insider trading (the Absolute Net Shares Traded - *ANST*) that is the percentage change of the trading activity normalized by shares outstanding to control for cross-sectional variation in the level of shares outstanding:

$$ANST = \sum \frac{\text{Shares purchased}}{NOSH} - \sum \frac{\text{Shares sold}}{NOSH} \qquad (6)$$

where:
NOSH the number of shares outstanding at the beginning of the period.

As an indicator of insider trading we also calculate the percentage change of the trading activity by dividing the trading activity by share outstanding owned by the insiders on the beginning of the period (the Relative Net Shares Traded - *RNST*):

$$RNST = \sum \frac{\text{Shares purchased}}{I\_NOSH} - \sum \frac{\text{Shares sold}}{I\_NOSH} \qquad (7)$$

where:
I_NOSH the number of shares outstanding owned by insiders at the beginning of the period.

Our research design focuses on firm's share trading made by the Author and the Directors before and after the release of the LTS. Consequently, we define the following variables:

ANST_au_1q	Absolute Net Share Trading by the Author of the LTS before the release of the LTS
RNST_au_1q	Relative Net Share Trading by the Author of the LTS before the release of the LTS
ANST_au_2q	Absolute Net Share Trading by the Author of the LTS after the release of the LTS
RNST_au_2q	Relative Net Share Trading by the Author of the LTS after the release of the LTS
ANST_dir_1q	Absolute Net Share Trading by Directors before the release of the LTS
RNST_dir_1q	Relative Net Share Trading by Directors before the release of the LTS
ANST_dir_2q	Absolute Net Share Trading by Directors after the release of the LTS
RNST_dir_2q	Relative Net Share Trading by Directors after the release of the LTS

Research design

We focus on the Author studying the relationship between her insider trading and qualitative disclosure to disentangle whether qualitative disclosure, measured as the disclosure

tone, is made to inform or mislead investors. We expect that if insider trading, conducted before when the cheap signal becomes public, is aligned with disclosure tone then qualitative disclosure is conducted to truthfully inform investors. When disclosure tone represents the rational expectations of the managers, it should be associated with a buy/hold position of the insiders, while a low level of optimism should be associated with a sell position. We contend that if the Author has a positive (negative) outlook about firm performance, then disclosure tone should be optimistic (pessimistic) and the Author is expected to buy (sell) shares. The Author should use an optimistic tone when she buys shares, and a pessimistic tone when she sells shares. When this is the case, we can sustain that the Author engages in ethical discourse with investors. On the contrary, when the coherence between disclosure and insider trading does not exist, signalling theory suggests that the cheap signal is not credible while the costly is. Therefore, the qualitative disclosure seems to be unfounded. We also argue that Author aims to cheat investors when an unfounded qualitative disclosure is not associated with insider trading activity when this disclosure has been already made public. Figure 1 presents our research design.

INSERT FIGURE 1 ABOUT HERE

The LTS becomes public in [3], few days before the Shareholder Annual General Meeting when the Annual Report is made available in the corporate website. A sound research design should consider the insider trading by the Author between a starting date [1] and [3] for the period before the release of the LTS; and between [3] and a final date [4] for

the period after the release of the LTS. This research design is theoretically correct but not fully applicable. The existing Italian regulation on financial markets establishes a period of time (blocking period) before the release of quarterly or annual financial statements during which all persons (and their relatives) having access to private information are not allowed to sell or buy firm shares (the only exception is for the exercise of stock options). The time window of the blocking period varies from 15 days before the publication of quarterly data to 30 days for the Annual Report and it is defined in the internal dealing procedure of each listed company. Moreover, the date in which the Annual Report (that includes the LTS) is uploaded in the corporate website is not available making impossible to know exactly when the blocking period starts. Listed companies set the date of the shareholder annual general meeting in [3] around four months after the end of the fiscal year. If we consider the days before the availability of the LTS to the public (three weeks as requested by the Italian law) and the blocking period usually set between 15 and 30 days, insiders cannot operate on trading firm shares since 36 – 51 days before the date of the shareholder annual general meeting. It means that a reasonable proxy for the final date of the trading period is three months after the end of the fiscal year. For these reasons, the first quarter ([0] – [1]) is the time-window in which we consider the insider trading before the release of the LTS. For the similar reason, we consider the second quarter ([3] – [4]) as the time-window to consider insider trading after the release of the LTS since in the period ([1] – [3]) insiders are not allowed to operate (blocking period).

Data Analysis

In our main analyses, we estimate two panel data regression models[1]: one considering the insider trading before the release of the LTS (*Equation [1]*) and the other after the release of the LTS (*Equation [2]*).

Equation [1]

$$NETOPT = b_0 + b_1 INS\_TR_{1q} + b_2 shareh + b_3 ros + b_4 ear\_man + b_5 lbsize + b_6 indper + b_7 d\_ceo + b_8 a\_meet + b_9 b\_meet + b_{10} age + b_{11} skill + b_{12} locks + b_{13} lcomp + b_{14} delta\_prof + e$$

Equation [2]

$$NETOPT = b_0 + b_1 INS\_TR_{2q} + b_2 aut\_shareh + b_3 ros + b_4 ear\_man + b_5 lbsize + b_6 indper + b_7 d\_ceo + b_8 a\_meet + b_9 b\_meet + b_{10} age + b_{11} skill + b_{12} locks + b_{13} lcomp + b_{14} delta\_prof + e$$

where:

NETOPT	Qualitative disclosure: Net-optimistic tone in the LTS;
INS_TR$_t$	Insider trading during period *t*;
aut_shareh	Ownership: dummy equal to 1 if the Author is one of the controlling shareholders ; 0 otherwise;
ros	Profitability: Return on Sales (in case of financial institutions, replaced by intermediation margin) of the same fiscal year of the LTS;
ear_man	Earnings management: abnormal working capital accruals (DeFond and Park, 2001);
lb_size	Board size: logarithm of the number of directors;
ind_per	Board independence board: percentage of independent directors on the board;
d_ceo	CEO duality: dummy equal to 1 if the board chairperson is also the CEO, 0 otherwise;
a_meet	Intensity of the board monitoring: number of board meetings;
b_meet	intensity of the audit committee monitoring: number of audit committee meetings;
age	Reputation: age of the Author;
skill	Experience: dummy equal to 1 if the Author holds an MBA, a legal degree or has financial expertise;
interlocks	Successful Director: number of interlocking directorship of the Author;
lcomp	Compensation: natural logarithm of the total cash compensation (salary, performance bonuses and benefits) of the Author;

[1] We do not control for firm size since firm size is strictly correlated with the compensation of the Author and with the number of interlocking directorships of the Author.

delta_prof Future Performance: change in Return on Sales over the first two quarters after the end of the fiscal year to which the letter refers divided by the share price at the beginning of the period.

Standard errors of the coefficient estimates are adjusted for panel-level heteroscedasticity (White's t-statistic).

Control variables

We include four groups of controls to take into account financial, governance, and future performance characteristics of the firm, and personal characteristics of the Author. Prior literature (Merkl-Davies and Brennan, 2007) finds that profitability is associated with impression management, therefore we control for the profitability of the firm (*ros*). We control for the ownership of the controlling shareholder (*aut_shareh*) because it represents an incentive to be involved in impression management activity. Firms that have incentives to engage in earnings management (*ear_man*) in order to present better financial results might have similar incentives to engage in impression management to offer a better image of the firm (Godfrey et al., 2003). There are several measures proposed for capturing earnings management. We use abnormal working capital accruals (DeFond and Park, 2001) because prior studies consider it more appropriate than the signed value of earnings management in tax-oriented reporting regimes as Italy (Prencipe and Bar-Yosef, 2011).

Garcia-Osma and Guillamon-Saorin (2011) document a relationship between impression management and corporate governance. We control for corporate governance characteristics that are related to monitoring. We consider board size (*lb_size*): oversized boards are less

efficient than smaller boards in performing their duties (Yermack, 1996); independence of the board (*ind_per*): independent directors tend to limit the incidence of fraudulent (Beasley, 1996) and aggressive reporting (Peasnell et al., 2005); CEO duality (*d_ceo*): when CEO duality is present it is easier for the CEO to assert control of the board and consequently make it more difficult for independent directors to monitor and discipline the management (Mather and Ramsay, 2007); and the intensity of the monitoring activity of the board (*b_meet*) and audit committee (*a_meet*) considering the number of their meetings.

Previous literature provides evidence suggesting that personal characteristics affect firm accounting and disclosure choices. We control for the age of the Author (*age*): age is considered a proxy for the Author's reputation, as older directors tend to be better known and reputed than younger directors (Bamber et al., 2010); the degree or expertise in the financial area (*skill*): directors with MBAs or financial expertise are more likely to perceive voluntary disclosure as an opportunity to enhance firm reputation than are those who do not hold these degrees (Lewis et al., 2014); the number of interlocking positions (*interlocks*): it reflects social ties, has a reputation effect, and represents indirect remuneration for a successful director (Mizruchi,1996); the compensation (*lcomp*): it is an indication of Author's worth as a corporate leader and, by extension, the reputation in the executive job market (Zajac and Westphal, 1996).

Finally, we consider whether the disclosure tone in the LTS is driven by the expectations of the Author about short-term future performance and therefore it is not related to the willingness to mislead the readers. Starting from the assumption that there is not impression management unless the optimism is unfounded, we should take out the possibility that the

optimism sincerely represents the expectations of the Author. It might happen that optimism is explained by the privately observed incoming performance and not by the performance reported in the annual report of the closing fiscal year. We should be aware that when the LTS is written the Author has private information about firm short-term performance since they have a good outlook about the results of the first semester. For this reason, we use the change in accounting performance as a control in our regression model (Patelli and Pedrini 2014). By controlling for future performance, we consider the variability in disclosure tone not explained by this information available to insiders (*delta_prof*).

4. RESULTS

Descriptive analysis

Table 2 focuses on the Author and shows descriptive statistics for ownership data (Panel A), and insider trading (Panel B). Table 2 Panel A shows that the Author owns, directly or indirectly, the 32.70% of the shares (au_*1q*), ranging from a minimum of 0% to a maximum of 75.30%. The corresponding value (*v_au_1q*) has an average of 276 million (median 27 million) Euro. Table 2, Panel B shows that the average absolute net share traded by the Author before the release of the LTS (*ANST_au_1q*) corresponds to the 0.39% of the shares and ranges from a minimum of -0.20% (the Author has sold during the quarter the 0.20% of firm's shares) to a maximum of 5.87% (the Author has bought during the quarter the 5.87% of firm's shares). The relative variation of shares owned by the Author before the release of the LTS (*RNST_au_1q*) ranges -2.19% to a maximum of 209% (the average value is 3.49%) where a negative (positive) value means that the Author has sold (bought) more

shares than those bought (sold). This percentage change is weakly different from 0 (directional t-test *RNST_au_1q* > 0; p-value = 0.09).

INSERT TABLE 2 ABOUT HERE

Table 3 focuses on Directors (board members other than the Author) and shows descriptive statistics for ownership data for Directors (Panel A), for insider trading in the period after and before the release of the LTS (Panel B). Table 3, Panel A shows that Directors own, directly or indirectly, the 60.20% of the shares (*in_1q*), ranging from a minimum of 5.56% to a maximum of 91.90%. The corresponding value (*v_dir_1q*) ranges from a minimum of 5.6 million Euro to a maximum of 30,800 million Euro, with an average value of 1,538 million Euro (median 275 million). Table 2, Panel B shows that the average absolute net share traded by Directors before the release of the LTS (*ANST_dir_1q*) corresponds to the 0.6% of the shares and ranges from a minimum of -22.70% (Directors have sold during the quarter the 23% of firm's shares) to a maximum of 59.20% (Directors have bought during the quarter the 59% of firm's shares). The relative variation of shares owned by Directors before the release of the LTS (*RNST_dir_1q*) ranges from -32.40% to a maximum of 100% (the average value is 1.29%): a negative (positive) value means that Directors have sold (bought) more shares than those bought (sold). This change is not statistically different from 0 (non-directional t-test *RNST_dir_1q* = 0; p-value = 0.37). The average value of trading activity by Directors (Table 3: Panel A *v_dir_tr_1q*) corresponds to a net sell of 5.55 million Euro.

INSERT TABLE 3 ABOUT HERE

Table 4 Panel A shows descriptive statistics for disclosure tone. On average, the LTSs contain about 9 sentences with an optimistic tone (*opt*) and only 3 sentences with a pessimistic tone resulting in a net optimism of an average value of 6.49. Table 4 Panel B presents descriptive statistics for the control variables.

[INSERT TABLE 4 ABOUT HERE]

Multivariate analysis[2]

Table 5 presents the results of multivariate regressions before and after the release of the LTS for the Author. Models [1] and [2] show a strong negative association between insider trading of the Author before the release of the LTS and the net optimism in the LTS. On the one side, this negative association means that if the Author has already sold shares before the release of the LTS, then a more optimistic LTS (high *NETOPT*) is likely to be written (low *RNST_au_1q* or *ANST_au_1q*). On the other side, this result suggests that when the Author has already bought shares before the release the LTS (high *RNST_au_1q* or *ANST_au_1q*), a more pessimistic LTS (low *NETOPT*) is likely to be written. This negative relationships hold after controlling for the monitoring activity conducted by the board or by

[2] All of our regression models are estimated using years and industry fixed effects and with robust standard errors clustered by firm and year. To avoid the effect of extreme value we winsorize our observations at 99%.

dedicated board committees, earnings management, actual results and unexpected optimism in the LTS due to future performance.

The negative relationship observed for the Author reveals that insider trading is not coherent with qualitative disclosure. Specifically, a sell of firm shares by the Author, before the private information about the future outlook of the firm becomes public, appears to suggest that she expects that future outlook will be not positive in the future. At the same time the Author emphases the LTS with an optimistic writing suggesting the opposite. Because insider trading is a more costly signal about the expectations over the future than writing the un-audited LTS, we have significant evidence that such a non-coherent behavior might reveal the presence of impression management in the LTS. The negative relationship between insider trading and disclosure tone also exists when Authors bought firm shares before the release of the LTS and use a pessimistic tone in the LTS. The costly signal of insider trading represents the Author expectations that the firm will perform better in the future, while the cheap disclosure shows a pessimistic tone about the outlook of the firm, suggesting the opposite. The use of a less optimistic tone when the Author has previously bought firm shares suggests that she knows that past performance was negative and she would not be able to make it look better in the LTS. Why do not Authors align the cheap signal with the more costly signal insider trading in this case? One possible explanation is in the monitoring activity conducted by independent board members. Even if the monitoring activity in Italian listed firms tends to be low, regression models in Table 5 show that the level of net optimism in the LTS is negatively associated with the presence of independent directors in the board (*Ind_per*) and with the intensity of monitoring activity by the audit committee (*a_meet*). Therefore being

forced to use a pessimistic tone, the Author uses insider trading to send a signal to outside market participants as the insider trading can smooth the negative consequence of the tone Author is forced to use in the LTS.

Models [3] and [4] do not show any significant association between insider trading of the Author after the release of the LTS and the net optimism in the LTS. This result reflects that the Author does not consider what she has previously written in the LTS and bases her trading activity on information other than qualitative disclosure.

[INSERT TABLE 5 ABOUT HERE]

Table 6 presents the results of multivariate regressions before and after the release of the LTS for Directors. Models [1] and [2] do not evidence any statistical significant association between insider trading of Directors and net optimism in the LTS. The non-statistical significance of this association might reflect that they have no control on the content and the tone of the LTS, thus none of the two behaviors can be put in place for board member before the release of the LTS. When we focus on the period after the release of the LTS, Models [3] and [4] show a statistical significant association between firm's share trading by Directors and the level of net optimism in the LTS. This negative association means that Directors sell shares (low *RNST_dir_2q* or *ANST_dir_2q*) after a release of a more optimistic letter (high *NETOPT*) or, on the other side, insiders are more likely to buy shares (high *RNST_dir_2q* or *ANST_dir_2q*) when the LTS has a less optimistic tone (low *NETOPT*). As in the previous analyses, this relationships hold also controlling for the monitoring activity

conducted by the board or by dedicated board committees, earnings management practices, actual results and for unexpected optimism in the LTS due to future performance. Therefore we can sustain that, after the release of the LTS, insider trading by Directors in not aligned with the disclosure tone of the LTS but with insider trading by the Author of the LTS during the period before the release of the LTS. For insiders, the costly signal of insider trading dominates the cheap signal of the LTS.

[INSERT TABLE 6 ABOUT HERE]

5. ROBUSTNESS TESTS[3]

We conduct some tests to check for the robustness of our results. First we use an alternative measure for qualitative disclosure. Following Garcia-Osma and Guillamon-Saorin (2011), we argue that Author may manipulate qualitative disclosure in three ways other than disclosure tone by: (*i*) emphasizing positive information (emphasis); (*ii*) repeating positive information in the LTS (repetition); and (*iii*) reinforcing positive information (reinforcement). We develop other measures for qualitative disclosure considering the emphasis dimension (we classify information contained only in the phrases of the first two paragraphs of the LTS), the repetition dimension (we calculate the weighted optimism and weighted net optimism weighting more the same information if it is repeated throughout the LTS), and the reinforcement dimension (we calculate the weighted optimism and weighted net optimism considering any qualifier - such as superlatives, adjectives and/or adverbs - added to a

[3] Results of the robustness tests are available from the Authors upon request.

relevant keyword to emphasize / reinforce its connotation such as *very* positive, *big* success, *significant* increase). We replicate our regression analyses using different measures for qualitative disclosure and the main relationship between disclosure and insider trading was not affected. Finally, instead of using Panel regression models, we run OLS regression model with time dummies and standard errors clustered at the firm level. Results are substantially unchanged.

6. DISCUSSION AND CONCLUSIONS

Existing literature extensively investigates if narrative un-verifiable disclosure (qualitative disclosure) provides incremental information or increases the opacity to investors. Empirical studies consistently provide evidence that qualitative disclosure is perceived useful by market participants as it has a significant effect in analyst forecast revision and on share prices. But these results leave unanswered the question whether managers come up with qualitative disclosure to inform or mislead investors. To deal with this issue, it is necessary a research design able to disentangle whether qualitative disclosure truthfully represents the expectations about the outlook of the disclosing firm that managers or directors have. Grounding on signaling theory, we consider two different signals coming from the same person: the first signal is costly (insider trading) while the second signal is a cheap talk (qualitative disclosure). We conduct our analysis in an empirical setting where it is clearly identifiable the link between qualitative disclosure and the single person and where the cheap talk is "really cheap". Our results suggest that even when incentives to being involved in

insider trading are low and when narrative un-verifiable disclosure is a cheap talk, the persons responsible for the disclosure use qualitative disclosure to mislead investors and not to offer incremental information, irrespective on how this disclosure is considered by market participants.

If we consider the results of regression models, we have evidence that LTS with higher (lower) net optimistic tone are more likely to be written when the Author is selling (buying) firm shares. Authors are sending two signals with different content: in the first case (buying shares and low net optimism) the costly signal implies that the Author is expecting better future outlook because she is buying shares while the cheap public signal shows that she is not in a position to be optimistic in the LTS. Because disclosure tone is positively related to past performance and negatively related to the monitoring activity by independent and board committee (audit committee), we explain this not coherent behavior with the impossibility to be optimistic due to pat results and the monitoring activity. Therefore being forced to use a pessimistic tone, the Author uses insider trading to send a signal to outside market participants as insider trading can smooth the negative consequence of the not optimistic tone that the Author is forced to use in the LTS. In the second case (selling shares and high net optimism) the costly signal implies that the Author is expecting a worsening in the future outlook because she is selling shares while the cheap signal she wants to offer to investors a good image of the firm. This second behavior presents an ethical issue since the Author is using the public signal to cheat investors sending a message not-related with her truthfully expectations about the future. The results of the insider trading of the Author after the release of the LTS strengthen these results since insider trading is no more associated with

the content of the LTS and therefore with the information became public. We also find the Directors (board members other than Author and her family members) are involved in insider trading in a way different from the Author. Before the release of the LTS, we find that insider trading of Directors is not associated with the disclosure tone in the LTS, showing that they do not follow the insider trading of the Author. The results for the period after the release of the LTS are more interesting since our models show that Directors do not make insider trading following the disclosure in the LTS but the replicate the insider trading that Authors had put in place before the release of the LTS. Directors follow the costly instead of the cheap signal of the Author.

Our results raise significant concerns about the informative role of the qualitative disclosure in the LTS and, therefore, about the role of the LTS inside the reporting package of a firm. Existing results also question the informativeness of qualitative disclosure since it is found not coherent with the costly signal sent from the same person having the same set of information.

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Figure 1
The research design

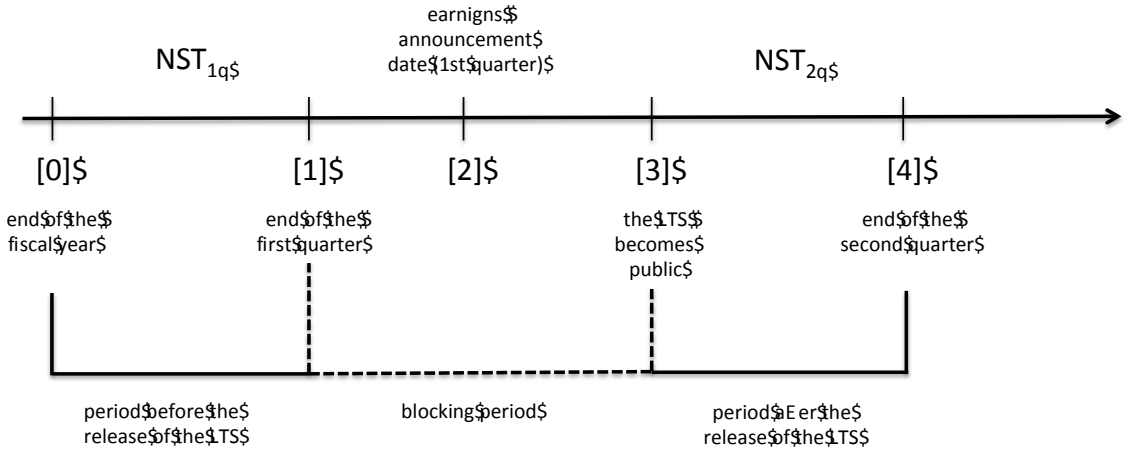

Table 1
Sample selection

Firm year observations	
Firms listed in the Milano Stock Exchange presenting the Letter to Shareholders in the Annual report (period 2008 – 2010)	253
Minus	
Firms without trading data by board members	(36)
Firms without financial and governance data	(26)
Final sample for insider trading by board members (Firms with letter to shareholder, trading data by board members and financial and governance data)	**191**
Firms without trading data of the Author	(5)
Final sample for insider trading of the Author (Firms with letter to shareholder, trading data of the Author and financial and governance data	**186**

Table 2
Authors

Panel A : *Ownership data*

variable	N	mean	sd	Min	p25	p50	p75	Max
au_1q	186	32.7	29.8	0	.0219	43	60.3	75.3
v_au_1q	186	276,397	776,943	0	856	27,117	219,855	6,291,338
v_au_tr_1q	186	4,157	52,860	-21,888	0	0	0	32,884
au_2q	186	32.8	29.8	0	.0219	43	61.3	75.3
v_au_2q	186	278,285	765,664	0	769	28,374	229,176	6,342,934
v_au_tr_2q	186	244	2,590	-5,183	0	0	0	10,764

Panel B : *Insider trading data*

variable	N	mean	sd	Min	p25	p50	p75	Max
ANST_au_1q	186	.00386	.0438	-.00204	0	0	0	.0587
RNST_au_1q	186	.0349	.362	-.0219	0	0	0	2.09
ANST_au_2q	186	.000534	.00482	-.0101	0	0	0	.0338
RNST_au_2q	186	.000609	.0139	-.0292	0	0	0	.0515

au_1q = % of shares, directly or indirectly, held by authors in the first quarter (before the release of the letter to shareholder); *v_au_1q* = value of shares (000), directly or indirectly, held by authors in the first quarter (before the release of the letter to shareholder); *v_au_tr_1q* = value of share (000) traded by authors in the first quarter (before the release of the letter to shareholder); *au_2q* = % of shares, directly or indirectly, held by authors in the second quarter (after the release of the letter to shareholder); *v_au_2q* = value of shares (000), directly or indirectly, held by authors in the second quarter (after the release of the letter to shareholder); *v_au_tr_2q* = value of share (000) traded by authors in the second quarter (after the release of the letter to shareholder); *ANST_au_1q* = absolute net share traded by authors in the first quarter (before the release of the letter to shareholder); *RNST_au_1q* = relative net share traded by authors in the first quarter (before the release of the letter to shareholder); *ANST_au_2q* = absolute net share traded by authors in the second quarter (after the release of the letter to shareholder); *RNST_au_2q* = relative net share traded by authors in the second quarter (after the release of the letter to shareholder).

Table 3
Insiders

Panel A : *Ownership data*

variable	N	mean	sd	Min	p25	p50	p75	Max
in_1q	191	60.2	17	5.56	53.1	61.7	72.6	91.9
v_dir_1q	191	1,538,482	4,266,402	5,685	67,826	275,904	1,017,015	3.08e+07
v_dir_tr_1q	191	-5,550	134,463	-640,746	0	0	0	672,390
in_2q	191	60.3	17.4	5.32	53.1	61.3	72.8	95.6
v_dir_2q	191	1,507,582	4,084,985	5,140	79,880	263,764	987,575	2.87e+07
v_dir_tr_2q	191	-2,388	232,009	-526,111	-716	0	1,912	235,947

Panel B : *Insider trading data*

variable	N	mean	sd	Min	p25	p50	p75	Max
ANST_dir_1q	191	.00727	.0728	-.227	0	0	0	.592
RNST_dir_1q	191	.0129	.154	-.324	-1.71e-06	0	0	1
ANST_dir_2q	191	-.00185	.0681	-.532	-.00211	0	.00556	.247
RNST_dir_2q	191	.00272	.102	-.48	-.00356	0	.0105	.572

in_1q = % of shares, directly or indirectly, held by directors in the first quarter (before the release of the letter to shareholder); *v_dir_1q* = value of share (millions), directly or indirectly, held by directors in the first quarter (before the release of the letter to shareholder); *v_dir_tr_1q* = value of share (millions) traded by directors in the first quarter (before the release of the letter to shareholder); *in_2q* = % of shares, directly or indirectly, held by directors in the second quarter (after the release of the letter to shareholder); *v_dir_2q* = value of share (millions), directly or indirectly, held by directors in the second quarter (after the release of the letter to shareholder); *v_dir_tr_2q* = value of share (millions) traded by directors in the second quarter (after the release of the letter to shareholder); *ANST_dir_1q* = absolute net share traded by directors in the first quarter (before the release of the letter to shareholder); *RNST_dir_1q* = relative net share traded by directors in the first quarter (before the release of the letter to shareholder); *ANST_dir_2q* = absolute net share traded by directors in the second quarter (after the release of the letter to shareholder); *RNST_dir_2q* = relative net share traded by directors in the second quarter (after the release of the letter to shareholder);

Table 4
Disclosure and control variables

Panel A : *Disclosure variables*

variable	N	mean	sd	Min	p25	p50	p75	Max
opt	191	9.25	6.5	0	5	8	11	34
netopt	191	6.49	6.67	-9	2	6	9	33

Panel B : *Control variables*

variable	N	mean	sd	Min	p25	p50	p75	Max
aut_shareh	191	.581	.495	0	0	1	1	1
ros	191	-.0415	1.01	-7.85	.0195	.0793	.128	.546
ear_man	191	.118	1.2	-1.65	-.0282	.00705	.0436	9.53
lb_size	191	2.39	.3	1.61	2.2	2.3	2.64	3.09
ind_per	191	.424	.163	.111	.3	.429	.545	.889
d_ceo	191	.277	.449	0	0	0	1	1
a_meet	191	5.88	3.54	0	4	5	8	20
b_meet	191	9.08	3.3	2.48	7	9	11	20
age	191	59.2	8.81	38	53	61	66	78
skill	191	.304	.461	0	0	0	1	1
interlocks	191	1.21	1.67	0	0	1	2	8
lcomp	191	6.53	1.08	3.95	5.69	6.71	7.29	8.69
delta_prof	191	3.42	41.9	-3.4	-.335	-.0399	.146	61.9

opt = ratio between the total number of sentences with optimistic tone and total sentences of the letter to shareholder; *netopt* = total number of sentences with optimistic tone on the total sentences in the letter to shareholder minus the total number of sentences with pessimistic tone on the total sentences in the letter to shareholder; *aut_shareh* = 1 when the author is one of the controlling shareholders, 0 otherwise; *ros* = return on sale (in case of financial institutions, replaced by intermediation margin) of the same fiscal year of the letter to shareholder; *ear_man* = earnings management (abnormal working capital accruals); *lb_size* = logarithm of the number of directors; *ind_per* = % of independent directors on the board; *d_ceo* = 1 when the board chairperson is also the CEO, 0 otherwise*; a_meet* = number of board meeting; *b_meet* = number of audit committee meetings; *age* = age of the author; *skill* = 1 when the author holds an MBA, a legal degree or has financial expertise; *interlocks* = number of interlocking directorship of the author; *lcomp* = natural logarithm of the total cash compensation (salary, performance bonuses and benefits) of the author; *delta_prof* = change in return on sale over the first two quarters after the end of the fiscal years to which the letter refers divided by the share price at the beginning of the period.

Table 5
Regression Results: insider trading of the Author

NET OPTIMISM				
	Model [1]	Model [2]	Model [3]	Model [4]
ANST_au_1q	-10.54***			
	[0.001]			
RNST_au_1q		-1.052**		
		[0.014]		
ANST_au_2q			-27.07	
			[0.651]	
RNST_au_2q				20.20
				[0.227]
aut_shareh	-3.240**	-3.228**	-3.262**	-3.297**
	[0.018]	*[0.018]*	*[0.016]*	*[0.015]*
ros	1.416***	1.441***	1.444***	1.464***
	[0.000]	*[0.000]*	*[0.000]*	*[0.000]*
ear_man	0.727**	0.755***	0.746***	0.775***
	[0.010]	*[0.007]*	*[0.006]*	*[0.003]*
lb_size	-2.506	-2.569	-2.789	-2.711
	[0.260]	*[0.246]*	*[0.205]*	*[0.219]*
ind_per	-5.813**	-5.733**	-5.387**	-5.538**
	[0.024]	*[0.026]*	*[0.034]*	*[0.030]*
d_ceo	1.436	1.421	1.600	1.438
	[0.252]	*[0.256]*	*[0.227]*	*[0.274]*
a_meet	-0.603***	-0.608***	0.643***	0.649***
	[0.002]	*[0.002]*	*[0.001]*	*[0.001]*
b_meet	0.143	0.141	0.113	0.109
	[0.490]	*[0.502]*	*[0.585]*	*[0.597]*
age	0.0368	0.0372	0.0382	0.0419
	[0.564]	*[0.562]*	*[0.550]*	*[0.511]*
skill	-0.051	-0.0238	-0.162	-0.0899
	[0.967]	*[0.985]*	*[0.893]*	*[0.940]*
interlocks	0.442	0.431	0.403	0.389
	[0.274]	*[0.286]*	*[0.297]*	*[0.317]*
lcomp	1.233***	1.232***	1.222***	1.229***
	[0.009]	*[0.009]*	*[0.010]*	*[0.010]*
delta_prof	-0.0003	-0.0005	-0.0003	-0.0009
	[0.870]	*[0.827]*	*[0.890]*	*[0.664]*
constant	1.037	1.115	1.577	1.227
	[0.883]	*[0.876]*	*[0.825]*	*[0.862]*
Observations	186	186	186	186
Wald chi(2)	255.14	174.24	39.36	39.38
p-value	0.000	9.52e-30	0.000320	0.000318

p-values in brackets
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Year dummy = YES
Net optimism = total number of sentences with optimistic tone on the total sentences in the letter to shareholder minus the total number of sentences with pessimistic tone on the total sentences in the letter to shareholder; *ANST_au_1q* = absolute net share traded by authors in the first quarter (before the release of the letter to shareholder); *RNST_au_1q* = relative net share traded by authors in the first quarter (before the release of the letter to shareholder); *ANST_au_2q* = absolute net share traded by authors in the second quarter (after the release of the letter to shareholder); *RNST_au_2q* = relative net share traded by authors in the second quarter (after the release of the letter to shareholder); *aut_shareh* = 1 when the author is one of the controlling shareholders, 0 otherwise; *ros* = return on sale (in case of financial institutions, replaced by intermediation margin) of the same fiscal year of the letter to shareholder; *ear_man* = earnings management (abnormal working capital accruals); *lb_size* = logarithm of the number of directors; *ind_per* = % of independent directors on the board; *d_ceo* = 1 when the board chairperson is also the CEO, 0 otherwise*; a_meet* = number of board meeting;

b_meet = number of audit committee meetings; *age* = age of the author; *skill* = 1 when the author holds an MBA, a legal degree or has financial expertise; *interlocks* = number of interlocking directorship of the author; *lcomp* = natural logarithm of the total cash compensation (salary, performance bonuses and benefits) of the author; *delta_prof* = change in return on sale over the first two quarters after the end of the fiscal years to which the letter refers divided by the share price at the beginning of the period.

Table 6
Regression Results: insider trading of Directors

NET OPTIMISM				
	Model [1]	Model [2]	Model [3]	Model [4]
ANST_dir_1q	0.147			
	[0.982]			
RNST_dir_1q		1.322		
		[0.573]		
ANST_dir_2q			-12.71**	
			[0.013]	
RNST_dir_2q				-7.478**
				[0.017]
aut_shareh	-3.044**	-3.118**	-3.147**	-3.115**
	[0.027]	*[0.023]*	*[0.019]*	*[0.019]*
ros	1.290***	1.300***	2.393***	1.911***
	[0.007]	*[0.008]*	*[0.003]*	*[0.002]*
ear_man	0.654**	0.661**	1.667***	1.196***
	[0.042]	*[0.043]*	*[0.009]*	*[0.007]*
lb_size	-2.105	-2.132	-2.238	-2.112
	[0.313]	*[0.307]*	*[0.271]*	*[0.294]*
ind_per	-5.277**	-5.371**	-4.996*	-4.874*
	[0.049]	*[0.046]*	*[0.060]*	*[0.067]*
d_ceo	1.667	1.624	1.310	1.472
	[0.190]	*[0.193]*	*[0.280]*	*[0.223]*
a_meet	0.557***	0.557***	0.551***	0.539***
	[0.007]	*[0.006]*	*[0.005]*	*[0.007]*
b_meet	0.0910	0.0879	0.0840	0.0999
	[0.664]	*[0.672]*	*[0.687]*	*[0.631]*
age	0.0370	0.0327	0.0166	0.0267
	[0.557]	*[0.609]*	*[0.793]*	*[0.668]*
skill	0.553	0.569	0.596	0.613
	[0.635]	*[0.626]*	*[0.600]*	*[0.585]*
interlocks	0.293	0.291	0.356	0.301
	[0.416]	*[0.402]*	*[0.271]*	*[0.365]*
lcomp	1.010**	1.055**	0.883*	0.890*
	[0.050]	*[0.038]*	*[0.075]*	*[0.069]*
delta_prof	-0.000312	-0.000465	-0.000594	-0.000133
	[0.888]	*[0.828]*	*[0.799]*	*[0.962]*
constant	1.657	1.793	3.974	2.988
	[0.818]	*[0.804]*	*[0.579]*	*[0.671]*
Observations	191	191	191	191
Wald Chi2	30.92	30.18	32.74	33.52
p-value	0.00569	0.00721	0.00314	0.00242

p-values in brackets
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Year dummy = YES

Net optimism = total number of sentences with optimistic tone on the total sentences in the letter to shareholder minus the total number of sentences with pessimistic tone on the total sentences in the letter to shareholder; *ANST_dir_1q* = absolute net share traded by directors in the first quarter (before the release of the letter to shareholder); *RNST_dir_1q* = relative net share traded by directors in the first quarter (before the release of the letter to shareholder); *ANST_dir_2q* = absolute net share traded by directors in the second quarter (after the release of the letter to shareholder); *RNST_dir_2q* = relative net share traded by directors in the second quarter (after the release of the letter to shareholder); *aut_shareh* = 1 when the author is one of the controlling shareholders, 0 otherwise; *ros* = return on sale (in case of financial institutions, replaced by intermediation margin) of the same fiscal year of the letter to shareholder; *ear_man* = earnings

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