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THE INFORMATIONAL ROLE OF FINANCIAL ANALYSTS

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THE INFORMATIONAL ROLE OF FINANCIAL ANALYSTS

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Περίληψη

Σε αυτή την διατριβή εξετάζεται ο ρόλος των χρηματοοικονομικών αναλυτών στις κεφαλαιαγορές. Εξετάζονται τρία διαφορετικά θέματα: πρώτον, ο ρόλος των χρηματοοικονομικών αναλυτών στις κεφαλαιαγορές σε σχέση με την ύπαρξη περισσότερης πληροφόρησης εκ μέρους των εταιριών, δεύτερον, το κίνητρό τους να αποκρύπτουν τις αρνητικές μελλοντικές προσδοκίες τους για μια εταιρία, όταν αποφασίζουν την διακοπή παροχής έρευνας, και τέλος την βραχυχρόνια έρευνα των αναλυτών που αυξάνει το επίπεδο πληροφόρησης της μακροπρόθεσμης έρευνας.

Τα αποτελέσματα της σχετικής βιβλιογραφίας είναι ανάμικτα καθώς έχουν προταθεί δύο διαφορετικοί ρόλοι τους οποίους κατέχουν οι χρηματοοικονομικοί αναλυτές στις κεφαλαιαγορές. Πρώτον, οι αναλυτές μπορεί να δρουν σαν «αγωγοί πληροφόρησης», υποδηλώνοντας την ύπαρξη θετικής σχέσης μεταξύ εταιρικής πληροφόρησης και πληροφόρησης εκ μέρους των αναλυτών. Δεύτερον, οι αναλυτές μπορεί να δρουν σαν «πάροχοι πληροφόρησης» υποκαθιστώντας την εταιρική πληροφορία. Η έλλειψη συνεπούς εξήγησης σχετικά με το ρόλο των αναλυτών τονίζει την ανάγκη για επιπρόσθετα στοιχεία που θα συνδράμουν στην καλύτερη κατανόηση σχετικά με το σημαντικό ρόλο που έχουν οι αναλυτές στην διάδοση πληροφοριών, καθώς και σχετικά με την υποκείμενη πηγή της πληροφόρησής τους. Το πλεονέκτημα αυτής της μελέτης είναι ότι χρησιμοποιεί την υποχρεωτική μετάβαση στα ΔΛΠ που πραγματοποιήθηκε το 2005, ως ένα εξωγενές σοκ στην πληροφόρηση που παρέχουν οι εταιρίες και συνεπώς, δίνει τη δυνατότητα να εντοπίσουμε την κύρια πηγή πληροφόρησης των αναλυτών χωρίς την ύπαρξη χρονικών προϋποθέσεων.

Δεύτερον, αυτή η μελέτη λαμβάνει υπόψη τις πρόσφατες ρυθμιστικές τροπολογίες εκ μέρους της Επιτροπής Κεφαλαιαγοράς της Αμερικής, η οποία (α) απαιτεί από τους αναλυτές να ανακοινώνουν τον τερματισμό της ερευνητικής κάλυψης, όταν προτίθενται να σταματήσουν την παροχή έρευνας για μια εταιρία, και (β) στοχεύει στην ενίσχυση της σχετικότητας της έρευνάς τους. Σε αυτή τη μελέτη, διερευνάται αν οι ανακοινώσεις τερματισμού ερευνητικής κάλυψης είναι τόσο πληροφοριακές όσο αναμένει η Επιτροπή Κεφαλαιαγοράς, εστιάζοντας σε ένα δείγμα που αποδίδει την απόφαση τερματισμού στην ανάγκη ανακατανομής πόρων. Αυτή είναι η πρώτη μελέτη που προσδιορίζει το συμβάν τερματισμού κάλυψης και εξετάζει την αντίδραση της αγοράς στην ανακοίνωσή του. Επιπλέον, η μελέτη χρησιμοποιεί ένα μοναδικό αλγόριθμο για να διαχωρίσει τους εξωγενείς από τους ενδογενείς τερματισμούς,

καθώς η μείωση της κάλυψης των αναλυτών μπορεί να οφείλεται σε άλλους λόγους πέραν των αρνητικών προσδοκιών των αναλυτών. Μέσα από αυτό το διαχωρισμό, η μελέτη έχει στοχεύει να παράσχει ενδείξεις σχετικά με την ικανότητα των αναλυτών να παρουσιάζουν τον ενδογενή τερματισμό ως εξωγενή, με σκοπό να αποκρύψουν τις αρνητικές προσδοκίες τους για μια επιχείρηση, επηρεάζοντας σημαντικά τη μελλοντική κερδοφορία των επενδυτών.

Τέλος, αυτή η διατριβή παρέχει στοιχεία για το νέο προϊόν της έρευνας των αναλυτών το οποίο αναφέρεται σε βραχυχρόνια παροχή επενδυτικών συμβουλών για διάστημα έως και δύο μήνες. Η σημασία και το επίπεδο πληροφόρησης των βραχυπρόθεσμων επενδυτικών συμβουλών καθώς και η συμβολή τους στη διαμόρφωση των μακροπρόθεσμων ερευνών έχουν παραμείνει σε μεγάλο βαθμό ανεξερεύνητα. Αντίθετα με τις προβλέψεις κερδών και τις προτάσεις μετοχών, η βραχυπρόθεσμη έρευνα συνδέεται με μια «ημερομηνία λήξης», η οποία συμβάλει στην ευκολότερη ερμηνεία από τους επενδυτές, κινεί σημαντικά τις τιμές και θα μπορούσε να αυξήσει και να εξυπηρετήσει τα κίνητρα των αναλυτών μέσω της επιλεκτικής πληροφόρησης. Επιπλέον, δεδομένου ότι οι βραχυπρόθεσμες συμβουλές μπορεί να είναι αντίθετες από τις μακροπρόθεσμες προτάσεις των αναλυτών, η μελέτη αυτή έχει ως στόχο να εξετάσει τη δυνατότητα πρόβλεψης της επερχόμενης μακροπρόθεσμης έρευνας. Η μελέτη αυτή λαμβάνει επίσης υπόψη την πρόσφατη μετάβαση σε μικρότερο εύρος κατηγοριών στις προτάσεις των αναλυτών, το οποίο έχει μειώσει την πληροφόρηση της έρευνας, και εξετάζει κατά πόσο το νέο προϊόν έρευνας για μικρότερο διάστημα από αυτό των προτάσεων μετοχών θα μπορούσε να αυξήσει σημαντικά το επίπεδο πληροφόρησης της μακροπρόθεσμης έρευνας.

Abstract

In this dissertation, I examine the informational role of sell-side financial analysts in capital markets. Three different issues are examined; firstly, the role of financial analysts in capital markets with respect to enhanced corporate disclosure, secondly, their incentive to withhold their negative expectations when terminating research coverage, and finally analysts' short-term research enhancing the informativeness of long-run research.

The related research results are mixed as they propose two different roles analysts play in capital markets. First, analysts may act as information intermediaries suggesting a positive relation between corporate disclosure and analysts' informativeness. Second, analysts may act as information providers substituting firm disclosure. The lack of a consistent explanation regarding analysts' role highlights the need for additional evidence to improve our understanding regarding the important role analysts play in information dissemination as well as the underlying source of their informational advantage. The advantage of this study is that it uses the mandatory switch to IFRS in 2005 as an exogenous shock to the information environment of the firm and therefore enables us to capture the predominant source of analysts' informativeness without conditioning on timing or promptness factors.

Secondly, this study takes into consideration recent regulatory amendments on behalf of the SEC that (a) require analysts to provide a notice of termination coverage when they intend to stop providing research on a firm, and (b) aim to enhance the relevance of analysts research. In this study, we investigate whether analysts' terminations are as informative as the SEC expects them to be by focusing on a sample that attributes the termination decision to the resources reallocation need. This is the first study that clearly identifies the termination event and examines the market reaction to a termination announcement. Moreover, the study employs a unique classification algorithm to separate exogenous from endogenous terminations, as drops in analyst coverage may be due to reasons other than analysts' negative expectations. Through this separation, this study aims to provide evidence on analysts' ability to mask an endogenous termination as exogenous in order to hide their negative expectations on a firm, significantly affecting the future profitability of investors.

Finally, this dissertation provides new evidence on analysts' new research product which refers to short-run investment advice of maximum two months. The importance and

informativeness of short-term trading tips as well as their contribution in the formation of long-term research have remained largely unexplored. Unlike earnings forecasts and stock recommendations, short-run research is associated with an end date, which suggests an easier interpretation by investors, price moving and could potentially increase analysts' trading incentive through selective disclosure. Moreover, given that short-term tips may be contrary to the long-run recommendation, this study aims to examine the possibility of their predictive power towards upcoming long-run research. This study also takes into consideration the recent transition to coarser recommendation grids that have decreased the informativeness of research, and investigates whether a research product in an interval shorter than that of recommendations could significantly increase the informativeness of long term views.

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Dedication

To my parents, Babis and Sofia

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CHAPTER 1

Financial Analyst Stock Recommendations and Corporate Disclosures: Complements or Substitutes?

Abstract

Prior research provides mixed evidence on whether financial analysts generate new information or whether they merely interpret and repackage publicly available information. These studies examine this question around corporate disclosure events which constrain the analysis on their occurrence, relevance and timing. In contrast, the overall enhancement in the firm's information environment associated with the European mandated switch to IFRS, and its related effects on the legal environment, enable us to infer which of the two roles analysts predominantly serve. Using a dataset of 10,744 analyst stock recommendation revisions we document a significant increase in the informativeness of both stock upgrades and downgrades in the post-IFRS period providing evidence that their informational value stems mainly from analysts' ability to interpret publicly available information rather than to generate new information. In line with related research, we also document that this increase is more pronounced for firms in strong enforcement environments. We do not find similar changes in the informativeness of analyst recommendations for a control sample of firms that had voluntarily adopted IFRS, or for a sample of US firms alleviating concerns that our results are affected by other confounding events. Overall, our evidence highlights the complementarity rather than the substitution relation between stock recommendations and corporate disclosures.

Financial Analyst Stock Recommendations and Corporate Disclosures: Complements or Substitutes?

1. Introduction

Financial analysts are an integral part of capital markets. Even though analyst research reports exhibit significant information content, the literature has not provided a consistent explanation regarding the underlying source of their informativeness. Lang and Lundholm (1996) propose two different roles analysts play in capital markets. First, analysts may act as information intermediaries, i.e., they merely interpret and repackage firm provided information. In this case, firm disclosures and analyst research output are complementary sources of information implying a strong and positive association between the informativeness of analysts' reports and the quality of firm public disclosures. Second, analysts may act as information providers, i.e., through their own research they provide new information to the market. Firm disclosures and analyst research output are therefore substitute sources of information suggesting that analysts' research is more informative when their ability to generate new information is enhanced, i.e., when firm disclosure quality is low. Ramnath, Rock, and Shane (2008) call for more research in the area to improve our understanding on the underlying source of analysts' informational advantage.

A possible explanation for the inability of extant research to provide consistent results may be the fact that related studies examine the informational value of analyst research in an otherwise constant information environment that prompts them to perform the analysis around specific firm disclosure events, such as earnings announcements. In this design inferences are, inevitably, closely related to the characteristics of the event studied, such as the regularity of its occurrence, its timing or relevance. This paper exploits the European-wide mandated switch to IFRS which, along with any other changes in the legal environment it may have triggered,¹ increase the quality and quantity of publicly available information substantially. This overall enhancement in corporate disclosure provides a unique opportunity to capture

¹ Throughout this study the reference to the mandatory IFRS switch is used as a generic event to capture the timing of a significant change in the firm's information environment that may have resulted either from the move to IFRS as a large body of related literature argues, or from other concurrent events in the firm's legal and institutional environment as promulgated by another (see for example, Christensen, Hail and Leuz, 2013). The design of this study is based on the observed and undisputed financial benefits observed in the post-IFRS period as documented by related research irrespective of the underlying cause responsible for the change.

changes in the informativeness of analyst research eliminating the need to condition analysis on the occurrence, timing, or relevance of a firm specific event, allowing us, in turn, to infer the average, or predominant role analysts play in capital markets.

We posit that if analysts act primarily as information interpreters, i.e., their research output complements financial reporting, increased public disclosure should enhance the quality of analysts output and this in turn should lead to an increase in the informativeness of analyst recommendations (the *complementarity hypothesis*). If, on the other hand, public disclosure and analyst output are substitute sources of information, i.e., analysts act primarily as information providers, new public information should render analyst output less relevant decreasing the informativeness of their recommendations (the *substitution hypothesis*). If the former (latter) effect dominates the latter (former), we expect the stock price response to analyst output to increase (decrease) in the post-IFRS period.

Our main dataset consists of 10,744 recommendation revisions for EU firms that mandatorily switched to IFRS with 5,972 (4,772) recommendations issued in the pre- (post-) IFRS period. Our results suggest that the market reaction to a recommendation revision announcement is stronger in the post-IFRS period. Specifically, the three-day abnormal return around the issuance of the recommendation is more positive for upgrades and more negative for downgrades, indicating that enhanced disclosure increases the informativeness of analyst stock recommendations. In the Lang and Lundholm (1996) framework, these findings suggest that financial analysts act mostly as information interpreters rather than as information providers and highlight the complementarity relation between stock recommendations and corporate disclosure. For both stock upgrades and downgrades, and consistent with prior research, our results also suggest that the complementarity effect is more pronounced in countries with a strong level of legal enforcement. We conjecture that strong legal enforcement enhances the credibility of IFRS adoption, increasing in turn, the informativeness of analyst stock recommendations.

To mitigate concerns that our results are affected by events other than those associated with the mandated IFRS switch, our methodological design implements a difference-in-differences approach. Specifically, we benchmark the analysis, first on a sample of firms from countries with strong enforcement environments, which had voluntarily adopted IFRS and second, by a

sample of US firms.² We do not find that the informativeness of recommendations is changed around the mandated IFRS switch for either control sample. This evidence suggests that the documented increase in recommendation informativeness for the mandatory sample is not driven by other confounding events.

Finally, we perform a number of additional sensitivity analyses to examine the robustness of our results. First, we compare the informativeness of recommendations released in a 6-week period before to a 6-week period after corporate earnings announcements. We find that for both upgrades and downgrades analyst recommendations elicit a stronger market reaction in the period following, but not the period preceding, earnings announcements. This evidence reaffirms the main conclusions of the paper in support of the complementarity hypothesis and alleviates concerns that the documented increase in recommendation informativeness may, instead, stem from analysts exerting more effort in the post-IFRS period. We also find that our results are not sensitive to: (a) including in the control sample voluntary adopters from low enforcement environments, (b) using US value-weighted index returns as an additional control variable, and (c) different model specifications.

In short, our results suggest that the informativeness of analyst recommendations stems mainly from their ability to interpret publicly available information in line with the evidence in Lang and Lundholm (1996), Francis, Schipper and Vincent (2002) and Livnat and Zhang (2012). Even though other research has shown that there are events or periods in a firm's financial year during which the information discovery role of analysts is more evident (see for example, Chen, Cheng and Lo, 2010), our results provide consistent evidence in support of the complementarity relation even when the analysis is performed around the earnings announcement event.

The remainder of the paper is organized as follows: Section 2 discusses related literature and provides a framework for developing the study's basic expectations. Section 3 presents the methodology and describes the data, Section 4 discusses the empirical results and Section 5 concludes.

² To the extent that disclosure quality of voluntary adopters is also enhanced in the post-IFRS period due to concurrent changes in country enforcement levels, (Soderstrom and Sun, 2007; Christensen, et al., 2013) we should not be able to document differences in the informativeness of recommendations for our treatment firms biasing against finding results under both competing explanations.

2. Related research and expectations

2.1 Related research and contribution:

Even though there is general agreement on the important role that financial analysts play in capital markets, the underlying source of their research informativeness is still an open empirical question.³ In general, the literature has acknowledged, but has not provided consistent evidence on, the two potential drivers of analysts' informational advantage. First, the informativeness of analyst research may stem from their ability to interpret and repackage public information or, second, from providing new information to the market (Lang and Lundholm, 1996). Under the first explanation, analyst research and firm provided disclosures serve as complementary, while under the second, as substitute sources of information. Even though, Asquith, Mikhail and Au (2005) find evidence supporting both roles, other studies provide support for either one or the other.

The substitution relation between public disclosure and private information acquisition has been suggested in the analytical literature which predicts that the market's reaction to analyst recommendations should decrease in the quality of public information available to the market, (Verrecchia, 1982; Holthausen and Verrecchia, 1988; Kim and Verrecchia, 1991; Demski and Feltham, 1994), which in turn, should result in reduced incentives for private information acquisition (Diamond, 1985). Earlier empirical work provides support for these predictions. Dempsey (1989) and Shores (1990), for example, find that the information content of earnings announcements decreases with analyst following while Ayers and Freeman (2003) find that stock prices of firms with higher analyst following embed more timely information regarding future earnings, consistent with analysts pre-empting the information in earnings. Similarly, Ivković and Jegadeesh (2004) and Park and Stice (2000) find that the importance of recommendations and earnings forecasts, respectively, is greater in a period immediately preceding earnings announcements. Similar to Ivković and Jegadeesh (2004), Chen et al. (2010) examine the information content of analyst forecasts and recommendations around corporate earnings announcements to also conclude that the information discovery role of analysts is overall more important than their information interpretation role.

³ On the importance of analyst recommendations in particular, see among others: Womack (1996), Barber, Lehavy, McNichols, and Trueman (2001), (2003), (2006), Jegadeesh and Kim (2006), Howe, Unlu, and Yan (2009), Loh and Stulz (2011).

The competing explanation posits that financial analysts interpret and repackage public information suggesting that analyst research output and firm public disclosures are complementary sources of information. The interpretation role of financial analysts is particularly important given that market participants exhibit different abilities to interpret public announcements (Kim and Verrecchia, 1994; Kandel and Pearson, 1995). The analytical models of Indjejikian (1991) and Harris and Raviv (1993) highlight the complementary nature of information in the markets and the fact that trading among investors is the result of different interpretations of public information announcements. More specific to the present's study research question is the model in Abarbanell, Lanen and Verrecchia (1995), which under the assumption that private information acquisition is endogenous, predicts that information precision increases forecast informativeness.

A number of prior empirical studies provide support for the complementarity hypothesis. Lang and Lundholm (1996) find that analysts tend to follow firms with more forthcoming disclosure policies⁴ while Barron, Byard and Kim (2002) provide empirical support for the theoretical predictions of Kim and Verrecchia (1994, 1997) which posit that accounting disclosures increase the value relevance of information intermediary output. Frankel, Kothari and Weber (2006) find that the informativeness of analyst forecasts is positively related to the timeliness of financial information corroborating the results in Francis et al. (2002) who find that more informative earnings announcements add to the informativeness of subsequent analyst reports. More recently, Lehavy, Li and Merkley (2011) find that the informativeness of analyst reports is increasing in the complexity of the 10-K while Kross and Suk (2012) show that Reg FD increased the importance of public disclosure and improved the quality of analysts' forecasts, suggesting that public disclosure and analysts' information are not in direct competition. To the extent that prompt revisions are more likely to reflect analysts' information interpretation role, Livnat and Zhang (2012) find that analysts forecast revisions are mostly valued by investors when they are issued promptly after corporate disclosures.

The above discussion suggests that related research results are, at best, mixed and highlights the need for more evidence to improve our understanding regarding the important role analysts play in information dissemination and, in particular, the underlying source of their

⁴ The positive relation between analyst following and disclosure quality has been consistently documented by related research, providing further support for the complementarity effect (see among others, Bhushan, 1989; Botosan and Harris, 2000; Lang, Lins and Miller, 2004; Karamanou and Nishiotis, 2009; Bae, Tan and Welker, 2008).

informational advantage. We exploit the European-wide switch to IFRS to re-examine this question in a setting where firm disclosure is significantly enhanced. The mandated switch to an altogether different accounting regime can be viewed as an exogenous shock that affected all publicly traded firms in the EU and had a substantial impact on the amount and quality of disclosed information, irrespective of whether this was due to the adoption of the new accounting regime per se or to changes in the institutional environment that it may have concurrently induced. In the related Directive 1606/2002 the European Union assessed that the move to IFRS would enhance corporate disclosure quality and increase the efficiency of the EU capital markets. This expectation has been confirmed by a vast stream of academic research documenting that in the post-IFRS period firm information environments improve significantly.⁵

In this paper we bring the two research streams together to create a powerful research setting that allows us to provide evidence on the prevalent role that financial analysts play in capital markets. The advantage of our study is that the switch to IFRS produces an exogenous change in the information environment of the firm that alleviates the need to condition the analysis around any firm specific event and therefore enables us to capture the predominant source of their informativeness. As Lo (2012) asserts, examining the informativeness of analyst research output around an event can lead to misleading conclusions as it may, for example, be more efficient for analysts to release their private information after a public disclosure event. Examining the informativeness of analyst recommendations around the IFRS adoption event not only mitigates any bias that can stem from analysts timing the release of their forecasts, but also enables us to utilize a large number of analyst reports which do not center around a specific disclosure event. Unlike earnings forecasts, stock recommendations are not concentrated around a particular firm disclosure event, but rather are spread out throughout a company's financial year. The use of stock recommendations instead of analyst earnings

⁵ Related research has linked the 2005 mandatory IFRS switch to significant enhancements in firm information environments captured by analyst forecast characteristics (Byard, Li and Yu, 2011; Tan, Wang and Welker, 2011; Horton, Serafeim and Serafeim, 2013; Panaretou, Shackleton and Taylor, 2012), cost of capital (Li, 2010; Christensen, Lee and Walker, 2007), the information content of earnings announcements (Landsman, Maydew, and Thornock, 2012; Choi, Peasnell and Toniato, 2013), cross-border information transfers (DeFond, Hu, Hung and Li, 2011; Kim and Li, 2011; Wang, 2011; Florou and Pope, 2012; Yip and Young, 2012), and stock price synchronicity in the long-run (Beuselinck, Joos, Khurana and Van der Meulen, 2010). Refer to Bruggemann, Hitz and Sellhorn (2013) for a review of the extant evidence on the consequences of mandatory IFRS adoption. Brown (2011) provides a comprehensive analysis of the benefits harvested by the IFRS adoption and proposes potential expansions of possible benefits, while Pope and McLeay (2011) review relevant academic evidence on the development, costs and benefits of IFRS adoption in Europe.

forecasts is more suitable for the research question of the current study for two additional reasons. First, the market's strong reliance on stock recommendations upon their release renders them a natural choice as the venue to examine analyst informativeness.⁶ Second, related literature suggests that even though individual investors have difficulty comprehending the meaning of analyst earnings forecasts as this requires an appreciation of how different earnings items can map into future earnings, they do rely on analyst stock recommendations (Malmendier and Shanthikumar, 2007; Mikhail, Walther and Willis, 2007). Hence, the market reaction to stock recommendations reflects their informativeness to the pool of investors without being affected by their level of sophistication.

Finally, even though we do not make an explicit attempt to place our paper in the IFRS literature as it is out of its research scope, we note that the paper adds to the related IFRS literature which has documented the benefits of IFRS adoption to analyst forecast properties. Unlike related research that examines whether analyst forecast attributes have been affected by IFRS, this study examines whether investor reliance on analyst output has changed. Even though the effect of increased disclosure on forecast attributes is, in and of itself, important to examine, such evidence cannot indicate much about the relevance of these changes to the market. Even though more accurate forecasts generally lead to more profitable stock recommendations (Loh and Mian, 2006) whether the informativeness of the recommendations will be affected after a mandated increase in disclosure depends largely on the relation between firm and analyst provided information.

There are two major concerns when using IFRS adoption as an exogenous shock on firm disclosure. First, as Bruggemann et al. (2013) observe, it is difficult to separate the financial effects of IFRS from the effects of concurrent market changes that are unrelated to financial reporting. To address this concern we employ a control sample that comprises of European firms that had voluntarily adopted IFRS prior to the European-wide mandated switch to IFRS (see for example, Horton et al., 2013; Byard et al., 2010; Tan et al., 2011; Wang, Young, and Zhuan, 2008). Under the assumption that the voluntary adoption of IFRS is reliable, changes in the informativeness of recommendations for voluntary adopters around the 2005 mandated IFRS adoption event could either be related to the existence of confounding events unrelated to increases in disclosure or to a more rigorous application of IFRS (Christensen et al., 2013;

⁶ Kadan, Madureira, Wang and Zach, (2009), for example, document 3-day size and industry adjusted returns of 2.2% and -3.97% on the release of buy and sell recommendations, respectively.

Daske, Hail, Leuz, and Verdi, 2008, 2013).⁷ We, therefore, utilize a control sample of voluntary adopters from high enforcement regimes where IFRS adoption is more credible to minimize the effects of the latter, and better capture the effects of the former, explanation.⁸

Second, the accounting literature seems to agree on the important role that reporting incentives play on the quality of financial reporting. Ball, Kothari and Robin (2000), Ball, Robin and Wu (2003), Leuz, Nanda and Wysocki (2003), Ball and Shivakumar (2005), Ball (2006), Burgstahler and Eames (2006), Street and Gray (2001), among others, point to the limited role of accounting standards and highlight the importance of firm reporting incentives and, more specifically, of the institutional environment, in determining observed accounting quality. Holthausen (2009), argues that if in fact enforcement is a significant factor in determining financial reporting outcomes, we should expect differences in the effects of IFRS across countries. Related research supports this conjecture and provides consistent evidence that the effects of the enhanced information environment around the IFRS event are stronger, if not only present, in countries with strong legal enforcement (see among others, Daske et al., 2008; Brown, Preiato, and Tarca, 2009; Byard et al., 2011; Landsman et al., 2012; DeFond et al., 2011; Florou and Pope, 2012). We, accordingly, adjust our research design to examine whether the change in recommendation informativeness is affected by the strength of the country's legal enforcement environment.

2.2 Expectations:

Under the assumption that firm provided disclosures are enhanced in the post-IFRS period the *complementarity hypothesis* posits that the informativeness of analyst recommendations should increase. This is based on the assumption that analysts merely analyze and interpret publicly available information and therefore, their recommendations should be more informative after the switch to an accounting regime that significantly enhances the quality and quantity of firm provided disclosures. On the other hand, under the *substitution hypothesis* the informativeness of stock recommendations is based on analysts' ability to provide new information to the market rendering their recommendations less informative in the presence of enhanced firm disclosure. Thus, if the complementary (substitution) effect dominates the

⁷ The use of voluntary adopters in the control sample has the added advantage that these firms reside in the same countries as the treatment firms alleviating concerns that inferences may be affected by the different institutional and legal environments the two samples operate in. In section 4.4 we drop this requirement and report results using US firms as the control sample.

⁸ Inferences are unchanged when the control sample includes voluntary adopters from all European countries.

relation between analyst and firm provided information the market reaction around analyst recommendation upgrades should be more (less) positive and the reaction for downgrades should be more (less) negative in the post- IFRS period.

3. Methodology and Data

3.1. Regression Model employed

To examine the effect of IFRS adoption on the informativeness of analyst stock recommendations revisions, we run model (1) below, which employs a difference-in-differences approach between mandatory and voluntary adopters of IFRS. All analyses are performed separately for the samples of recommendation upgrades and downgrades (see among others, Barber, Lehavy, and Trueman, 2007; Ivkovic and Jegadeesh, 2004; Barber et al., 2006).

$$CAR = \{IFRS, MAND, IFRS*MAND, REC_CD, MOMENTUM, TOPBROKER, M_B, SIZE, Country\ effects, Industry\ effects, Year\ effects\} \quad (1)$$

Following related research, the informativeness of analyst recommendations is captured by the market reaction around their release. *CAR* is cumulative abnormal returns over the three day window around the recommendation announcement. Daily abnormal returns are adjusted for risk based on the market model estimated using daily returns from 265 to 15 days before the recommendation announcement. To ensure a meaningful estimation of the model's coefficients we require at least 80 daily return observations.

IFRS is an indicator variable which equals 1 when the recommendation revision is issued in the period after the mandatory adoption of IFRS (post-IFRS period) and zero otherwise. We include recommendations that are issued during the 2005 calendar year in the pre-IFRS period as the full impact of IFRS disclosure can only be observed after the release of firm annual reports. Moving the cutoff date back to 30 June, 2005 to account for changes in disclosure of interim reports does not affect inferences (untabulated).

MAND is a dummy variable that takes the value 1 for mandatory and 0 for voluntary adopters. Voluntary adopters are firms that adopted IFRS before 2005. If the change in the recommendation informativeness of mandatory adopters is due to other concurrent regulatory or market-wide events, the informativeness of stock recommendations for voluntary adopters

should be similarly affected. In this case, the coefficient on *IFRS*MAND* should not be significantly different from the coefficient on *IFRS* which captures the change in the informativeness of recommendations for the control sample of voluntary adopters. More importantly, a significant coefficient on *IFRS*MAND* would suggest that the informativeness of stock recommendations for mandatory adopters is different between the pre- and post-IFRS periods.

We also control for a number of variables that are expected to affect the informativeness of analyst stock recommendations. *REC_CD* is the recommendation level and is included in the model on the expectation that the strength of a downgrade or an upgrade differs across the different recommendation categories. We retain the IBES ranking system which is based on 5 distinct recommendation categories with 1 denoting strong buys and 5 strong sells. We expect that for upgrades (downgrades) lower (higher) values of the recommendation rating should result in a more positive (negative) market reaction and therefore the coefficient on *REC_CD* should be negative.

Price momentum, *MOMENTUM*, is calculated as the compounded daily market-adjusted return in the period from 90 days to 1 day before the recommendation announcement. We use price momentum to control for any other information available to the market which can induce analysts to revise their recommendations (see for example, Jegadeesh, Kim, Krusche, and Lee, 2004).

TOPBROKER is an indicator variable taking the value 1 if the recommendation is issued by one of the top 10 brokerage firms based on the rankings of the Institutional Investor magazine. Institutional Investor's "All Europe Research Team" rankings are based on surveying the directors of research and heads of investments at institutions worldwide evaluating each team based on important research attributes, the three most important of which are industry knowledge, integrity and local market knowledge. Barber et al. (2006) find that recommendation announcement returns are greater for larger brokerage houses while Park and Stice (2000) find that superior analyst forecasts have a greater impact on market prices. Similarly, Gleason and Lee (2003) find that forecasts by Institutional Investor All-Star analysts elicit a stronger immediate price response while Loh and Stulz (2011) find that recommendations issued by leader and star analysts are more likely to be influential. We, thus,

expect a stronger market reaction for recommendation revisions issued by the top 10 investment banks.

We use the market-to-book ratio, M_B , to control for firm growth opportunities and the natural logarithm of total assets to control for firm size, $SIZE$. Jegadeesh et al. (2004) find that analysts tend to recommend smaller and high growth stocks while Loh and Stulz (2011) find that recommendations issued for growth and small firms are more influential.

To examine whether the informativeness of stock recommendations is affected by the country's level of legal enforcement we replace country fixed effects in model (1) with $ENFORCEMENT$, which takes the value 1 for countries with high legal enforcement and 0 otherwise. The cutoff value is based on our sample's median of the related variable in Kaufmann, Kraay, and Mastuzzi (2007). Further, to examine whether the relation between increased disclosure and the informativeness of stock recommendations is affected by enforcement levels, we interact $ENFORCEMENT$ with $IFRS*MAND$. We also control for two additional country characteristics. First, the importance of the capital market is captured by the ratio of market capitalization as a percentage of GDP, MC_GDP . Second, the difference between IFRS and local GAAP, $DIFF_ACCT$, is a dummy variable that takes the value 1 for firms domiciled in countries with difference between IFRS and local GAAP above the sample median, and 0 otherwise. The country values for this variable are based on $gaap_diff1$ obtained from Bae et al. (2008), where higher values of $gaap_diff1$ indicate greater differences.

3.2 Data

To construct our sample we obtain all recommendations on the *IBES* database for the period 2003 - 2007 for all European firms.⁹ We eliminate recommendations that are issued within seven days before the earnings announcement to ensure that the observed market reaction around the recommendation is not related to the forthcoming announcement.¹⁰ Following related research we focus on recommendation revisions but also require that for each firm in the sample there is at least one recommendation in both the pre- and post- IFRS periods. This

⁹ Since this study examines the informativeness of analyst recommendations around an event, extending the period under review does not offer any advantage, while at the same time runs the risk of later events, such as the onset of the financial crisis, altering results and affecting inferences.

¹⁰ Untabulated results are similar if we also exclude recommendation revisions that take place within 7 days after the earnings announcement. Results are also unchanged when neither of these restrictions is applied. In table 6 we also drop these restrictions and run the analysis for a short period around earnings announcements.

technique alleviates any concerns that the change in sample composition may confound results. Daily returns to construct *CAR* and *MOMENTUM* and variables to construct *M_B* and *SIZE* and to identify the control sample of voluntary adopters are obtained from *Datastream*. Data to compute *MC_GDP* are obtained from The World Bank, and data to identify the top 10 investment banks from Institutional Investor's "All-Europe Research Team" for each sample year.

These data requirements result in a final sample of 5,400 upgrades of which 4,461 recommendations pertain to mandatory and 939 to voluntary adopters. Similarly, our final sample consists of 5,344 downgrades 4,418 of which relate to mandatory, and 926 to voluntary adopters. Panel A of table 1 shows the distribution of the mandatory and voluntary recommendation samples, separately for upgrades and downgrades, across the two sub-periods. Panel B of the same table shows the distribution of the sample across country of origin. 19.44% of the sample's recommendations are issued for German, 14.57% for Finnish and 14.06% for UK firms.¹¹

4. Empirical Results

4.1 Univariate analysis

Panel A and panel of B of table 2 present mean and median values for all explanatory variables in the pre- and post- IFRS periods, separately for the subsamples of upgrades and downgrades. The significance of the difference in means and medians is based on a t-test and a Wilcoxon test, respectively. The table suggests a number of important changes in firm characteristics related to analyst recommendation revisions, for both the mandatory and voluntary samples. Specifically, results in table 2 indicate that following the IFRS switch both upgraded and downgraded firms exhibit higher growth opportunities as indicated by the higher mean and median values of *M_B*. In addition, results in panel A suggest that in the post-IFRS period analysts issue upgrades for firms with lower price momentum while according to panel B downgraded firms are larger in size. These results hold for both the mandatory and voluntary samples highlighting, on the one hand, important changes in the environment around the mandated switch, and on the other, supporting the choice of voluntary adopters from high enforcement regimes as the control sample. The table also indicates a number of changes in

¹¹ To alleviate any concerns that our results are driven by the influence of UK firms we rerun the analysis excluding recommendations for UK firms. Results remain qualitatively similar.

firm characteristics that are only observed for mandatory adopters. First, in the post- IFRS period analysts tend to issue more favorable recommendations as evidenced by the lower values of *REC_CD* for both upgrades and downgrades. In addition, in the post-IFRS period analysts tend to both upgrade and downgrade more mandatory switchers from countries whose local accounting standards exhibit greater differences from IFRS. We interpret both of these findings as being consistent with the mandated IFRS adoption providing important information to financial analysts that prompts them to change the propensity to upgrade or downgrade affected firms. This conjecture is further supported by the fact that these changes are not observed for the voluntary sample whose information environment is deemed unchanged. Whether this new information in analyst recommendations is preempted by or informative to the market is the subject of the analysis that follows.

Table 3 presents Pearson correlations among all variables used in this study. The coefficients above the diagonal represent correlations for the upgraded sample while the values below the diagonal reflect the correlations for the downgraded sample. Panel A of table 3 presents correlations for the mandatory and panel B for the voluntary sample. For mandatory switchers, the positive (negative) correlation between *CAR* and *IFRS* suggests that the market reaction for upgrades (downgrades) is more positive (negative) in the post-IFRS, and therefore stronger, consistent with the complementarity effect. Interestingly, the correlation between *IFRS* and *CAR* for the voluntary sample is not significant for upgrades and weakly positive for downgrades providing preliminary evidence that inferences for the mandatory sample are not affected by other non-IFRS related events.

The correlations between *CAR* and the rest of the independent variables suggest that the informativeness of both upgrades and downgrades is higher, (and therefore *CAR* is more positive and more negative, respectively), for smaller firms, firms domiciled in countries with high enforcement and greater capital market importance. Similarly, the market reaction to both upgrades and downgrades is stronger the lower the firm's price momentum. This suggests that upgrades are more informative when least expected and downgrades when they reaffirm poor return performance. In addition, upgrades issued by large brokerage firms and upgrades to a stronger recommendation level elicit more positive market reactions. Finally, the market reaction to an upgrade (downgrade) is stronger (weaker) for firms with higher market to book multiples. Panel B exhibits similar correlation patterns for the sample of voluntary adopters.

Specifically, for the downgraded (upgraded) sample *CAR* exhibits positive correlations with *M_B* and *SIZE (TOPBROKER)*. Panel B does not present correlations for the enforcement variable as this sample consists of firms domiciled in high enforcement regimes only.

Table 4 compares the market reaction around recommendation revisions between the two sub-periods for both the mandatory and voluntary samples. Panel A presents results for recommendation upgrades and panel B for downgrades. Results suggest that for the mandatory (voluntary) sample an upgrade elicits an average market response of 0.523% (0.314%) in the pre- IFRS period increasing to 1.35% (0.618%) in the post- IFRS period. This is equivalent to an increase in *CAR* of 0.827% (0.304%), for the mandatory (voluntary) sample. The difference between the increase in informativeness of the mandatory and voluntary samples of 0.52% is not only economically, but also statistically significant (p value < 1%). Tests based on median returns are consistent with these conclusions, but even though the increase in *CAR* for the mandatory adopters exceeds that of the voluntary adopters by 0.22%, the difference is not statistically significant.

Similarly, a downgrade elicits an average market reaction of -0.628% in the pre- IFRS period and -1.507% in the post- IFRS period, indicating a stronger and significantly more negative reaction of -0.88% for mandatory adopters. In contrast, the difference in the market reaction for the voluntary sample is 0.37%, indicating that the market reacts less negatively around a downgrade in the post-IFRS period. Results based on median *CAR* are qualitatively similar; the market reaction to downgrades is more negative by -0.62% for the mandatory sample but less negative for the voluntary sample by 0.2%. The decrease in *CAR* for the mandatory sample is more negative than the respective change for the voluntary sample by -1.248% (-0.822%) based on mean (median) returns and both differences are statistically significant at a level of 1% or better. Taken together, the results of the univariate analysis suggest that enhancements in firm increase the informativeness of recommendation revisions consistent with the complementarity hypothesis. We present multivariate regression results in the following section.

4.2 Regression results

Panel A of Table 5 presents results for recommendation upgrades and panel B for for downgrades.^{12 13} In both panels, the first model includes country fixed effects whereas in the second model fixed country effects are dropped and replaced by three country variables. In the third model *IFRS*MAND* is interacted with *ENFORCEMENT*. In the first two models of panel A the coefficient on the interaction between the *IFRS* and *MAND* is positive and statistically significant, suggesting that in the post-IFRS period analyst upgrades for mandatory adopters elicit a more positive market reaction compared to the pre-IFRS period. This increase in *CAR* is economically significant as well, approaching 0.5% in both models. Given that this result holds after controlling for a number of firm and analyst characteristics that should adequately capture any changes in the information content of the specific recommendation, we conclude that the informativeness of analyst upgrades increases after significant enhancements in the information environment of the firm. Results in model 3, however, indicate that the enhancement in the informativeness of recommendation upgrades is driven mainly from mandatory switchers residing in strong enforcement regimes, consistent with the findings of related research. The interaction of *IFRS* and *MAND* that captures the change in *CAR* for firms in low enforcement regimes is positive but not significant. In contrast, the coefficient on the interaction of *IFRS* and *MAND* with *ENFORCEMENT* is positive and highly significant suggesting that recommendation upgrades of mandatory adopters in the post-IFRS period elicit positive *CAR* which is approximately 0.5% higher than its respective value in pre-IFRS period.

Interestingly, none of the models of panel A suggests a similar increase in *CAR* for the control sample as evidenced by the insignificant coefficient on *IFRS*.¹⁴ This provides assurance that results are not affected by other confounding effects. Overall, the evidence supports the *complementarity* rather than the *substitution* hypothesis, in essence suggesting that the market finds analyst upgrades more informative when the information on which these are based, is enhanced.

¹² Results are presented after the elimination of extreme outliers at 1%. Results are qualitatively similar if outliers are not eliminated but for the upgraded sample in particular the interactions of *IFRS*MAND* in the first two models of table 5 are significant at the 10% level.

¹³ All tests are based on heteroscedasticity consistent standards errors.

¹⁴ Given that the models contain fixed effects the model intercepts cannot be interpreted.

Similar to the findings for the upgraded sample, results for recommendation downgrades suggest a more negative market reaction in the post- IFRS period for mandatory adopters. Specifically, in the first two models of panel B, the coefficients on the interaction between *IFRS* and *MAND* are negative and strongly significant with values of about -1.25%. This result is also confirmed in the third model but unlike upgrades, the informativeness of downgrades in the post-IFRS period is enhanced for firms in both low and strong enforcement environments. Specifically, firms in low enforcement regimes exhibit more negative returns around analyst downgrades of -0.9%. For firms in high enforcement regimes however, this increase in recommendation informativeness is even more negative by -0.48%. This difference in results between the upgraded and downgraded sample is interesting in and of itself as it suggests that even in low enforcement countries IFRS adoption increases the reliability of unfavorable information, possibly through a more timely revelation of bad news. Charitou, Karamanou, and Lambertides (2014) find that IFRS adoption induces firms to reveal their bad news that were able to conceal under local GAAP and that this effect is stronger in low enforcement environments. Given the paucity of sources of firm-specific unfavorable information and the reluctance of firms to disclose bad news timely, (Kothari, Shu and Wysocki, 2009), new disclosures of negative information can be informative even in lax enforcement environments.

The results on the control variables corroborate those of the univariate analysis to a great extent. Specifically, the informativeness of stock recommendation revisions is decreasing in firm size, consistent with the evidence in Barber et al. (2001), Barber et al. (2006), Ryan and Taffler (2006) and Womack (1996), who find that the market reaction to recommendations is significantly stronger for smaller firms. Results also suggest that *CAR* is more positive (negative) for upgrades (downgrades) the lower the *MOMENTUM*. Thus, the informativeness of upgrades increases when the recommendation is expected the least and when the downgrade reconfirms poor return performance. Interestingly, while the market reaction to an upgrade is more positive when this is issued by a top broker or when it results in a stronger recommendation level, neither of these variables is relevant for downgrades. Finally, even though recommendation upgrades elicit more positive reactions for high growth firms, downgrades for firms with high market to book multiples are less informative.

Overall, our results provide strong and consistent evidence that both recommendation upgrades and downgrades elicit stronger market reactions when firm disclosures are enhanced.

This increase in the informativeness of recommendation revisions suggests that the two are complementary sources of information. The ability of analysts to interpret and repackage public information is thus greater when the underlying source of their information is enhanced. We preclude the possibility that this result is obtained by the inability of the model to capture other confounding market-wide events as the analysis fails to document a similar change in the informativeness of analyst recommendation revisions for the control sample of voluntary adopters.

4.3 Analyst recommendation informativeness around earnings announcements

Even though results are consistent with the complementarity relation between firm disclosure and analyst research, it is possible that the increased informativeness of analyst recommendation revisions may in fact be related to analysts exerting greater effort to generate new information in the post-IFRS period. Even though there is no reason to expect that analysts would increase their effort more than what is necessary to maintain the same level of informativeness in the two periods, we nevertheless examine whether our results are sensitive to this alternative explanation by comparing the informativeness of analyst recommendations in the pre- and post-IFRS periods around earnings announcements. Following prior research we posit that in the period before the release of public information, analysts are more likely to act as information providers while in the period after, as information interpreters (Chen et al., 2010; Livnat and Zhang, 2012). Under this alternative explanation the increased informativeness of analyst recommendation revisions should be more pronounced in the period preceding rather than following, earnings announcements.

Table 6 presents results.¹⁵ For this analysis we examine all recommendation changes that are issued within six weeks before and after the earnings announcement. Our sample consists of 2,728 upgrades and 3,114 downgrades for both mandatory and voluntary adopters. The insignificant coefficients on *IFRS*MAND* suggest that the informativeness of upgrades and downgrades is not different between the two sub-periods when these are released before firm earnings announcements. Our results, therefore, do not lend support to the claim that the increased informativeness we document in the post-IFRS period is due to analysts exerting more effort towards information discovery, especially in a period that their information discovery role is expected to be valued the most. In contrast, results provide further support

¹⁵ For ease of reference we report results only for the model that includes fixed country effects. The other two model specifications result in similar inferences.

for the complementarity hypothesis, as they indicate stronger market reactions for upgrades and downgrades which are released shortly after the earnings announcement.

4.4 Using US firms as control

Even though our choice of voluntary adopters as control sample is based on the expectation that any confounding events would likely affect firms sharing the same institutional and legal environments in a similar way, we acknowledge that the two samples may differ in important aspects that are difficult to identify and hence to control for. Given that the reliability of inferences is based on the appropriateness of the benchmarking sample we extend the analysis by using US based firms as an alternative control sample.¹⁶

We construct the US control sample by matching our European mandatory adopters to US firms based on industry, size and market to book multiples.¹⁷ Similar to the main analysis, *IFRS* takes the value 1 for recommendation changes issued after 2005, and 0 otherwise. The variable *EU* takes the value 1 if the recommendation revision is issued for a European firm that mandatorily adopted IFRS, and 0 if the recommendation is issued for a US firm in the control sample.

Table 7 presents results. In general, our findings indicate that the informativeness of both upgrades and downgrades following enhancements in corporate disclosure levels is higher, consistent with the paper's main conclusion.¹⁸ Specifically, the coefficient on the interaction between *IFRS* and *EU* is significantly positive (negative) for the upgraded (downgraded) sample, consistent with the complementarity hypothesis. More importantly, the analysis fails to document a similar increase in the informativeness of recommendation changes for the matching US firms, alleviating concerns that results are driven by other confounding events. With respect to control variables we continue to find that the informativeness of both upgrades and downgrades decreases with firm size, and that *M_B* is positively related to *CAR*. In addition, upgrades issued by reputable investment banks or upgrades to stronger ratings are more informative, but unlike the results of table 5, *MOMENTUM* is positively related to *CAR*. For downgrades we note the negative and significant relation between *REC_CD* and *CAR* which suggests that downgrades are more informative for stronger ratings as well.

¹⁶ See for example, Tan et al. (2011), DeFond et al. (2011), Landsman et al. (2012).

¹⁷ The control sample consists of all US firms with *SIZE* and *M_B* values within 10% of the respective values of each treatment firm.

¹⁸ The third model specification which is not shown in the table results in similar inferences.

5. Additional sensitivity analysis

In order to further test the robustness of our results, we run two additional tests to further examine whether our results are affected by concurrent events unrelated to IFRS adoption. In the first test we examine whether the informativeness of analyst recommendations changes *within* the pre- or post-IFRS periods. For the pre (post) period we examine whether notable changes in *CAR* can be observed around the year 2003 (2006). We do not find any significant differences in the market reaction around these two alternative cutoff dates. In the second test we include in the model the 3-day return of the US value weighted market index for each recommendation date in the treatment sample. This method does not rely on any matching procedure to identify suitable US firms and hence does not condition inferences on the matching criteria imposed. We continue to find that in the post-IFRS period the informativeness of upgrades and downgrades is enhanced even when accounting for possible unobserved events that are captured by the return of the US market. In short, this array of additional tests provides reasonable assurance that our results are robust and inferences are not affected by confounding events.

6. Summary and Conclusions

This study revisits the role of financial analysts in capital markets by examining whether enhanced corporate disclosure affects the informativeness of analyst recommendations. We argue that if analysts act primarily as information interpreters, additional firm disclosure should better facilitate this role, increasing the informativeness of analyst recommendations (the *complementarity hypothesis*). On the other hand, if analysts act primarily as information providers, enhanced corporate disclosure should render analyst output less relevant decreasing the informativeness of their recommendations (the *substitution hypothesis*). We exploit the mandatory adoption of IFRS in Europe an event that, along with any other changes in the legal environment that it may have induced, significantly enhanced corporate disclosure levels. This design allows us to examine which of the two analyst roles predominates without having to condition results on the occurrence and timing of a firm disclosure specific event.

Our results indicate stronger market reactions to recommendation revisions for a sample firms that were required to increase the quality of their corporate disclosures. Specifically, we document both statistically and economically significant changes in the informativeness of upgrades (downgrades) of approximately 0.5% (-1.3%) following the mandated adoption of

IFRS in Europe. These findings suggest that the informativeness of stock recommendations stems mainly from analysts' ability to interpret firm disclosures, supporting the complementarity relation between the two sources of information. For both stock upgrades and downgrades, and consistent with prior research, our results also suggest that the complementarity effect on analysts' recommendations changes is more pronounced in countries with a strong level of legal enforcement. To mitigate concerns that our results are affected by events unrelated to the mandated enhancement in disclosure we use a control sample of firms that had voluntarily adopted IFRS and for which, the information environment is not expected to be affected by the mandated switch. We do not find evidence that the informativeness of stock recommendations for control firms changes in post-IFRS period while we obtain similar results when we benchmark the analysis on a matched sample of US firms instead. Our results are robust to an array of additional tests reinforcing the conclusion that the predominant role of financial analysts is to interpret firm disclosures rather than generate new information.

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Table 1: Sample Selection

Panel A presents the sample distribution separately for upgrades and downgrades. The pre- (post-) IFRS period relates to recommendations issued in or before (after) 2005. The mandatory sample consists of recommendations issued for firms that mandatorily adopted IFRS and the voluntary sample consists of recommendations issued for firms that had adopted IFRS before the EU mandated switch. Panel B presents the country distribution.

Panel A: Upgrades vs. Downgrades

	Total Upgrades	Mandatory Sample	Voluntary Sample
Pre-IFRS	2911 53.9%	2498 56.0%	413 44.0%
Post-IFRS	2489 46.1%	1963 44.0%	526 56.0%
TOTAL	5400	4461	939

	Total Downgrades	Mandatory Sample	Voluntary Sample
Pre-IFRS	3061 57.3%	2657 60.1%	404 43.6%
Post-IFRS	2283 42.7%	1761 39.9%	522 56.4%
TOTAL	5344	4418	926

Panel B: Country Distribution

Country	Frequency	%
Austria	235	2.19
Belgium	262	2.44
Germany	2089	19.44
Denmark	670	6.24
Spain	209	1.95
Finland	1565	14.57
France	1072	9.98
UK	1511	14.06
Ireland	3	0.03
Italy	48	0.45
The Netherlands	1457	13.56
Poland	59	0.55
Portugal	100	0.93
Sweden	1464	13.63
Total	10744	100.00

Table 2: Descriptive Statistics

The sample presents mean and median values of all independent variables across the two sample periods. The paired t-test and Wilcoxon rank sum tests are used to examine the statistical significance of the difference, respectively. *MOMENTUM* is the compounded market adjusted return in a 90-day period before the recommendation. *TOPBROKER* takes the value 1 if the recommendation is issued by one of the top 10 brokerage firms, and 0 otherwise. *M_B* is the ratio of market value to book value of equity. *SIZE* is the natural logarithm of total assets. *REC_CD* is the IBES level of recommendation ranging from 1 to 5 with 1 indicating a strong buy and 5 a strong sell. *MC_GDP* is the country's market capitalization deflated by GDP. *ENFORCEMENT* takes the value of 1 for countries with high legal enforcement and 0 otherwise based on the sample median values from Kaufmann et al. (2007). *DIFF_ACCT* takes the value 1 for firms domiciled in countries whose local GAAP is substantially different from IFRS, and 0 otherwise based on the sample median values from Bae et al. (2008). Variable values on the first (second) line are based on the mandatory (voluntary) sample. Panel A refers to upgrades and Panel B to downgrades. Significance levels of 10%, 5% and 1% are indicated by *, ** and *** respectively.

Panel A: Upgrades

	Mean – PRE	Mean- POST	Difference		Media n -PRE	Median- POST	Difference	
<i>MOMENTUM</i>	0.005	-0.017	-0.022	***	0.002	-0.011	-0.012	***
	-0.014	-0.049	-0.035	***	-0.004	-0.028	-0.024	***
<i>TOPBROKER</i>	0.253	0.236	-0.016		0.000	0.000	0.000	
	0.230	0.200	-0.030		0.000	0.000	0.000	
<i>M_B</i>	3.182	3.607	0.425	***	2.234	2.383	0.149	***
	2.271	2.591	0.320	***	1.818	2.317	0.498	***
<i>SIZE</i>	7.893	7.935	0.042		7.868	7.801	-0.067	
	8.737	8.721	-0.017		8.657	8.978	0.321	
<i>REC_CD</i>	1.968	1.888	-0.080	***	2.000	2.000	0.000	***
	1.886	1.798	-0.088		2.000	2.000	0.000	*
<i>MC_GDP</i>	89.190	116.785	27.595	***	90.774	122.222	31.448	***
	57.797	84.038	26.241	***	43.798	63.245	19.447	***
<i>ENFORCEMENT</i>	0.477	0.483	0.007		0.000	0.000	0.000	
	0.969	0.945	-0.024	*	1.000	1.000	0.000	*
<i>DIFF_ACCT</i>	0.502	0.539	0.037	***	1.000	1.000	0.000	***
	0.930	0.920	-0.010		1.000	1.000	0.000	

Panel B: Downgrades

	Mean – PRE	Mean- POST	Difference		Median -PRE	Median- POST	Difference	
<i>MOMENTUM</i>	0.008	0.012	0.004		0.008	0.011	0.002	
	-0.015	-0.016	-0.001		0.001	0.000	-0.001	
<i>TOPBROKER</i>	0.257	0.220	-0.036	***	0.000	0.000	0.000	***
	0.230	0.182	-0.048	*	0.000	0.000	0.000	*
<i>M_B</i>	3.103	3.487	0.384	***	2.202	2.426	0.224	***
	2.289	2.518	0.229	***	1.983	2.294	0.311	
<i>SIZE</i>	7.753	7.866	0.113	*	7.785	7.707	-0.078	
	8.527	8.800	0.273	**	8.396	8.978	0.582	***
<i>REC_CD</i>	3.430	3.375	-0.055	**	3.000	3.000	0.000	**
	3.386	3.439	0.053		3.000	3.000	0.000	
<i>MC_GDP</i>	90.361	117.189	26.828	***	92.108	124.838	32.730	***
	57.208	87.733	30.525	***	43.798	63.245	19.447	***
<i>ENFORCEMENT</i>	0.640	0.645	0.005		1.000	1.000	0.000	
	0.953	0.948	-0.005		1.000	1.000	0.000	
<i>DIFF_ACCT</i>	0.492	0.541	0.049	***	0.000	1.000	1.000	***
	0.941	0.935	-0.006		1.000	1.000	0.000	

Table 3: Pearson Correlation

Panel A presents Pearson correlation coefficients for the sample of mandatory adopters and Panel B for voluntary. *CAR* cumulative risk adjusted abnormal returns over the three day window around the recommendation announcement. *IFRS* takes the value 1 when the recommendation announcement is issued in post-IFRS period 0 otherwise. *MOMENTUM* is the compounded market adjusted return in a 90-day period before the recommendation. *TOPBROKER* takes the value 1 if the recommendation is issued by one of the top 10 brokerage firms, and 0 otherwise. *M_B* is the ratio of market value to book value of equity. *SIZE* is the natural logarithm of total assets. *REC_CD* is the IBES level of recommendation ranging from 1 to 5 with 1 indicating a strong buy and 5 a strong sell. *MC_GDP* is the country's market capitalization deflated by GDP. *ENFORCEMENT* takes the value of 1 for countries with high legal enforcement and 0 otherwise based on the sample median values from Kaufmann et al. (2007). *DIFF_ACCT* takes the value 1 for firms domiciled in countries whose local GAAP is substantially different from IFRS, and 0 otherwise based on the sample median values from Bae et al. (2008). The elements above the diagonal represent correlations for upgrades and below for downgrades. Significance levels of 10%, 5% and 1% are indicated by *, ** and *** respectively.

Panel A: Mandatory adopters

	<i>CAR</i>	<i>IFRS</i>	<i>MOMENTUM</i>	<i>TOPBROKER</i>	<i>M_B</i>	<i>SIZE</i>	<i>REC_CD</i>	<i>MC_GDP</i>	<i>ENFORCEMENT</i>	<i>DIFF_ACCT</i>
<i>CAR</i>	1	0.11576 (0.01)	-0.05618 (0.01)	0.0556 (0.01)	0.05868 (0.01)	-0.03088 (0.04)	-0.04419 (0.01)	0.06218 (0.01)	0.04882 (0.01)	-0.01126 (0.45)
<i>IFRS</i>	-0.10651 (0.01)	1	-0.6203 (0.01)	-0.01872 (0.21)	0.05825 (0.01)	0.00985 (0.51)	-0.04937 (0.01)	0.42704 (0.01)	0.00662 (0.66)	0.03723 (0.01)
<i>MOMENTUM</i>	0.07485 (0.01)	0.00976 (0.52)	1	0.00337 (0.82)	0.06038 (0.01)	0.01228 (0.41)	-0.03254 (0.03)	-0.04004 (0.01)	-0.12347 (0.01)	-0.03072 (0.04)
<i>TOPBROKER</i>	0.00671 (0.65)	-0.04154 (0.01)	-0.01301 (0.39)	1	0.02313 (0.12)	0.15896 (0.01)	0.11496 (0.01)	0.02863 (0.06)	-0.04409 (0.01)	-0.07584 (0.01)
<i>M_B</i>	0.04729 (0.01)	0.05973 (0.01)	0.12074 (0.01)	0.04102 (0.01)	1	-0.15487 (0.01)	-0.00231 (0.88)	0.12165 (0.01)	-0.04003 (0.01)	-0.08552 (0.01)
<i>SIZE</i>	0.07794 (0.01)	0.02716 (0.07)	-0.01518 (0.31)	0.15615 (0.01)	-0.14646 (0.01)	1	0.05566 (0.01)	-0.21963 (0.01)	0.16086 (0.01)	0.01655 (0.27)
<i>REC_CD</i>	-0.0001 (0.99)	-0.03099 (0.04)	-0.04723 (0.01)	-0.003 (0.84)	-0.01701 (0.26)	0.03594 (0.02)	1	-0.02005 (0.18)	0.02281 (0.13)	0.03264 (0.03)
<i>MC_GDP</i>	-0.07425 (0.01)	0.41347 (0.01)	-0.03968 (0.01)	0.03279 (0.03)	0.10839 (0.01)	-0.18688 (0.01)	-0.05429 (0.01)	1	-0.20766 (0.01)	-0.54362 (0.01)
<i>ENFORCEMENT</i>	-0.03055 (0.04)	0.0048 (0.75)	-0.028 (0.06)	-0.05356 (0.01)	-0.13463 (0.01)	0.17195 (0.01)	0.04435 (0.01)	-0.21977 (0.01)	1	0.3102 (0.01)
<i>DIFF_ACCT</i>	-0.01263 (0.40)	0.04825 (0.01)	0.00956 (0.52)	-0.08493 (0.01)	-0.07569 (0.01)	0.00996 (0.51)	0.05707 (0.01)	-0.54185 (0.01)	-0.0021 (0.89)	1

Panel B: Voluntary Adopters

	<i>CAR</i>	<i>IFRS</i>	<i>MOMENTUM</i>	<i>TOPBROKER</i>	<i>M_B</i>	<i>SIZE</i>	<i>REC_CD</i>	<i>MC_GDP</i>	<i>ENFORCEMENT</i>	<i>DIFF_ACCT</i>
<i>CAR</i>	1	0.05779 (0.08)	-0.09408 (0.01)	0.16655 (0.01)	-0.03198 (0.33)	-0.01381 (0.67)	0.01257 (0.70)	0.03015 (0.36)	-0.02306 (0.48)	0.00301 (0.93)
<i>IFRS</i>	0.06175 (0.06)	1	-0.09614 (0.01)	-0.03686 (0.26)	0.10875 (0.01)	-0.00448 (0.89)	-0.05341 (0.10)	0.37767 (0.01)	-0.05681 (0.08)	-0.01808 (0.58)
<i>MOMENTUM</i>	-0.02998 (0.36)	-0.0019 (0.95)	1	0.06898 (0.03)	0.09196 (0.01)	0.15419 (0.01)	-0.0919 (0.01)	-0.12293 (0.01)	-0.03081 (0.34)	0.03199 (0.33)
<i>TOPBROKER</i>	-0.02728 (0.41)	-0.05943 (0.07)	0.01811 (0.58)	1	-0.02978 (0.36)	0.10062 (0.01)	0.16779 (0.01)	-0.00454 (0.89)	0.03707 (0.26)	-0.05783 (0.08)
<i>M_B</i>	0.08966 (0.01)	0.07782 (0.02)	0.22078 (0.01)	-0.01757 (0.059)	1	0.01696 (0.60)	-0.02923 (0.37)	0.047 (0.15)	0.06909 (0.03)	0.11452 (0.01)
<i>SIZE</i>	0.07029 (0.03)	0.07235 (0.03)	0.11556 (0.01)	0.07364 (0.02)	0.10243 (0.01)	1	0.01794 (0.58)	0.28296 (0.01)	0.09925 (0.01)	-0.46151 (0.01)
<i>REC_CD</i>	-0.10496 (0.01)	0.03009 (0.36)	-0.10069 (0.01)	0.00569 (0.86)	-0.07286 (0.03)	-0.02188 (0.51)	1	-0.02243 (0.49)	0.04523 (0.17)	-0.01269 (0.70)
<i>MC_GDP</i>	0.00398 (0.90)	0.41412 (0.01)	-0.02521 (0.44)	0.00975 (0.77)	0.06352 (0.05)	0.25561 (0.01)	-0.02947 (0.37)	1	-0.07777 (0.02)	-0.40584 (0.01)
<i>ENFORCEMENT</i>	0.01749 (0.59)	-0.01071 (0.74)	-0.05688 (0.08)	0.01655 (0.61)	0.05256 (0.11)	0.09584 (0.01)	0.06383 (0.05)	-0.0245 (0.46)	1	0.09401 (0.01)
<i>DIFF_ACCT</i>	0.00177 (0.96)	-0.01172 (0.72)	-0.04282 (0.19)	0.06897 (0.03)	0.09882 (0.01)	-0.41633 (0.01)	0.00059 (0.98)	-0.34818 (0.01)	-0.0591 (0.07)	1

Table 4: Mean and Median Differences in Market Reaction

This table presents the mean and median differences in *CAR* between the mandatory and voluntary samples and between the pre- and post-IFRS periods. The number of observations for each sub-sample is shown in table 1. *CAR* is cumulative risk adjusted abnormal returns over the three day window around the recommendation announcement. Significance levels at 10%, 5% and 1% are indicated by *, ** and *** respectively.

	Upgrades		
	Pre IFRS	Post IFRS	Difference between
	(1)	(2)	Pre and Post (2) – (1)
Mandatory Mean	0.00523	0.01350	0.00827 ***
Voluntary Mean	0.00314	0.00618	0.00304 *
Difference	0.00209	0.00731 ***	0.00523 **
Mandatory Median	0.00297	0.00905	0.00608 ***
Voluntary Median	0.00067	0.00453	0.00386 **
Difference	0.00229	0.00452 ***	0.00222
	Downgrades		
	Pre IFRS	Post IFRS	Difference between
	(1)	(2)	Pre and Post (2) – (1)
Mandatory Mean	-0.00628	-0.01507	-0.00879 ***
Voluntary Mean	-0.00930	-0.00561	0.00369 *
Difference	0.00302 **	-0.00946 ***	-0.01248 ***
Mandatory Median	-0.00440	-0.01058	-0.00618 ***
Voluntary Median	-0.00656	-0.00452	0.00204 **
Difference	0.00217 *	-0.00606 ***	-0.00822 ***

Table 5: The impact of increased disclosure on the informativeness of recommendation changes

The dependent variable *CAR* is cumulative risk adjusted abnormal returns over the three day window around the recommendation announcement. *IFRS* takes the value 1 when the recommendation announcement is issued in post-IFRS period 0 otherwise. *MAND* takes the value 1 when the recommendation is issued for mandatory adopters and 0 for the control sample of voluntary adopters. *MOMENTUM* is the compounded market adjusted return in a 90-day period before the recommendation. *TOPBROKER* takes the value 1 if the recommendation is issued by one of the top 10 brokerage firms, and 0 otherwise. *M_B* is the ratio of market value to book value of equity. *SIZE* is the natural logarithm of total assets. *REC_CD* is the IBES level of recommendation ranging from 1 to 5 with 1 indicating a strong buy and 5 a strong sell. *MC_GDP* is the country's market capitalization deflated by GDP. *ENFORCEMENT* takes the value of 1 for countries with high legal enforcement and 0 otherwise based on the sample median values from Kaufmann et al. (2007). *DIFF_ACCT* takes the value 1 for firms domiciled in countries whose local GAAP is substantially different from IFRS, and 0 otherwise based on the sample median values from Bae et al. (2008). Second row shows p-values in parentheses.

Panel A: Upgrades			
	(1)	(2)	(3)
<i>Intercept</i>	0.02137 (0.01)	0.01077 (0.04)	0.01358 (0.01)
<i>IFRS</i>	0.00307 (0.20)	0.00313 (0.20)	0.00312 (0.20)
<i>MAND</i>	0.00139 (0.50)	0.00245 (0.21)	0.00149 (0.46)
<i>IFRS*MAND</i>	0.00495 (0.04)	0.00492 (0.04)	0.00257 (0.33)
<i>IFRS*MAND*ENFORCEMENT</i>			0.00501 (0.01)
<i>MOMENTUM</i>	-0.00953 (0.01)	-0.00951 (0.01)	-0.00952 (0.01)
<i>TOPBROKER</i>	0.00747 (0.01)	0.00670 (0.01)	0.00674 (0.01)
<i>M_B</i>	0.00041 (0.01)	0.00041 (0.01)	0.00039 (0.01)
<i>SIZE</i>	-0.00082 (0.01)	-0.00048 (0.07)	-0.00046 (0.08)
<i>REC_CD</i>	-0.00159 (0.01)	-0.00153 (0.01)	-0.00155 (0.01)
<i>MC_GDP</i>		-0.00001 (0.89)	-0.00001 (0.93)
<i>ENFORCEMENT</i>		0.00327 (0.01)	0.00115 (0.41)
<i>DIFF_ACCT</i>		-0.00158 (0.22)	-0.00176 (0.17)
Country Effects	YES	NO	NO
Industry effects	YES	YES	YES
Year Effects	YES	YES	YES
N	5400	5400	5400
Adj. R-Sq	0.0340	0.0313	0.0322

Panel B: Downgrades			
	(1)	(2)	(3)
<i>Intercept</i>	-0.02657 (0.01)	-0.01009 (0.10)	-0.01252 (0.05)
<i>IFRS</i>	0.00448 (0.10)	0.00648 (0.02)	0.00646 (0.02)
<i>MAND</i>	0.00208 (0.38)	0.00291 (0.19)	0.00353 (0.19)
<i>IFRS*MAND</i>	-0.01248 (0.01)	-0.01257 (0.01)	-0.00951 (0.01)
<i>IFRS*MAND*ENFORCEMENT</i>			-0.00484 (0.05)
<i>MOMENTUM</i>	0.01001 (0.01)	0.00980 (0.01)	0.00974 (0.01)
<i>TOPBROKER</i>	-0.00233 (0.07)	-0.00175 (0.16)	-0.00177 (0.16)
<i>M_B</i>	0.00030 (0.01)	0.00082 (0.01)	0.00083 (0.01)
<i>SIZE</i>	0.00170 (0.01)	0.00126 (0.01)	0.00127 (0.01)
<i>REC_CD</i>	-0.00050 (0.41)	-0.00067 (0.27)	-0.00071 (0.24)
<i>MC_GDP</i>		-0.00006 (0.01)	-0.00005 (0.02)
<i>ENFORCEMENT</i>		-0.00304 (0.02)	-0.00122 (0.49)
<i>DIFF_ACCT</i>		-0.00249 (0.08)	-0.00222 (0.12)
Country Effects	YES	NO	NO
Industry effects	YES	YES	YES
Year Effects	YES	YES	YES
N	5344	5344	5344
Adj. R-Sq	0.0309	0.0265	0.0271

Table 6: The informativeness of recommendation changes around earnings announcements

The dependent variable *CAR* is cumulative risk adjusted abnormal returns over the three day window around recommendation announcements issued in a period of 6 weeks before and 6 weeks after corporate earnings announcements (pre-EAD, and post-EAD, respectively). *IFRS* takes the value 1 when the recommendation announcement is issued in post-IFRS period 0 otherwise. *MAND* takes the value 1 when the recommendation is issued for mandatory adopters and 0 for the control sample of voluntary adopters. *MOMENTUM* is the compounded market adjusted return in a 90-day period before the recommendation. *TOPBROKER* takes the value 1 if the recommendation is issued by one of the top 10 brokerage firms, and 0 otherwise. *M_B* is the ratio of market value to book value of equity. *SIZE* is the natural logarithm of total assets. *REC_CD* is the IBES level of recommendation ranging from 1 to 5 with 1 indicating a strong buy and 5 a strong sell. *MC_GDP* is the country's market capitalization deflated by GDP. *ENFORCEMENT* takes the value of 1 for countries with high legal enforcement and 0 otherwise based on the sample median values from Kaufmann et al. (2007). *DIFF_ACCT* takes the value 1 for firms domiciled in countries whose local GAAP is substantially different from IFRS, and 0 otherwise based on the sample median values from Bae et al. (2008). Second row shows p-values in parentheses.

	Upgrades		Downgrades	
	Pre-EAD	Post-EAD	Pre-EAD	Post-EAD
<i>Intercept</i>	0.01491 (0.20)	0.06045 (0.01)	-0.00236 (0.83)	-0.00554 (0.61)
<i>IFRS</i>	-0.00468 (0.42)	-0.01216 (0.04)	-0.0051 (0.38)	0.01047 (0.04)
<i>MAND</i>	-0.00183 (0.69)	-0.01207 (0.01)	-0.00071 (0.85)	0.01193 (0.01)
<i>IFRS*MAND</i>	0.00576 (0.32)	0.01261 (0.05)	0.00283 (0.62)	-0.01539 (0.01)
<i>MOMENTUM</i>	-0.0114 (0.02)	-0.00817 (0.14)	-0.01367 (0.01)	-0.00227 (0.70)
<i>TOPBROKER</i>	0.00499 (0.01)	0.00587 (0.01)	-0.00687 (0.01)	-0.0057 (0.01)
<i>M_B</i>	0.000961 (0.01)	-0.00047 (0.18)	0.000711 (0.04)	-0.00029 (0.41)
<i>SIZE</i>	-0.00102 (0.02)	-0.00102 (0.01)	0.000771 (0.08)	-0.00018 (0.61)

<i>REC_CD</i>	-0.00317	-0.00288	-0.00156	-0.00146
	(0.01)	(0.01)	(0.11)	(0.09)
Country Effects	YES	YES	YES	YES
Industry effects	YES	YES	YES	YES
Year Effects	YES	YES	YES	YES
N	1267	1461	1343	1771
Adj. R-Sq	0.0300	0.0304	0.0270	0.0140

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Table 7: Sensitivity analysis

The dependent variable *CAR* is cumulative risk adjusted abnormal returns over the three day window around the recommendation announcement. *IFRS* takes the value 1 when the recommendation announcement is issued in post-IFRS period 0 otherwise. *EU* takes the value 1 when the recommendation is issued for mandatory adopters and 0 for the control sample of US firms. *MOMENTUM* is the compounded market adjusted returns in 90-day period before the recommendation. *TOPBROKER* takes the value 1 if the recommendation is issued by one of the top 10 brokerage firms, and 0 otherwise. *M_B* is the ratio of market value to book value of equity. *SIZE* is the natural logarithm of total assets. *REC_CD* is the IBES level of recommendation using 5 ratings in the range of 1 to 5 with 1 indicating a strong buy and 5 a strong sell. *MC_GDP* is the country's market capitalization deflated by GDP. *ENFORCEMENT* takes the value of 1 for countries with high legal enforcement and 0 otherwise based on the sample median values from Kaufmann et al. (2007). *DIFF_ACCT* takes the value 1 for firms domiciled in countries whose local GAAP is substantially different from IFRS, and 0 otherwise based on the sample median values from Bae et al. (2008). Significance levels of 10%, 5% and 1% are indicated by *, ** and *** respectively.

	(1)	(2)	(1)	(2)
<i>Intercept</i>	0.06910	0.07865	-0.07695	-0.08947
	(0.01)	(0.01)	(0.01)	(0.01)
<i>IFRS</i>	-0.00037	0.00046	0.00483	0.00397
	(0.83)	(0.80)	(0.02)	(0.06)
<i>EU</i>	0.00266	-0.01612	0.00402	0.01744
	(0.77)	(0.08)	(0.80)	(0.26)
<i>IFRS*EU</i>	0.00513	0.00616	-0.01368	-0.01485
	(0.03)	(0.01)	(0.01)	(0.01)
<i>MOMENTUM</i>	0.00742	0.00733	0.04352	0.04348
	(0.01)	(0.01)	(0.01)	(0.01)
<i>TOPBROKER</i>	0.00590	0.00531	-0.00007	0.00044
	(0.01)	(0.01)	(0.28)	(0.77)
<i>M_B</i>	0.00071	0.00073	0.00117	0.00110
	(0.01)	(0.01)	(0.01)	(0.01)
<i>SIZE</i>	-0.00435	-0.00405	0.00117	0.00727
	(0.01)	(0.01)	(0.01)	(0.01)
<i>REC_CD</i>	-0.00597	-0.00597	-0.00696	-0.00698

	(0.01)	(0.01)	(0.01)	(0.01)
<i>MC_GDP</i>		-0.00009		0.00011
		(0.05)		(0.03)
<i>ENFORCEMENT</i>		0.00738		-0.00633
		(0.01)		(0.01)
<i>DIFF_ACCT</i>		-0.00544		0.00663
		(0.04)		(0.03)
Country Effects	YES	NO	YES	NO
Industry effects	YES	YES	YES	YES
Year Effects	YES	YES	YES	YES
F test IFRS+IFRS*EU	4.19	6.36	10.47	11.68
	(0.04)	(0.01)	(0.01)	(0.01)
F test IFRS+IFRS*EU+IFRS*EU*ENFORCEMENT				
N	12441	12441	11816	11816
Adj. R-Sq	0.0398	0.0386	0.0875	0.0864

CHAPTER 2

Coverage Termination due to Resources Constraints: Cheap talk or Euphemism for Bleak Business Prospects?

Abstract

Given the scarcity of sources of negative information in capital markets, investors rely on financial analysts for informing them on negative business prospects of the firms they cover. Instead, prior literature has documented analysts' reluctance to voice negative opinions as well as their relative optimism for the stocks they cover. Using a unique hand collected dataset of 12311 US announcements made according to the SEC provision between 2005 and 2012 and referring to investment banks' decision to terminate research coverage, this study constitutes the first empirical analysis of the reported reasoning behind analysts' decision to drop coverage of a specific firm. We provide evidence that analysts are unwilling to provide explicit and comprehensive explanations in their final report. Instead, non-firm specific termination rationales referring to resource constraints or reallocation of research resources are not perceived by the market as negative news on the day of their announcement. We posit that analysts take advantage of this provision to understate the true reason behind the termination and mislead the market even in the presence of private information about weak future business prospects. By taking into consideration the ex post industry research activity of the investment bank, we show that on average, firms that were terminated for non-credible reasons significantly underperform their peers by -9.6% in the 12 months after the termination announcement. Results indicate that the long run performance of the terminated firm is significantly lower when the termination announcement did not have information content or was not expected, as well as when the within industry competition was lower.

Coverage Termination due to Reallocation of Research Resources:

Cheap Talk or Euphemism for Bleak Business Prospects?

“Over the past month, RBC Capital Markets and Canaccord Genuity have both discontinued coverage of the first Canadian energy producer to move in earnest to the Indian market. Neither did so maliciously – a “reallocation of analyst resources” was cited as the reason in both cases – but those analysts aren’t exactly leaving on a high note for Niko.”

(<http://www.bnn.ca/News/2014/6/6/Is-salvation-nigh-for-Niko-Resources.aspx>)

1. Introduction

In an attempt to further enhance the relevance of analyst research reports the SEC approved, in 2003, further amendments to SRO rulings governing research analyst conflicts of interest¹⁹ that among others require financial analysts to provide notice of terminating coverage through the issuance of a final research report.²⁰ In light of incentives to issue optimistic reports analysts often choose not to issue a research report from issuing an unfavorable one thus withholding an important source of bad news from the market. As the SEC asserts, “[T]he public may not be fully informed when a firm terminates coverage of a company without disclosing the termination to customers, and without providing customers with a final rating or recommendation, even in cases where a ratings change may have been warranted.” Therefore, “..requiring notice of termination of coverage will provide investors with important information to better evaluate the usefulness of research, including whether the firm is no longer covering the issuer.” (SEC, July 29, 2003). In this paper we investigate whether analyst terminations are as informative as the SEC expects them to be by focusing especially on a sample of termination reports that attribute the termination decision to the need to reallocate bank resources. As the above quote suggests, however, such vague and news-neutral reasoning may just reflect the analysts’ attempt to conceal their bearish views thus potentially mitigating the effectiveness of the new regulation. Current regulations which allow analysts not to provide a final rating in their termination report if, instead, they provide a rationale for

¹⁹ The original SRO rules, which relate to research analysts and research reports, were approved by the SEC on May 10, 2002 and include NASD Rule 2711 and amendments to NYSE Rules 351 and 472.

²⁰ SEC Release no. 34-48252 (July 29, 2003).

the termination further enhance the ability of analysts to more effectively disguise their true views. Analysts can drop coverage of a firm without really disclosing their true and unfavorable views on a stock while at the same time providing a news-neutral rationale for doing so. This is in direct contrast to the intention of the policy makers but nevertheless consistent with the results in McNichols and O'Brien (1997), who document analysts' reluctance to issue reports for firms about whose prospects they are pessimistic. Related research also suggests that career concerns induce analysts to avoid issuing unfavorable reports (Hong and Kubik, 2003), while the possibility of resuming coverage on the terminated stock provides another incentive to terminate coverage without breaking valuable ties with the firm.

We manually collect all termination reports available in Thomson-Reuters for the period 2005-2012 citing resource constraints, or reallocation of resources as the justification for the termination decision resulting in an initial sample of 3529 final research reports. Return data are available for 3051 firms while additional data requirements reduce the sample to 2327.²¹ We start our empirical analysis by examining the market's reaction to the termination announcement. Univariate results suggest that termination announcements citing reallocation of resources as the underlying rationale for the decision do not seem to convey any negative news as indicated by the very small mean (median) market return of -0.17% (-0.016%) on the three days around the event. This suggests that the market does not consider the termination event a negative signal about the firm's prospects.

We next examine whether the decision to drop coverage due to the need to reallocate resources is as news-neutral as purported to be or whether it is rather analysts' attempt to conceal their poor expectations on the firm's financial prospects. To do so we split the reallocation termination sample to terminations that we deem as credible reallocation terminations and those which are deemed as non-credible, i.e., for which the reallocation justification reflects the attempt to conceal the firm's poor financial prospects. We posit that banks are more likely to engage in resource reallocation when they considerably free the

²¹ In order to identify the sample of reallocation terminations we obtained all termination notices in the period. The break-down of the sample is very similar to that reported in Mola, Rau and Khorana (2013). Specifically 45% of the termination announcements refer to analyst departure, 20% refer to acquisitions or bankruptcy proceedings and 2.6% provide no reason for the termination. We are also able to identify 407 observations (3.3% of the original sample) for which the termination notice refers explicitly to firm financial issues. Finally, the reallocation sample represents 28% of all termination notices.

analyst covering an industry so that she can effectively cover other firms in the bank's portfolio. Given that analysts specialize in specific industries discontinuing coverage of just a few firms within one industry, is more likely to attempt to mask the real reason behind the termination. We thus classify the reallocation rationale as credible if within one year following the termination announcement the firms covered in the industry are reduced by approximately 50%.²² All other cases, including those indicating that in fact the bank's portfolio of firms *increased* in the year following the termination, are deemed as non-credible. This latter behavior is, in essence, equivalent to reshuffling the bank's portfolio, rather than downsizing it to save up resources. The popular press provides examples of terminations that are attributed to 'reallocation of resources' when these actually reflect shifts in coverage.²³ This classification method results in a total of 915 credible and 1692 non-credible termination decisions based on the need to reallocate resources.

To test the validity of our classification and, in turn, of our conjecture that justifying termination decisions under the premise of reallocating resources may be used as disguise of the true termination reason, we examine the future return performance of the reallocation sample. Results suggest that even though cumulative returns for the non-credible terminations sub-sample are more negative than those of the credible terminations sample, the difference increases monotonically across the 4 different horizon periods examined. Specifically, the non-credible sample exhibits more negative buy-and-hold mean returns of almost 6.9%, and 9.6% in the 6, and 12 month-period following the termination announcement compared to the credible sample. Interestingly, mean (median) BHAR for the non-credible sample suggest that in the first 6, and 12 months of the termination announcement non-credibly terminated firms exhibit changes of 2.8% (-2.3%), and -6.1% (-4.3%) in their value, compared to 9.7% (1.5%), and 3.5% (-0.9%) for the credibly terminated sample.

²² The benchmark used is the sample mean of the ratio of the firms covered in the post-termination period relative to the number of firms covered in the pre-termination period. The benchmark of 51% , indicates that terminations citing reallocation of resources which result in a reduction of the number of firms followed by more than 51% are deemed credible.

²³ See for example, <http://www.tradewindsnews.com/weekly/344495/Jefferies-makes-bold-dry-bulk-call-as-coverage-shifts> and <http://www.tradewindsnews.com/weekly/344518/Shuffle-points-to-better-trading-options>.

Our results are unchanged using regression analyses and controlling for a number of factors that can explain the long-run performance of the terminated firm. Results are robust to different model specifications and estimating techniques. Models with fixed time and industry effects and models with clustered errors in both of these dimensions provide strong evidence supporting that the return performance of the non-credible sample underperforms that of the credible sample especially in the longer horizon periods of 12 months post-termination. Clustering the errors instead provides consistent evidence and also interestingly reveals that the long-run return performance of the credible sample is in most models positive and not significant. This provides further support for our classification algorithm that is successful in effectively separating credible from non-credible coverage terminations attributed to resource reallocation. More importantly, results support our main conjecture that justifying terminations in this manner often conceals the true of the bank which exploits existing regulation clauses to avoid the need to issue an unfavorable research report for the dropped firm. These results should thus be of importance to policy makers whose intention to provide investors with important information to better evaluate the usefulness of analyst research, is undermined by the very same rules they enacted enabling the termination announcement to be in essence information-free.

Our paper adds to the literature on the informational role of financial analysts in several ways. First, this is first paper that attempts to measure the market reaction to a termination announcement that cannot unequivocally be attributed to exogenous reasons. Even though prior research documents a negative reaction to terminations of coverage related to brokerage closures, it has been unable to examine the informativeness of individual terminations as these are identified when the number of analysts following the firm decreases. In these cases, therefore, a termination event cannot be clearly identified, leaving the question of whether the decision to drop coverage of a given firm is informative, largely unanswered. Second, prior research which attempts to identify endogenous terminations by relying on decreases in analyst following has been unable to document adverse long-run performance effects for the affected firms. This evidence may be due to terminations having no information value. Alternatively, it could be due to the sample selection procedure that cannot adequately separate exogenous from endogenous terminations as drops in analyst coverage may be due to reasons other than the analyst's expectations of poor firm performance. Recognizing that termination announcements may be related to either endogenous or exogenous factors we

move the analysis to the investment bank level by examining changes in the research department's portfolio of covered firms. Our classification algorithm suggests that endogenous terminations are followed by poor return and financial performance, suggesting that analyst terminations, when correctly classified, have information value about the future prospects of the firm. Thus our paper makes a significant contribution to the literature by providing evidence on what anecdotal evidence suggested but prior research was unable to confirm: that analyst reluctance to issue unfavorable research reports is also manifested through their termination decisions.

The fact that the termination event is not informative suggests that the market is unable to a priori distinguish endogenous from exogenous terminations under the label "reallocation of resources". Yet, our second set of analysis reveals that analysts use this justification to hide their true expectations about the firm. Together, we are able to document the analyst success in masking an endogenous termination as exogenous which when properly identified and separated from the true exogenous ones, is informative for the long-run performance of the firm. Our results thus support the evidence in McNichols and O'Brien (1997), in that analysts after regulatory changes that require them to announce a termination, continue to find ways to do so in the least informative way. Thus, by electing to provide a justification that is vague and uninformative they behave in essence, in the same way as in the pre-2003 period when they chose to withhold their opinion rather than issuing a negative report. Thus, analysts in a number of cases continue to deprive the market from an important negative source of information promulgating the scarcity of bad news available. It seems therefore, that even though analyst incentives significantly reduced optimistic bias changes in regulations haven't improved their willingness to share negative news (Kadan, Madureira, Wang and Zach, 2010). Consequently, our results should be of particular importance to regulators as clearly, requiring a termination announcement is not as informative as they expected it to be and of course to investors who need to more carefully read through and analyze such termination announcements.

The remainder of the paper is organized as follows: Section 2 discusses related literature and provides a framework for developing the study's basic expectations. Section 3 describes the sample, data and presents the methodology. Section 4 discusses the empirical results and Section 5 concludes.

2. Background and Hypothesis Development

Our paper draws on, and contributes to, two interrelated streams of literature. The first stream of literature examines the effects of analyst following on firm value and other related financial characteristics, while the second seeks to explain analyst tendency to issue optimistic reports. We draw on both of these streams to argue that due to pressures not to issue unfavorable reports, analysts will attempt to mask a termination decision that reflects a firm's bleak prospects, as being exogenous, and hence information-free.

Related literature documents a number of benefits associated with increase analyst following. These include increases in firm value (Lang, Lins and Miller, 2003), liquidity (Irvine, 2003; Roulstone, 2003), disclosure quality (Yu, 2008), market efficiency (Ayers, and Freeman, 2003), and decreases in default risk as proxied by credit ratings (Cheng and Subramanyam, 2008). Based on the beneficial effects of analyst following, related research aimed to examine whether losing analyst coverage results in adverse effects for the firm. If increasing following results in financial benefits for the firm, decreasing following should have the opposite effect. Yet, even though the positive effects of increased following have been well documented results on losing coverage are mixed. Mola, Rau and Khorana (2013) find that after complete loss of analyst coverage firms do not exhibit significant differences in their future performance relative to covered peers, while McNichols and O'Brien (1997) document lower industry adjusted ROEs for their dropped firms compared to the added firms. Yet, even for the dropped firms ROE is positive, implying that within industry the dropped firms do not perform worse than their peers.

Perhaps, the inability of research to document significant long-run adverse effects of loss of coverage may be due to the fact that while adding a firm to an analyst portfolio is unequivocally a positive signal, terminating coverage may be affected both by information-based terminations (what the literature defines as "endogenous") and involuntary terminations (i.e., terminations that are information-free, i.e. "exogenous"). This arises due to the selection of the sample that is based on the lack of earnings forecasts during a predetermined time interval. This therefore may result both in firms being dropped due to exogenous reasons to be included in the sample and second, firms that were temporarily discontinued assumed to have been terminated or due to the reluctance of analysts to truthfully disclose. Exogenous drops of coverage may be due to the firm being acquired, due to the departure of the analyst covering

the industry, of due to the closure of the brokerage firm. The latter stream has documented some adverse effects that are predominantly due to increases in information asymmetry. Decreases in analyst following increase the level of earnings forecast bias (Hong and Kacperczyk, 2010), credit rating bias (Fong, Hong, Kacperczyk and Kubik, 2013), and consequently the cost of debt and the rate of defaults (Derrien, Kecskes and Mansi, 2014). In addition, Derrien and Kecskés (2013) find that the loss of an analyst decreases the firm's investment and financing levels, while both Mola, Rau and Khorana (2013), Ellul and Panayides (2014), and Kelly and Ljungqvist (2012) find significant increases in information asymmetry for firms which lose complete analyst coverage, or experience exogenous drops in analyst coverage, respectively. Yet, one should also take into consideration that exogenous terminations due to brokerage closures are expected to have a greater impact on information asymmetry than single firm terminations, as the firm will suffer not only from a reduction in information production for the firm itself but also for the firm's entire industry. This in turn can significantly hamper comparability across firms, possibly inflating the event's market impact. Thus whether terminations of analyst coverage are informative about the firm's future performance is still an open question.

The second stream of research that is relevant to this study relates to the incentives analysts face that prompt them to issue optimistic reports on the firms they follow. Prior research suggests that analysts issue optimistic research reports in order to serve the interests of the investment banking or brokerage departments of the bank (Dugar and Nathan, 1995; Lin and McNichols, 1998; Michaely and Womack, 2001; Jackson 2005; Cowen, Groysberg and Healy, 2006; Barber, Lehavy, McNichols and Trueman, 2006; Barber, Lehavy and Trueman, 2007; Ljungqvist, Marston, Starks, Wei and Yan, 2007; Kolasinski and Kothari, 2008; Gu, Li and Yang, 2013), to support positions already taken by mutual funds (Mola and Guidolin, 2009), and to gain access to the private information of the firm being followed (Lim, 2001; Chen and Matsumoto, 2006).²⁴ Conversely, McNichols and O'Brien (1997) postulate that due to the incentives that they face analysts will choose not to issue a report when their information about a stock is unfavorable. As analyst effort allocation is dependent upon their expectations of firm future performance, analysts will discontinue coverage of firms with sufficiently negative prospects. Consistent with this conjecture, Shon and Young, (2011) find that firms experiencing negative stock returns have a higher likelihood of being dropped by analysts. The

²⁴ See Ramnath, Rock and Shane (2008) for a thorough discussion of analyst incentives.

converse is also true as related literature has also documented that analysts tend to follow firms with better prospects, (Das, Guo and Zhang, 2006), better corporate governance (Lang, Lins and Miller, 2003), high institutional ownership (Bhushan, 1989), reduced return volatility (O'Brien and Bhushan, 1990), or enhanced disclosure (Lang and Lundholm, 1996).

Interestingly, Kadan, Madureira Wang and Zach (2010) find that even though regulations aimed at mitigating the investment banking incentive in particular, they have successfully reduced the tendency of analysts to issue optimistic reports, but they have not changed their reluctance to issue pessimistic recommendations. Based on this stream of research we posit that analysts terminating coverage of firms with poor expected performance will be reluctant to disclose their negative views given the lax reporting requirements in current regulations.

Based on this research we can assume that analysts termination decisions that are justified based on a seemingly vague and information neutral reasoning, may also include terminations that analysts mask as information free when in fact they are based on the analysts' expectations. Thus, if endogenous terminations can be effectively distinguished from exogenous ones we should be able to document negative firm performance for the former but not for the latter group.

3. Regulatory Requirements on Research Reports and Research Analysts

The 2003 amendments to the SRO rulings which require analysts to issue terminations reports aimed at mitigating analysts' tendency not to issue a research report rather than issuing an unfavorable one. Requiring analysts to issue a terminating report instead of silently discontinuing coverage should enrich the market with important information, especially in light of the paucity of sources of negative firm-specific information.

“The Commission finds that the proposed amendments requiring notice of termination of coverage will provide investors with important information to better evaluate the usefulness of research, including whether the firm is no longer covering the issuer. The public may not be fully informed where a firm terminates coverage of a company without disclosing the termination to customers, and without providing customers with a final rating or recommendation, even in cases where a ratings change may have been warranted.”

In addition, aiming at increasing the comparability between reports, the final research report should include a final recommendation or rating, or disclose the bank's rationale for the

decision to terminate coverage, instead. Thus, the regulation allows analysts not to disclose their final rating, which would be a stronger signal of their true expectations, provided that their final report provides a justification for the decision to terminate coverage. This gives analysts the opportunity to essentially terminate coverage by concealing their true and unfavorable expectations by providing a vague and seemingly information-free terminating reasoning.

4. Dataset and Empirical Design

We manually collected all the original termination reports which are stored in PDF format in Thomson One Research from January 2005 to September 2012.²⁵ Furthermore, we collected the termination reasoning as well as the exact announced date of the termination.²⁶ During the period examined, 12311 terminations reports for US based firms were identified using the phrase criteria of termination, drop, dropping, cessation, and withdrawal of coverage. The initial 12311 reports incorporated different termination rationales which were categorized into six groups: acquisition of the previously covered firm, reallocation of resources within the investment bank²⁷, analyst departure from the investment bank, filing for bankruptcy of the previously covered firm or other clear stated problem of the previously covered firm (e.g. liquidity issues, low performance), and no disclosed reason in the announcement.²⁸ Our analysis focuses on 3529 termination reports citing resource constraints, or reallocation of

²⁵ Thomson One Research does not provide any report before 2005.

²⁶ I/B/E/S also provides a special section of “stopped recommendations”. The difference between the two databases is that I/B/E/S considers a firm as stopped even when there is no activity in the coverage for a certain period i.e. when the estimate or the recommendation are not updated for up to 180 days. Brokers inform I/B/E/S on a monthly basis by sending data electronically. Therefore it is up to the broker to inform the database that the estimates and/or recommendations for a particular company / analyst should be stopped. On the other hand, Thomson One Research provides the exact date and the original report of the termination which is the actual event of the loss of coverage.

²⁷ The “reallocation of resources” reasoning includes termination rationales such as “in order to re-align our coverage”, “owing to changes in coverage responsibilities”, “reorganization of our coverage”, “internal reallocation of resources”, “rationalizing our sector coverage”, “due to a shift in analyst resources”, “due to strategic resource constraints”, “due to a continuing review of our research coverage”, “restructuring of our coverage”, “a shift in our research emphasis”, “reorganization of the Equity Research”, “due to personnel changes in the research department”, “due to a shift of coverage priorities”, “a change in the sector focus”, “on time allocation issues exacerbated by a recent change in our research team”, “following review of our coverage”, “owing to changes in team structure and responsibilities”, “we have reassessed our ongoing coverage universe to suit the needs of our client base”.

²⁸ About 45% of the termination notices refer to the analyst departure, while more than 28% announce that the termination is driven by the reallocation of resources within the investment bank. Only 23.5% of the announcements refer to firm specific reason that resulted in coverage termination while the remaining 2.7% disclose no reason at all. The results corroborate the findings of Mola et al. (2003) and highlight that analysts appear unwilling to provide an explicit and comprehensive reasoning of their decision to terminate coverage, even if the reason of dropping research coverage on a given firm while reorganizing resources is likely to be related to the firms’ weak performance as well as low capital market’s interest for the specific stock.

resources as the justification for analysts' decision to drop coverage. Return data and additional requirements result in 2327 termination events. To determine whether the lack of explicit reasoning included in the termination announcement understates potential negative news, we compute the 3 days abnormal return around the termination announcement. Untabulated results indicate that the need for resources reallocation is not perceived by investors as negative news on firm future prospects, as shown by the very small mean (median) market returns of -0.17% (-0.016).

This paper aims to examine whether the choice of the reasoning included in the termination announcement can significantly undervalue the negative market reaction of investors on the release of the bad news. We hypothesize that terminations announcements justified by resources constraints but not followed by substantial decreases in the number of same industry covered peers, are less credible and are associated with lower future firm performance. We test this hypothesis, using the following model:

$$BHAR_{t+n} = \{Non-credible, MOMENTUM, CAR_t(-1,+1), DLOSS_{q-1}, SIZE_{q-1}, BM_{q-1}, LEV_{q-1}, DIO, FOLL, Industry\ effects, Year\ effects\} \quad (1)$$

We measure long run firm performance by buy-and-hold abnormal returns (*BHAR*) computed for six and 12 months following the termination announcement. *BHAR* are calculated by compounding successive daily raw returns and value weighted market index returns, then adjusting the raw returns with respect to the evolution of excess security returns (relative to a risk-free rate) as a function of excess market returns (Market model).

Our variable of interest, *Non-credible*, is an indicator variable that takes the value of 1 when the termination reasoning is non-credible and 0 otherwise. To determine whether the decision to drop coverage indeed stems from the need to reallocate resources, we posit that banks are more likely to engage in resource reallocation when they considerably free the analyst covering an industry. Given that analysts specialize in a specific industry *i*, the actual number of industry peers covered by investment bank *b* in year *t-1* is:

$$Actual\ following_{ibt-1} = Max (IBES\ following_{ibt-1}, NumTerm_{ibt}).$$

Actual following $_{ibt-1}$ is the actual number of unique firms covered in industry *i* by investment bank *b* and in year *t-1*. *IBES following* $_{ibt-1}$ is the number of unique firms covered in industry *i*

by investment bank b and in year $t-1$, as calculated by the detail and the recommendations file of IBES. $NumTerm_{ibt}$ is the total number of firms belonging to the same industry i and terminated in day t , by investment bank b . The expected number of industry peers covered by investment bank b in industry i and in year $t+1$ is:

$$Expected\ following_{ibt+1} = Actual\ following_{ibt-1} - NumTerm_{ibt}$$

$Expected\ following_{ibt+1}$ is the expected number of unique firms covered in industry i by investment bank b and in year $t+1$, and refers to the difference between the actual number of unique firms that the analyst used to cover and the ones she dropped. Since resource reallocation is expected to considerably free the analyst covering industry i so that she can effectively cover other firms in the bank's portfolio, we compare the expected number to the actual number of industry i peers, in investment bank b and in year $t+1$ ($Actual\ following_{post_{ibt+1}}$), by also taking into consideration the relationship between the new and the old coverage portfolio, as follows:

$$Non-credible = \begin{cases} 0, & \text{if } \frac{Actual\ following_{ibt+1}}{Actual\ following_{ibt-1}} < 50\% / Actual\ following_{ibt+1} \leq Expected\ following_{ibt+1} \ \& \ Actual\ following_{ibt+1} \neq 0 \\ 0, & \text{if } Actual\ following_{ibt-1} \geq Median / Actual\ following_{ibt+1} \leq Expected\ following_{ibt+1} \ \& \ Actual\ following_{ibt+1} = 0 \\ 1, & \text{otherwise} \end{cases}$$

When $Actual\ following_{post_{ibt+1}}$ is lower or equal to $Expected\ following_{post_{ibt+1}}$ and when this decrease results to a new coverage portfolio which is at least 50% smaller to the old one, then we classify the reallocation rationale as credible. In cases when the actual industry following after the termination is zero, we posit that the reallocation is credible only when the actual industry following before the termination was greater than the median. The credibility identification takes into consideration the load that analysts used to have and which they need to free after the reallocation of resources. Therefore, we conclude that when this load is not considerably transferred ex post, the reallocation reasoning is not credible but rather used to conceal future bleak firm prospects. We expect that the long run performance associated to non-credible termination reasonings is more negative than the future performance of credibly justified terminated firms.

To capture the determinants that have been shown to affect buy-and-hold abnormal returns, we include book to market and size in our tests (Fama and French, 1993). Book to market, BM , is

a proxy for firm growth and is calculated as the book value divided by market value of equity at the end of the quarter prior to the termination quarter.²⁹ We measure *SIZE* as the natural logarithm of total assets at the end of the quarter prior to the termination quarter. We also control for price momentum, *MOMENTUM*, in our models. *MOMENTUM* is calculated as the cumulative risk adjusted returns starting six months and ending 5 days before the termination announcement.

In order to examine whether the lack of explicit and comprehensive termination reasoning misleads investors first, by being reluctant to accurately disseminate negative news on the termination announcement, and secondly by failing to prevent investors from long run losses on their investments, we include $CAR_{t(-1,+1)}$ in the model. $CAR_{t(-1,+1)}$ is the 3 days cumulative risk adjusted abnormal return calculated around the termination announcement. Given that the termination report may incorporate vague reasoning, we control for its short run informativeness to examine a potential reverse effect. A negative relationship between $CAR_{t(-1,+1)}$ and long run performance would provide evidence of analysts' concealing their bearish views on future business prospects in news-neutral termination announcements. We expect that termination announcements which are less negatively informative should be associated to significantly more negative long run performance of the terminated firms.

Moreover, to control for the operating performance factors that have been shown to be associated with long run market returns, we also include two measures calculated on the quarter before the one of the termination announcement. $DLOSS_{q-1}$ is a proxy of profitability and equals 1 if the net income at the end of the quarter before the termination quarter is negative, and zero otherwise. We also compute total liabilities over total assets (LEV_{q-1}), as a predictor of financial issues. Apart from previous financial performance, the degree of information environment regarding the terminated firms can significantly affect the long term performance of terminated firms. Losing research coverage may affect more negatively the performance of less transparent firms or firms with lower remaining analysts before the termination, as for these firms the drop is more likely related to performance factors (Mola et al. 2013). To control for this relationship, *FOLL*, *LOW FOLL*, and *DIO* are included in the models. *FOLL* is the natural logarithm of the number of consensus EPS estimates. This

²⁹ Book to Market ratio $((CEQ_q + TXDB_q + ITCCY - PSTK_q) / (CSHO_q * PRCC_q))$,

number is estimated on the previous month before the termination announcement and reflects the consensus estimates for one year ahead. *LOW FOLL* is an indicator variable that takes the value of 1 when the number of consensus EPS estimates is less or equal to 5, and 0 otherwise. *DIO* is the difference in the quarterly institutional holdings between the last two quarters prior to the termination quarter. The preferences of institutional investors are directly related to stock performance (O'Brien and Bushnan, 1990). Consistently with prior literature, we expect that the long run performance of the terminated firm will be lower when then market least expects it i.e. when the long run analysts' and institutional investors' opinion is superior before the termination. We calculate buy-and-hold abnormal returns using Eventus. All accounting data come from the quarterly files of COMPUSTAT, while coverage data are collected from IBES.

Table 1 presents descriptive statistics on the distribution of termination announcements due to resources constraints. Of the 2607 termination announcements citing reallocation of resources as the underlying rationale, analysts provide credible termination reasonings on 915 terminated firms (i.e. 35.1%). The remaining 1692 firms are terminated due to resources constraints even if the investment bank does not follow corporate policies towards decreasing its research activities in the same industry. On the other hand for these cases, which we treat as non-credibly justified, investment banks marginally decrease the number of peers in the coverage portfolio or increase their following.

In order to test our hypothesis that the terminations justified by resources constraints but not accompanied by substantial decreases in the number of industry covered peers are more likely to signal future poor performance, we present mean and median differences between credible and non-credible terminations' reasonings. Results of table 1 panel B indicate that the announcement of credible terminations' reasonings elicits significantly more negative abnormal returns compared to non-credible ones. In univariate terms, the later finding shows that credible terminations' reasonings are more informative for the market. It is also noted that the credibility of the reasoning announcement is associated with the long run performance of the firm. Univariate analysis provides early evidence on the significantly negative performance of firms that are terminated for non-credible reasons. This difference is apparent 6 months after the termination announcement when the non-credibly justified terminated firms significantly underperform the rest, eliciting -6.8% (-3.8%) more negative long term

performance. The significant difference between the performance of the credibly and the non-credibly justified terminations remains 12 months after the announcement when non-credibly terminated firms underperform by almost 9.6%.

Panel C of table 1 presents mean and median differences between firms terminated with credibly and non-credibly reasons for all explanatory variables used in the analysis. Results indicate that firms terminated for non-credible reasons deal with higher probability of reporting accounting losses in the quarter before the termination quarter. There are no significant differences between the two groups' *BM*, and *DIO* in the quarter prior to the termination announcement. However, the mean *SIZE* and *LEV* measures are significantly larger for credible termination reasonings. Moreover, the non-credibly terminated firms have significantly lower number of EPS estimates for 1 year after the termination announcement, as well as higher probability of being followed by less than 5 analysts before the termination. Univariate results present early evidence that the credibility of the reasoning incorporated in the termination announcement is associated to some extent with the performance of the terminated firms before the announcement. This is related to our expectation that non-credible justifications are driven by reasons other than the resources constraints of the research department.

Table 2 presents Pearson correlations among all the examined variables. Panel A, B, and C present the correlations between *Non-credible* and *BHAR* variables, long run performance, and all explanatory variables respectively. Our main variable of interest, *Non-credible*, is significantly negatively correlated to firm performance 6, and 12 months after the termination announcement. Consistently to Panel A, Panel B shows significant negative correlation between *Non-credible* and *ROA* in the year following the termination announcement. Results also indicate that *Non-credible* is negatively correlated to *UNEXP_EPS*, and positively to the delisting probability (*DELISTING PROB*) and the probability of accounting losses in the year after the termination (*DLOSS_{t+1}*). Overall, the findings of Panels A and B suggest significant negative correlation between the lack of credibility of terminations announcements and the firms' future prospects. Panel C shows that *Non-credible* terminations are positively correlated to previous accounting losses (*DLOSS_{q-1}*), to the informativeness of the termination report (*CAR(-1,+1)*), and to lower number of analysts following the firm. Results also indicate negative relationship between *Non-credible* and *SIZE* and *LEV*.

5. Results

5.1 Short Run Informativeness of termination announcements

Losing analysts' coverage for reasons other than firm specific is showed to be news neutral for the market. However, we posit that the lack of explicit reasoning included in the termination announcement potentially aims in understating negative news on business prospects. We posit that future coverage portfolios of analysts can determine the degree of credibility of such termination reasonings. Even if the degree of "ex post" credibility is expected to differentiate the long run market performance of the terminated firms, the short run market reaction on termination announcements cannot be a priori determined.

The regression results presented in table 3 show the relationship between the termination reasonings' credibility and the short run market reaction on their announcement.³⁰ Market reaction is measured by the risk adjusted 3 day abnormal returns around the termination announcement. The coefficient of the dummy variable *Non-credible* measures the incremental impact of non-credibly justified terminations on the short run informativeness. This coefficient, 0.498% is positive but insignificant. This result indicates that relative to credible terminations, non-credibly justified terminations have not a significant incremental impact on short run informativeness. This supports the fact that investors cannot a priori distinguish the degree of credibility on terminations justified by resources constraints. Even if these results can only prove that market perceives credibly and non-credibly justified terminations as of equal investment value in the short run, the following sections examine whether long run business perspectives are differentiated.

5.2 Long Run Performance of terminated firms

Neither all investment banks nor all covered firms have the same research potential. Prior research shows that analysts' incentives and firms' underlying prospects exert significant impact on the focus of their coverage as well as on their termination decisions (Mola et al., 2013). Even if analysts are required to inform the market on what determines their drop decisions, the credibility of their provided justification is inherently difficult to quantify ex ante.

The regression results presented in table 4 determine whether the lack of explicit and comprehensive termination reasonings on the final report is associated with analysts' incentive

³⁰ All tests are based on heteroscedasticity consistent standards errors.

to hide weak business prospects of the terminated firms. The table presents the long run firm performance six (panel A) and 12 months (panel B) after the termination announcement. The first column for each return window reports the results for a parsimonious model that includes only the proxy for the credibility of termination reasoning, *Non-credible*. The second column in each return window also takes into consideration the potential reverse relation between the same-day informativeness of the termination announcement and the future firm performance. The third column in each return window controls for additional factor of financial performance of the terminated firms in the quarter before the termination announcement, while the following columns also consider the information environment before the termination.

The results of table 4 show that our variable of interest, *Non-credible*, is negatively and statistically significant for the six and 12 months after the termination announcement. The difference in returns between credibly and non-credibly justified terminated firms increases with the length of the examined long run performance window. More specifically, results indicate that credible terminations' reasonings are associated with an insignificant mean 6 month (12 month) performance of 17% (-4.2%) which is significantly less negative from the corresponding mean 6 month (12 month) performance of -8.5% (-10.2%). The negative coefficient does not mean revert; which suggests that the price impact from a non-credibly justified termination is a permanent negative event.

The coefficient of $CAR(-1, +1)$ is significantly negative indicating that there is a reverse effect between the short run informativeness provided in the termination announcement and the long run performance of the terminated firms. This negative relation highlights the importance of termination announcements containing value relevant information, and show that the absence of this information content can constitute a factor for analysts hiding expected weak long run performance of the terminated firms. Results of the models indicate that more informative termination reports are associated with around 30% (50%) less negative performance six (12) months after the announcement.

The financial performance of the terminated firms in the quarter before the termination is also a significant factor affecting the long run firm performance both six and 12 months after the announcement. More specifically, the *BHAR* after the termination announcement is lower when the previous financial performance of the terminated firm is superior. This fact indicates

that the impact of the termination announcement on the long run performance is greater when the financial performance does not predict the firm's weak prospects. Results show that the long run performance of a firm is worse after the termination when its financial position the quarter before the termination is characterized by more positive momentum, less probability of recording accounting losses, and greater growth dynamics. Size component seems to also affect the long run performance of the terminated firm but its significance is not present in a consistent pattern.

Finally, the relationship between the information environment existing on the quarter before the termination announcement quarter and the long run firm performance captures how informed the market was for the upcoming business prospects. The significant negative coefficient of *DIO* indicates that a firm for which institutional investors' holdings increased in the quarter before the termination faces significantly lower long run abnormal returns. Taken together, our results suggest that financial analysts opportunistically exercise their discretion in presenting a general rather than an explicit and comprehensive explanation behind their decision to terminate research coverage. This decision is announced one year before the negative firm performance is realized and is consistent with the findings of McNichols and O'Brien (1997) who find that analysts' research reports are characterized by paucity of negative information.

5.3 Sensitivity analysis

In order to validate our findings, this section presents additional tests. Firstly, additional measures of long run performance are calculated for both credibly and non-credibly terminated firms. Analysis aims in examining whether significant differences exist in the long run. Then, we use an alternative control sample to show differences between firm specific terminations and the non-credible treatment sample.

5.3.1 Alternative Measures of Long Run Performance

Although the lack of credibility of the reported justification is significantly negatively associated with the long run abnormal firm returns, this section provides additional evidence using alternative measures of long run performance. We posit that non-credibly justified terminations signal private information about firms' anticipated performance. To test this directly, we analyze subsequent mean and median differences between credibly and non-credibly justified terminations with respects to future *ROA*, earnings surprises (*UNEXP_EPS*),

delisting probability, and probability of reporting accounting losses (*DLOSS*). We expect that the paucity of negative news in terminations announcements will be greater for non-credible terminations. Thus, profitability will be lower and delisting probability will be higher for these firms. Moreover, suppose that indeed a bank terminates coverage of a firm due to negative information about next year's earnings that is not reflected in the consensus earnings before the termination. On the announcement of the actual EPS, credible terminations will not fall short of consensus, while for non-credible justifications earnings will disappoint systematically (Kelly and Ljunqvist, 2012).

ROA_{t+1} is the ROA of the year after the termination announcement, while $DLOSS_{t+1}$ is an indicator variable that equals 1 if the year after the termination is not profitable. $UNEXP_EPS$ is the difference between the actual 1 year ahead EPS and the last estimated mean consensus 1 year ahead EPS, divided by the absolute actual 1 year ahead EPS. Finally, *DELISTING PROB* equals 1 if the terminated firm is not categorized as "active – 100" in the CRSP files, within 1 year after the termination announcement.

The findings indicate that the non-credible reallocation terminations also refer to firms with significantly lower mean ROA and more negative mean earnings surprises in the year after the termination (-6.6% and -21.9% respectively). The corresponding median differences also show -1.6% lower ROA and -0.7% more negative earnings surprises. Univariate analysis also indicates that the delisting probability as well as the probability of reporting accounting losses in the year after the termination is greater for non-credible reallocations (5.3% and 12.3% respectively). Notably, the robustness checks also provide evidence on the inferior future firm performance of firms that are terminated using non-credible justifications, corroborating previous findings.

5.3.2 Firm Specific vs Non Credible Terminations

As a final robustness check, we compare the performance of non-credibly terminated firms to firm specific terminations. Panel A of Table 6 shows that 283 termination reports refer to firms being dropped due to their financial condition. For these cases, analysts explicitly state the poor past or poor anticipated performance and therefore. Therefore, we expect that these reports will be informative for the market. Compared to the non-credibly terminated firms, firm specific reports elicit 3.6% more negative abnormal returns on their announcement (Panel B, Table 6). After examining this relationship in a regression analysis (Panel C), the positive

and significant coefficient of *Non-credible* shows that relative to firm specific terminations, non-credibly justified terminations have a significant positive (or less negative) incremental impact on short run informativeness.

On the other hand, we expect that after the termination announcement negative information will gradually be incorporated into the stock prices of non-credibly terminated firms. Panel B of Table 6 shows that the long run 6 and 12 month performance of the latter firms is lower but not significantly different in the univariate setting. Notably, the long run performance which also includes the return on the announcement does not differ significantly between the treatment and control sample. We also examine these relationships in a multivariate setting. Panel D and E show that compared to firm specific terminated firms, non-credibly terminated firms have significantly lower six and 12 months returns after the announcement. On the other hand, when also taking into consideration the market response on the day of the announcement, long run performance of non-credible and firm specific terminations does not differ significantly. Results suggest that even if analysts avoid expressing directly their negative opinion on business prospects on the termination announcement, market adjusts in the long run. The overall effect on firm performance is as negative as explicit negative news, but timing delays market's efficiency. Therefore, analysts can opportunistically choose to conceal the true reason of their termination decision which is as important as an apparent firm financial issue.

6. Conclusion

Capital markets are characterized by lack of sources of bad news. Even if analysts constitute an important source of information, they are unwilling to provide negative information to the market. Thus prior literature has shown that they prefer to discontinue following firms rather than downgrading them due to poor performance. Aiming in minimizing this technique, the SEC has introduced additional provisions that require analysts to provide a final report, disclosing their intention to terminate research coverage and providing the termination rationale behind their decision.

Using a unique hand collected dataset of 12311 termination announcements, we show that analysts are reluctant to provide firm specific termination reasonings when they announce drop of coverage. Instead, they attribute their decision to resources constraints (analysts' departure or reallocation of resources), which significantly undervalues the negative impact of

bad news into stock prices. However, given the selection bias of analysts' activity, it is difficult to detect the credibility of the provided rationales.

In this paper, we propose one way to separate the 3529 non-firm specific terminations' reasons into credible and non-credible. We conjecture that non-firm specific terminations' reasons that are justified by resources constraints and are subsequently followed by significant decreases in within industry coverage portfolio, are more likely to be credible. Using this method, we find that non-credible terminations' reasonings are associated with significantly lower returns six and 12 months after the termination. More specifically, the terminated firms that are not credibly terminated significantly underperform the rest, eliciting -6.9% (-9.6%) more negative long term performance. Regression analysis shows that the long run business prospects are lower for terminated firms that are non-credibly justified. Moreover, the performance of the terminated firms is poorer when the announcement did not have information content or was not expected, as well as when the financial performance of the firm in the quarter before the termination was higher. Robustness checks also show significantly lower profitability, higher delisting probability, and more negative earnings surprises for the non-credibly justified terminations. Also compared to the performance of firm-specific terminations, the overall effect of non-credible terminations on firm performance is as negative as explicit negative news, but timing delays market's efficiency. Our findings imply that the lack of explicit and comprehensive reasoning behind the termination decision can affect significantly negatively the profitability of capital market participants.

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Table 8: Credible and Non-credible Terminations

The table presents descriptive statistics for the two samples of credible and non-credible terminations. Panel A presents the year distribution of the terminations announcements in total, as well as based on their credibility. Panel B and C present means and medians for the variables used in the analysis. Panel B presents the mean and median differences of short run abnormal and long run buy-and-hold abnormal returns 6, 12 months as well as the long run performance after the announcement of the terminations, while Panel C presents descriptive statistics for the explanatory variables. Using paired t-test and Wilcoxon rank sum test, we show differences in means and median respectively for each variable. 3 days CAR represents the risk adjusted abnormal returns around the termination announcement, while the Buy-and-Hold abnormal returns are computed for 6, and 12 months following the termination announcement. All short and long run returns are presented in percentages. ROA_{t+1} is the ROA of the year after the termination announcement, while $DLOSS_{t+1}$ is an indicator variable that equals 1 if the year after the termination is profitable. $UNEXP_EPS$ is the difference between the actual EPS and the last estimated mean consensus 1 year ahead EPS estimate, divided by the absolute actual EPS. $DELIST_PROB$ equals 1 if the terminated firm is not categorized as “active (100)” in the CRSP files, within a year after the termination announcement. Non-credible is an indicator variable that takes the value of 1 when the termination reasoning is non-credible. BM proxies for growth while $DLOSS_{q-1}$ proxies for profitability; $SIZE$ is the natural logarithm of market capitalization, $LEVERAGE$ is the ratio of total liabilities over total assets. $MOMENTUM$ is the risk adjusted abnormal returns 6 months before the termination until 5 days before. DIO is the difference in the percentage institutional ownership holdings between the two last quarters before the quarter of termination. $FOLL$ is the natural logarithm of the consensus number of EPS estimates before the termination. LOW_FOLL is an indicator variable that takes the value of 1 if the number of consensus estimates for 1 year ahead EPS is below 5. All financial indicators are calculated in the quarter before the quarter of termination. ^a, ^b, ^c denote the two sided significance level at 1%, 5%, and 10% respectively.

Panel A: Distribution of Credible and Non-Credible Terminations

	Credible	Non-credible	Total
<i>N</i>	915	1692	2607
<i>% Frequency</i>	35.1	64.9	100%

Panel B: % Short Run and Long Run Abnormal Returns on Credible and Non-Credible Terminations

	MEAN			MEDIAN		
	Credible	Non-credible	Difference	Credible	Non-credible	Difference
<i>3 days</i>	-0.596	-0.004	0.592 ^b	-0.222	0.031	0.253 ^a
<i>6 months</i>	9.732	2.874	-6.858 ^a	1.504	-2.338	-3.842 ^a
<i>12 months</i>	3.542	-6.070	-9.612 ^b	-0.957	-4.263	-3.306
<i>MOMENTUM</i>	-2.841	-1.775	1.066	-0.708	0.438	1.146

Panel C: Independent Variables on Credible and Non-Credible Terminations

	MEAN			MEDIAN		
	Credible	Non-credible	Difference	Credible	Non-credible	Difference
<i>DLOSS_{q-1}</i>	0.18579	0.22991	0.04412 ^a	1	1	0 ^a
<i>SIZE</i>	5.33805	4.38936	-0.94869 ^a	6.67331	5.33963	-1.33368 ^a
<i>BM</i>	0.39992	0.36554	-0.03438	0.27318	0.23355	-0.03963
<i>LEV</i>	0.38034	0.33986	-0.04048 ^a	0.39044	0.27822	-0.11222 ^a
<i>DIO</i>	-0.00689	-0.00841	-0.00152	0	0	0
<i>FOLL</i>	1.91088	1.53330	-0.37758 ^a	2.19722	1.79176	-0.40546 ^a
<i>NUMEST</i>	10.64481	7.47104	-3.17377 ^a	9	6	-3 ^a
<i>LOW FOLL</i>	0.34863	0.49409	0.14546 ^a	0	0	0 ^a

Table 9: Pearson Correlation

The table presents Pearson correlation coefficients and their significance in the second row. Panel A presents the correlations of Non-credible to the long run returns, while Panel B presents the correlations of Non-credible to alternative measures of long run performance. Panel C presents the correlations of Non-credible to the explanatory variables. Non-credible is an indicator variable that takes the value of 1 when the termination reasoning is not credible. BHAR are the value weighted risk-adjusted buy-and-hold returns for 6, and 12. ROA_{t+1} is the ROA of the year after the termination announcement, while $DLOSS_{t+1}$ is an indicator variable that equals 1 if the year after the termination is profitable. $UNEXP_EPS$ is the difference between the actual EPS and the last estimated mean consensus 1 year ahead EPS estimate, divided by the absolute actual EPS. $DELIST_PROB$ equals 1 if the terminated firm is not categorized as “active (100)” in the CRSP files, within a year after the termination announcement. Non-credible is an indicator variable that takes the value of 1 when the termination reasoning is non-credible. 3 days CAR represents the risk adjusted abnormal returns around the termination announcement. BM proxies for growth while $DLOSSq-1$ proxies for profitability; $SIZE$ is the natural logarithm of market capitalization, $LEVERAGE$ is the ratio of total liabilities over total assets. DIO is the difference in the percentage institutional ownership holdings between the two last quarters before the quarter of termination. $MOMENTUM$ is the risk adjusted abnormal returns 6 months before the termination until 5 days before. $FOLL$ is the natural logarithm of the consensus number of EPS estimates before the termination. All financial indicators are calculated in the quarter before the quarter of termination. LOW_FOLL is an indicator variable that takes the value of 1 if the number of consensus estimates for 1 year ahead EPS is below 5. ^a, ^b, ^c denote the two sided significance level at 1%, 5%, and 10% respectively.

Panel A: Returns Correlation with Non-credible

	<i>Non-credible</i>	<i>BHAR 6 months</i>	<i>BHAR 12 months</i>
<i>Non-credible</i>	1	-0.05016 ^a	-0.04034 ^b
		0.0104	0.0395
<i>BHAR 6 months</i>		1	0.83082 ^a
			<0.0001
<i>BHAR 12 months</i>			1

Panel B: Long Run Performance correlations with Non-credible

	<i>Non-credible</i>	<i>ROA_{t+1}</i>	<i>UNEXP_EPS</i>	<i>DELISTING PROB</i>	<i>DLOSS_{t+1}</i>
<i>Non-credible</i>	1	-0.09958 ^a 0.0001	-0.04613 ^b 0.0386	0.09456 ^a <0.0001	0.12492 ^a <0.0001
<i>ROA_{t+1}</i>		1	0.03699 0.1927	-0.13417 ^a <0.0001	-0.43816 ^a <0.0001
<i>UNEXP_EPS</i>			1	0.00657 0.7686	-0.14152 ^a <0.0001
<i>DELISTING PROB</i>				1	0.09514 ^a 0.0002
<i>DLOSS_{t+1}</i>					1

Panel C: Independent Variables correlations with Non-credible

	<i>Non-credible</i>	<i>DLOSS_{q-1}</i>	<i>SIZE</i>	<i>BM</i>	<i>LEV</i>	<i>DIO</i>	<i>CAR(-1,+1)</i>	<i>FOLL</i>	<i>MOMENTUM</i>	<i>LOW FOLL</i>
<i>Non-credible</i>	1	0.05130 ^a	-0.11685 ^a	-0.01032	-0.05646 ^a	-0.00919	0.03363 ^c	-0.16208 ^a	0.00923	0.13976 ^a
		0.0088	<0.0001	0.5982	0.0039	0.6389	0.0860	<0.0001	0.6375	<0.0001
<i>DLOSS_{q-1}</i>		1	0.22970 ^a	0.13636 ^a	0.35352 ^a	-0.05090 ^a	-0.06389 ^a	-0.17233 ^a	-0.06982 ^a	0.18503 ^a
			<0.0001	<0.0001	<0.0001	0.0093	0.0011	<0.0001	0.0004	<0.0001
<i>SIZE</i>			1	0.15236 ^a	0.79638 ^a	0.04153 ^b	-0.02425	0.24347 ^a	0.02370	-0.19042 ^a
				<0.0001	<0.0001	0.0340	0.2158	<0.0001	0.2264	<0.0001
<i>BM</i>				1	0.04796 ^a	0.05387 ^a	0.01522	0.00600	0.05956 ^a	0.01419
					0.0143	0.0059	0.4373	0.7596	0.0023	0.4689
<i>LEV</i>					1	-0.00552	-0.04962 ^a	0.05876 ^a	-0.01437	-0.02236
						0.7783	0.0113	0.0027	0.4633	0.2538
<i>DIO</i>						1	-0.01893	0.02440	0.01567	-0.04166 ^b
							0.3340	0.2130	0.4239	0.0334
<i>CAR(-1,+1)</i>							1	0.03970 ^b	0.08910 ^a	-0.03760 ^b
								0.0427	<0.0001	0.0549
<i>FOLL</i>								1	0.05084 ^a	-0.86695 ^a
									0.0094	<0.0001
<i>MOMENTUM</i>									1	-0.04835 ^a
										0.0135
<i>LOW FOLL</i>										1

Table 10: Regression results of Short run Informativeness (3days)

The table presents regression analysis after using fixed effects for industry and year. The first row of each variable denotes the coefficient, while the second presents the significance. 3 days CAR represents the risk adjusted abnormal returns around the termination announcement, while MOMENTUM is the risk adjusted abnormal returns 6 months before the termination until 5 days before. Non-credible is an indicator variable that takes the value of 1 when the termination reasoning is non-credible. BM proxies for growth while SIZE is the natural logarithm of market capitalization. All financial indicators are calculated in the quarter before the quarter of termination.

Intercept	Non-credible	MOMENTUM	SIZE	BM	Adj R-Sq
0.02512	0.00498	0.01431	-0.00041990	0.00061957	0.0104
0.6260	0.1737	<0.0001	0.3551	0.5713	

Table 11: The effect of lack of credibility on long run performance

The table presents regression analysis after using fixed effects for industry and year. The first row of each variable denotes the coefficient, while the second presents the significance. 3 days CAR represents the risk adjusted abnormal returns around the termination announcement, while the Buy-and-Hold abnormal returns are computed for 6, and 12 months following the termination announcement. Non-credible is an indicator variable that takes the value of 1 when the termination reasoning is non-credible. MOMENTUM is the risk adjusted abnormal returns 6 months before the termination until 5 days before. BM proxies for growth while DLOSS_{q-1} proxies for profitability; SIZE is the natural logarithm of market capitalization, LEVERAGE is the ratio of total liabilities over total assets. DIO is the difference in the percentage institutional ownership holdings between the two last quarters before the quarter of termination. FOLL is the natural logarithm of the consensus number of EPS estimates before the termination. LOW_FOLL is an indicator variable that takes the value of 1 if the number of consensus estimates for 1 year ahead EPS is below 5. All financial indicators are calculated in the quarter before the quarter of termination.

Panel A – Long Run Post Event Informativeness of Non-Credible & Credible Terminations (6months)

<i>Intercept</i>	-0.01525	-0.00700	0.15819	0.14858	0.17301	0.19391	0.17200
	0.9670	0.9848	0.6679	0.6874	0.6390	0.5960	0.6386
<i>Non-credible</i>	-0.08147	-0.07959	-0.08765	-0.08608	-0.08402	-0.08293	-0.08544
	0.0019	0.0024	0.0008	0.0011	0.0015	0.0015	0.0011
<i>MOMENTUM</i>	-0.18238	-0.17793	-0.16747	-0.16787	-0.16851	-0.16523	-0.16448
	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<i>SIZE</i>	-0.00440	-0.00460	-0.00969	-0.01051	-0.01158	-0.00985	-0.00854
	0.1766	0.1573	0.0793	0.0684	0.0424	0.0822	0.1356
<i>BM</i>	0.02754	0.02774	0.02448	0.02458	0.02484	0.02792	0.02762
	0.0004	0.0004	0.0021	0.0020	0.0018	0.0004	0.0005
<i>CAR(-1,+1)</i>		-0.33564	-0.29067	-0.29322	-0.29686	-0.32065	-0.31625
		0.0220	0.0471	0.0454	0.0427	0.0273	0.0296
<i>DLOSS</i>			0.14201	0.14484	0.14946	0.13995	0.13453
			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<i>LEV</i>			0.01991	0.02444	0.03146	0.02013	0.01182
			0.7598	0.07102	0.6319	0.7574	0.8562
<i>FOLL</i>				0.00602			0.00437
				0.6211			0.7173
<i>LOW FOLL</i>					-0.03518	-0.03535	
					0.1882	0.1823	
<i>DIO</i>						-1.04518	-1.04382
						<0.0001	<0.0001

Obs	2607	2607	2607	2607	2607	2607	2607
F value	13.61	13.23	13.09	12.55	12.62	14.12	14.05
	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Adj R-Sq	0.0882	0.0897	0.0964	0.0961	0.0967	0.1118	0.1112

Panel B – Long Run Post Event Informativeness of Non-Credible & Credible Terminations (12months)

<i>Intercept</i>	-0.25404	-0.24161	-0.05843	-0.07790	0.03140	0.00048343	-0.04225
	0.6908	0.7050	0.9274	0.9034	0.9609	0.9994	0.9471
<i>Non-credible</i>	-0.10212	-0.09930	-0.10713	-0.10394	-0.10053	-0.09810	-0.10224
	0.0247	0.0289	0.0188	0.0236	0.0282	0.0311	0.0250
<i>MOMENTUM</i>	-0.34958	-0.34288	-0.33189	-0.33271	-0.33382	-0.32798	-0.32669
	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<i>SIZE</i>	-0.00971	-0.01002	-0.01339	-0.01504	-0.01683	-0.01413	-0.01197
	0.0851	0.0756	0.1631	0.1333	0.0898	0.1516	0.2294
<i>BM</i>	0.06513	0.06543	0.06120	0.06141	0.06188	0.06667	0.06614
	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<i>CAR(-1,+1)</i>		-0.50568	-0.45924	-0.46440	-0.47047	-0.50864	-0.50130
		0.0466	0.0711	0.0682	0.0646	0.0443	0.0475
<i>DLOSS</i>			0.15907	0.16482	0.17267	0.15691	0.14775
			0.0061	0.0051	0.0033	0.0073	0.0116
<i>LEV</i>			-0.01028	-0.00112	0.01070	-0.00652	-0.02044
			0.9276	0.9922	0.9253	0.9541	0.8571
<i>FOLL</i>				0.01219			0.00963
				0.5646			0.6468
<i>LOW FOLL</i>					-0.06403	-0.06466	
					0.1681	0.1610	
<i>DIO</i>						-1.65255	-1.64923
						<0.0001	<0.0001
Obs	2609	2609	2609	2609	2609	2609	2609
F value	15.15	14.63	13.75	13.19	13.26	14.40	14.32
	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Adj R-Sq	0.0979	0.0989	0.1011	0.1008	0.1014	0.1138	0.1132

Table 12: Sensitivity Analysis - Alternative Measures of Long run Performance

The table presents mean and median differences between the non-credible and the credible sample, regarding alternative measures of long run performance. ROA_{t+1} is the ROA of the year after the termination announcement, while $DLOSS_{t+1}$ is an indicator variable that equals 1 if the year after the termination is profitable. $UNEXP_EPS$ is the difference between the actual EPS and the last estimated mean consensus 1 year ahead EPS estimate, divided by the absolute actual EPS. $DELIST_PROB$ equals 1 if the terminated firm is not categorized as “active (100)” in the CRSP files, within 1 year after the termination announcement. ^{a, b, c} denote the two sided significance level at 1%, 5%, and 10% respectively.

	MEAN			MEDIAN		
	Credible	Non-credible	Difference	Credible	Non-credible	Difference
ROA_{t+1}	1.393	-5.182	-6.575 ^a	3.732	2.136	-1.596 ^a
$UNEXP_EPS$	-10.254	-32.133	-21.879 ^b	0.735	0	-0.735 ^a
$DELISTING_PROB$	4.372	9.693	5.321 ^a	0	0	0 ^a
$DLOSS_{t+1}$	23.274	35.604	12.330 ^a	0	0	0 ^a

Table 13: Sensitivity Analysis - Financial Issues vs Non credible terminations

The table presents regression analysis after using fixed effects by industry and year. The first row of each variable denotes the coefficient, while the second presents the significance. Panel A presents the construction of the new sample. Panel B shows the mean and median returns for the non-credible sample versus the sample that was terminated due to financial issues of the underlying firm. The latter sample of firms is used as the control sample instead of credible terminations. Panel B presents the multivariate regressions. Panel C presents the multivariate regression explaining the short run informativeness of termination announcement. 3 days CAR represents the risk adjusted abnormal returns around the termination announcement. Panel D, E, and F present the regression results explaining different windows of long run performance. Non-credible is an indicator variable that takes the value of 1 when the termination reasoning is non-credible i.e. when the bank terminates covering a firm using non-credible reasons instead of explicitly providing financial issues. BM proxies for growth while DLOSS proxies for profitability; SIZE is the natural logarithm of market capitalization, LEVERAGE is the ratio of total liabilities over total assets. DIO is the difference in the percentage institutional ownership holdings between the two last quarters before the quarter of termination. FOLL is the natural logarithm of the consensus number of EPS estimates before the termination. LOW_FOLL is an indicator variable that takes the value of 1 if the number of consensus estimates for 1 year ahead EPS is below 5. All financial indicators are calculated in the quarter before the quarter of termination. ^a, ^b, ^c denote the two sided significance level at 1%, 5%, and 10% respectively.

Panel A – New Sample Construction

	Non-credible	Financial Issues	Total
<i>N</i>	1692	283	1975
<i>% Frequency</i>	85.67	14.33	100

Panel B - % Short Run and Long Run Abnormal Returns on Non-Credible & Firm-Specific Terminations

	Mean			Median		Difference
	Non-credible	Financial Issues	Difference	Non-credible	Financial Issues	
<i>3 days</i>	0.004	-3.582	-3.586 ^a	0.031	-0.791	-0.822 ^a
<i>6 months</i>	2.874	21.410	18.536	-2.338	-6.007	-3.669
<i>12 months</i>	-6.070	27.081	33.151	-4.263	-6.636	-2.373
<i>-1 day, +320</i>	-4.164	-2.782	1.382	-2.960	-5.614	-2.654

Panel C - Short Run Informativeness of Non-Credible & Firm-Specific Terminations (3days)

Intercept	Non-credible	MOMENTUM	SIZE	BM	Adj R-Sq
0.00035267	0.04279	-0.01199	-0.00055129	0.00205	0.0256
0.9966	<0.0001	0.0006	0.4384	0.1979	

Panel D – Long Run Post Event Informativeness of Non-Credible & Firm-Specific Terminations (6months)

<i>Intercept</i>	-0.31375	-0.31180	-0.22037	-0.24318	-0.11868	-0.08271	-0.19346
	0.6559	0.6576	0.7553	0.7308	0.8668	0.9065	0.7833
<i>Non-credible</i>	-0.16008	-0.14526	-0.14234	-0.15074	-0.15435	-0.14305	-0.13922
	0.0116	0.0228	0.0262	0.0188	0.0162	0.0252	0.0294
<i>MOMENTUM</i>	-0.13174	-0.13636	-0.13394	-0.13503	-0.13536	-0.13232	-0.13194
	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<i>SIZE</i>	-0.01127	-0.01157	-0.00752	-0.01283	-0.01393	-0.01070	-0.00937
	0.0612	0.0544	0.4262	0.1952	0.1560	0.2748	0.3436
<i>BM</i>	0.03574	0.03622	0.03156	0.03221	0.03278	0.03011	0.02954
	0.0080	0.0072	0.0244	0.0216	0.0193	0.0311	0.0345
<i>CAR(-1,+1)</i>		-0.38513	-0.37333	-0.39465	-0.39983	-0.41178	-0.40581
		0.0535	0.0623	0.0490	0.0459	0.0390	0.0420
<i>DLOSS</i>			0.07690	0.09859	0.10214	0.08570	0.08107
			0.1851	0.0962	0.0830	0.1448	0.1704
<i>LEV</i>			-0.08528	-0.06511	-0.05640	-0.06790	-0.07707
			0.3914	0.5153	0.5732	0.4958	0.4393
<i>FOLL</i>				0.04019			0.03373
				0.0747			0.1336
<i>LOW FOLL</i>					-0.11475	-0.10357	
					0.0171	0.0308	
<i>DIO</i>						-1.24787	-1.25275
						<0.0001	<0.0001
Obs	1975	1975	1975	1975	1975	1975	1975
F value	6.45	6.33	5.87	5.76	5.87	6.44	6.34
	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Adj R-Sq	0.0523	0.0537	0.0537	0.0547	0.0559	0.0645	0.0633

Panel E – Long Run Post Event Informativeness of Non-Credible & Firm-Specific Terminations (12months)

<i>Intercept</i>	-0.35008	-0.34792	-0.25003	-0.30746	0.01314	0.06836	-0.23057
	0.7964	0.7976	0.8545	0.8215	0.9923	0.9599	0.8652
<i>Non-credible</i>	-0.30577	-0.28062	-0.27719	-0.29774	-0.30818	-0.29034	-0.27952
	0.0122	0.0224	0.0247	0.0160	0.0126	0.0185	0.0234
<i>MOMENTUM</i>	-0.29200	-0.29938	-0.29667	-0.29933	-0.30036	-0.29558	-0.29447
	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<i>SIZE</i>	-0.01787	-0.01843	-0.01458	-0.02782	-0.03117	-0.02617	-0.02242
	0.1231	0.1118	0.4239	0.1452	0.0993	0.1664	0.2405
<i>BM</i>	0.07449	0.07567	0.07092	0.07266	0.07409	0.07008	0.06863
	0.0040	0.0034	0.0084	0.0069	0.0059	0.0090	0.0106
<i>CAR(-1,+1)</i>		-0.62565	-0.61198	-0.66318	-0.68039	-0.69696	-0.67873
		0.1023	0.1116	0.0849	0.0767	0.0690	0.0770
<i>DLOSS</i>			0.08226	0.13615	0.14760	0.12197	0.10875
			0.4622	0.2332	0.1934	0.2821	0.3407
<i>LEV</i>			-0.08489	-0.03497	-0.01022	-0.02829	-0.05382
			0.6581	0.8561	0.9577	0.8830	0.7797
<i>FOLL</i>				0.10008			0.08998
				0.0213			0.0382
<i>LOW FOLL</i>					-0.29713	-0.27977	
					0.0014	0.0025	
<i>DIO</i>						-1.93532	-1.94905
						0.0005	0.0005
<i>Obs</i>	1977	1977	1977	1977	1977	1977	1977
<i>F value</i>	6.34	6.17	5.66	5.66	5.88	6.16	5.95
	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<i>Adj R-Sq</i>	0.0513	0.0521	0.0514	0.0535	0.0559	0.0613	0.0590

Panel F – Long Run Informativeness of Non-Credible & Firm-Specific Terminations (-1 day, +320)

<i>Intercept</i>	-0.53430	-0.53286	-0.33767	-0.36536	-0.19946	-0.15303	-0.29982
	0.5101	0.5103	0.6777	0.6528	0.8061	0.8497	0.7103
<i>Non-credible</i>	-0.00060106	-0.03125	-0.02028	-0.03108	-0.03863	-0.02192	-0.01408
	0.9935	0.6756	0.7867	0.6891	0.6069	0.7691	0.8505
<i>MOMENTUM</i>	-0.21505	-0.20589	-0.19870	-0.91961	-0.20037	-0.19638	-0.19559
	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<i>SIZE</i>	-0.00509	-0.00470	-0.00446	-0.01087	-0.01314	-0.00888	-0.00626
	0.4667	0.5003	0.6819	0.3404	0.2444	0.4297	0.5816
<i>BM</i>	0.05928	0.05776	0.05165	0.05245	0.05328	0.04985	0.04901
	0.0001	0.0002	0.0013	0.0011	0.0009	0.0018	0.0022
<i>CAR(-1,+1)</i>		0.68906	0.72218	0.69574	0.68419	0.67495	0.68754
		0.0018	0.0011	0.0017	0.0020	0.0021	0.0018
<i>DLOSS</i>			0.16249	0.18775	0.19552	0.17312	0.16381
			0.0156	0.0061	0.0041	0.0107	0.0164
<i>LEV</i>			-0.07096	-0.04580	-0.03063	-0.04589	-0.06181
			0.5336	0.6897	0.7894	0.6872	0.5878
<i>FOLL</i>				0.04817			0.03930
				0.0635			0.1284
<i>LOW FOLL</i>					-0.15574	-0.14043	
					0.0051	0.0111	
<i>DIO</i>						-1.67441	-1.68636
						<0.0001	<0.0001
Obs	1956	1956	1956	1956	1956	1956	1956
F value	10.08	10.11	9.51	9.27	9.47	10.24	10.05
	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Adj R-Sq	0.0850	0.0892	0.0910	0.0921	0.0942	0.1057	0.1038

CHAPTER 3

Closing the Gap of Analysts' Informativeness: An Empirical Analysis of Short-Run Stock Tips

Abstract

Recent regulatory changes resulted in a widespread transition to coarser recommendation grids potentially entailing a lower level of information transmission, and lower informativeness of stock recommendations. At the same time anecdotal evidence suggests that capital market participants' demand on short-run information has significantly increased. Using the unique hand collected sample of 1509 short-run trading ideas, we examine the information content of short-term trading tips and their potential use as a valuable input in the longer-term research output. We document that analysts prefer to provide short-run trading tips for firms with greater performance and potential of revenue generation. The announcement of the tactical ideas elicits significant abnormal returns depending on the direction of the short term tip. Trading tips are incrementally informative, conditional on concurrent stock recommendations. We also find that the predictive power of the short-run news over the long run research horizon is strongest when the direction of the short-run trading tip and the previous recommendation coincide rather than when they differ. We also show that the market reaction to upcoming recommendation changes is greater for firms with short-run trading tips. Our findings provide evidence that an upcoming recommendation upgrade that is accompanied by a short-term rise estimate elicits up to +2.8% higher abnormal returns. Results are consistent with short-run price estimates increasing the overall informativeness of upcoming recommendations' changes.

Morgan Stanley also generates short-term views on various stocks, which it calls "Research Tactical Ideas" and distributes widely via email and the firm's Web site. In May, for example, it told clients that insurer Aflac Inc. 's earnings guidance would be "softer than many investors expect." Its rating on Aflac at the time was "neutral." In its longer-term reports published by analysts, Morgan Stanley discloses that it issues such trading tips, and that the tips on any given stock "may be contrary to the recommendations or views expressed in this or other research on the same stock."³¹

1. Introduction

Over the last years, U.S. regulators are seriously concerned that investors are being misled by financial analysts who not only issue biased research outputs but also funnel short-term stock tips to their biggest trading clients.³² Several regulatory changes on analysts' recommendations suggested stringent disclosure requirements on how equity research is produced and disseminated. The new rules resulted in a widespread transition to a three-tier rating system, in contrast to the traditional five-tier scale. Prior literature provides evidence on coarser recommendation grids potentially entailing a lower level of information transmission, and financial analysts' recommendations becoming less informative (Kadan et al. 2009).

Our paper examines a new short-run research product that provides market participants with concise and explicit statements of the upcoming stock price movements.³³ Despite the increasing importance of short-term trading tips, their potential in conveying valuable information to capital markets as well as their contribution in the formation of long-term research have remained largely unexplored. This paper provides new evidence on this topic.

Understanding the role of short-run trading tips in capital markets is important for several reasons. First, it may be argued that stock recommendations and earnings forecasts may

³¹ <http://www.wsj.com/articles/SB125107135585052521>

³² Recently, investment banks have been in the center of regulators' attention for "dishonest and unethical violation" of fair dealing with customers rules. For instance, Goldman was fined \$10 million for selectively providing short run trading tips for stocks that were likely to rise or fall because of coming earnings announcements, the direction of the overall market or other short-term developments. Apart from the fact that this practice puts individual clients at the end of the food chain, some of the tips differ from the widely circulated long-term reports of Goldman. Therefore, this selective distribution to key clients potentially hurts other customers who are not given the opportunity to trade on this information.

At least one investment bank discloses publicly such trading tips.

³³ On February 8th, 2008 Morgan Stanley announced the release of a new product called "Research Tactical Idea". This product is the reply to the market's need for information over a period shorter than the 12- to 18-month investment horizon that characterizes stock recommendations.

completely subsume the information in short-run trading tips, but the fact that tactical ideas are associated with a short-term “end date” suggests that they can be more easily interpreted by investors, increasing their necessity in the stock markets. Second, evidence that market participants react to the information conveyed in analyst short-run research is relevant in assessing the effect of potential biases in analysts’ opinion on the informativeness of their reports. Since short term tips may be contrary to the long term recommendations, this paper aims to examine the possibility of their predictive power towards the upcoming long-term research product. Thirdly, if tactical ideas are incrementally informative and price moving, this would suggest that analysts may choose to disclose short term news on firms with high investor interest and performance, thus indicating selection bias. Finally, given that within the new three tier system coarser recommendation grids potentially entail a lower level of information transmission, analysts’ recommendations have become less unconditionally informative (Kadan et al. 2009). Thus, analysts’ opinion in an interval shorter than that of recommendations could significantly increase the informativeness of positive long term news.

We begin our analysis by presenting descriptive statistics on the content of the short-run trading tips’ reports. We also aim to examine the characteristics of the firms that analysts choose to provide short run trading tips, by comparing firm’s operating and stock performance, as well as the potential for investor interest between the sample and control firms. Moreover, given the short-run horizon of this new research product we continue our analysis with an examination of stock price reactions associated with tactical ideas announcements. We posit that we should observe significant market reactions around the announcement, if capital market participants perceive short term trading tips as valuable. Our analysis also takes into consideration that tactical ideas are not issued alone, but in conjunction with stock recommendations. We expect tactical ideas to be informative even in the presence of stock recommendations. Additionally, we posit that even if short-run stocks tips are informative, it cannot be directly suggested whether this information is subtle or if it can necessitate an upcoming recommendation revision. Thus, we aim to examine the degree to which short-run analysts’ research is used as an input to long-run analysts’ valuation process.

Using the unique hand collected sample of 1509 tactical ideas, we document significant differences between firms with and without short-run trading tips, suggesting that analysts prefer firms with greater performance and potential of revenue generation. Evidence on the

properties of firms with short-run trading tips is provided by a univariate analysis between the sample and control firms. The control sample, which is matched from the same investment bank, industry and year has significantly lower operating and stock performance, lower consensus estimates as well as is characterized by lower institutional investors' holdings, suggesting that financial analysts could potentially be selective on providing short-run tips for firms with higher trading incentives.

Moreover, we find significant abnormal returns around their announcement, and show that market reaction depends on the direction of the short term tip. We also show that tactical ideas are incrementally informative, conditional on concurrent stock recommendations. Taking into consideration that subsequently to stock recommendations and earnings forecasts, a significant price "drift" exists, we examine event returns in relation to analysts' expectations. We provide evidence on tactical ideas announcements containing information regarding upcoming price movements, above and beyond that incorporated into concurrent stock recommendations. Our findings show that tactical ideas do contain valuable information.

The long-run analysis also enables us to provide evidence on the potential role that tactical ideas play on analysts' long-term valuation process. We ask whether short-term trading tips can close a gap in analysts' research, by predicting upcoming adjustments into recommendations' levels. We find that the predictive power of the short-run news over the long run research horizon is strongest when the direction of the short-run trading tip and the previous recommendation coincide rather than when they differ. We also find that the market reaction to upcoming recommendation changes is greater for firms with short-run trading tips. Examining the two day market reaction, an upcoming recommendation upgrade that is accompanied by a short-term rise estimate elicits up to +2.8% higher abnormal returns. Results are consistent with short-run price estimates increasing the overall informativeness of upcoming recommendations' changes.

Examining the informativeness of analysts' short-run trading tips contributes to extant literature on the information content of analysts' stock recommendations, earnings forecasts and target prices. Prior research provides evidence on the importance of stock recommendations on capitals markets, suggesting that they stimulate significant price reactions on their announcement (e.g. Stickel (1995), Womack (1996)). The information contained in stock recommendations is shown to be orthogonal to the information content of

other signals affecting stock returns (Jegadeesh et al. (2004)). In a similar vein, Francis and Soffer (1997) focus on the relative informativeness of recommendations and earnings forecasts, and show that each research output is informative in the presence of the other. Stickel (1995), apart from recommendation and earnings forecast revisions, also includes proxies for the magnitude of the recommendation change, the analyst's reputation, the size of the analyst's brokerage house, as well as the firm's information environment. His findings are consistent with those of Francis and Soffer (1997) indicating that earnings forecast revisions are informative even in the presence of a stock recommendation. Even if the studies of Francis and Soffer (1997) and Stickel (1995) include several potential factors that contribute to the information content of a new recommendation, they do not consider price targets. Brav and Lehavy (2003) use a large dataset of analysts' target prices and find significant market reaction to the information contained in analysts' target prices, even conditionally to contemporaneously issued stock recommendations and earnings forecasts. We add to this research by examining the value and content of short-run trading tips.

Moreover, this paper also adds to the literature examining the types of recommendations that are more informative to investors. Prior literature has shown that the informativeness of a stock recommendation is associated to firm, market, analysts' and recommendation's characteristics (e.g. Jegadeesh et al. (2004), Boni and Womack (2006), Loh and Stulz (2011), (2014)). Apart from these, previous studies have shown that analysts' research outputs are associated with each other to increase their informativeness. According to the recent work of Brown et al. (2015), more than 70% of financial analysts are motivated to issue accurate earnings forecasts as they constitute a valuable input to their stock recommendations. Similarly, Kesckes et al. (2015) provide evidence on the incremental effect of earnings estimates on stock recommendations, suggesting that recommendation changes triggered by earnings estimates revisions are significantly more valuable to market participants. In a similar vein, the results of Loh and Mian (2006) show that superior earnings forecasts in terms of accuracy appear to facilitate superior investment recommendations' profitability. Our paper stresses the informativeness of short-run price changes in combination with recommendation changes. Given that within the new three tier system coarser recommendation grids potentially entail a lower level of information transmission, analysts' recommendations have become less unconditionally informative (Kadan et al. 2009). Thus, our paper adds to the literature

suggesting that the positive short-run information of analysts can significantly increase the informativeness of positive long term news.

The remainder of the paper is organized as follows: Section 2 describes the sample and the data construction. Section 3 examines the characteristics of the firms which tactical ideas are announced for. Section 4 examines the information content of the short-run trading tips, as well as their long-run dynamics. Conclusions are offered in Section 5.

2. Sample and Data

2.1 Sample Description

The tactical ideas' reports on US firms are manually collected by Thomson One for the period 2008 to 2013. In Table 1 Panel A, we report descriptive statistics for the content of tactical ideas announcements. Out of the 1509 reports, 728 (48.24%) refer to an upcoming rise of the stock price while only 240 (15.9%) inform the market for a stock price drop. The remaining 541 (35.85%) reports aim to discontinue a previous research tactical idea that should no longer be relied upon. Interestingly enough, not all tactical ideas are discontinued which suggests either that they are closed on the interval included in the initial report, or that the upcoming event (rise or drop) never actually took place. Early evidence confirms previous research findings that analysts are more willing to provide positive rather than negative information. Panel B of Table 1 provides a description of analysts' estimated probability of short term tip realization. Analysts refer to the majority of their short term ideas (48.14%) with 70-80% probability of either rising or dropping stock prices in the next months. Results also indicate that price rises will take place almost 4 (15) days earlier than stock price drops in mean (median) terms. Rise reports are also more informative than drop reports, as proxied by the number of pages. Moreover, overall analysts tend to be more informative in the short-run for firms with "In-Line" (45.24%) or "Attractive" (43.9%) industries views. Table 1 Panel E reports statistics on the concurrent recommendations. Firstly, tactical ideas are overall more likely to be issued along with buy recommendations (45.8%) and hold (44.4%) rather than sell (9.8%) recommendations. Secondly, within tactical ideas categories, short-run rises are more likely to be issued for firms with buy recommendations (59,1%) while short run drops are more likely to accompany a hold (60%) recommendation. This evidence is consistent with the common claim that analysts are biased toward issuing favorable news and withholding bad news.

B. Data description

The manually collected sample of tactical ideas is joined with firm and stock performance indicators, analysts' data and institutional investor characteristics. All accounting data come from the quarterly files of COMPUSTAT while coverage data are collected from IBES. Institutional investors' holdings are from Thomson One, and cumulative abnormal returns are calculated using Eventus.

3. Which firms get Tactical Ideas Announcements?

In this section, we report the relation of the analysts' decision to provide tactical ideas announcements on a firm and the firm's operating and stock performance, as well as its potential for investor interest. Given that good news is easier to sell to investors, prior literature shows that analysts prefer to report good news than bad news (McNichols and O'Brien, 1997). This implies that analysts are reluctant to provide information for a firm that performs poorly, but on the other hand, they will consider covering a firm that is able to generate either trading (e.g. Irvine 2001, 2004) or underwriting revenue for their employer (e.g. Clarke et al. 2007).

Operating performance is measured by return on assets (ROA) and operating cash flow on total assets. We also compute total liabilities over total assets as a predictor of financial distress (e.g. Zmijewski, 1984). Given that prior literature shows that market indicators can better estimate bankruptcy prediction compared to accounting ratios, excess returns and stock idiosyncratic volatility are also computed (see Shumway, 2001). We measure the potential for investor interest by calculating market capitalization, book to market ratio, trading volume, percentage of institutional holdings, and number of institutions both totally as well as per institutional investor category. Moreover, we use firm size as a proxy to the potential of brokerage revenue as suggested by Collins et al. (1987). Also, Jegadeesh et al. (2004) show that analysts are keen to follow growing firms, characterized by lower book to market ratios since they are more likely to be held by institutional investors. Buy-side interest for a stock is also proxied by the higher percentage of institutional investors and the number of institutions holding the particular stock (Bhushan, 1989), while the institutional investor categories are made according to Bushee institutional classification data³⁴. Finally, we expect that short-run trading tips will be more common for firms with better analysts' consensus. To measure the

³⁴ <http://acct.wharton.upenn.edu/faculty/bushee/IIclass.html>

analysts' information environment for these firms, we include the number of EPS estimates and recommendations, the average recommendation, as well as the average percentages of Buy, Hold and Sell recommendations of these firms.

Table 2 report means and medians in the performance indicators, investor interest characteristics and analysts' consensus for firms with and without tactical ideas announcements on the same quarter ($q-1$). Quarter q corresponds to the quarter when the tactical idea announcement is made. Findings indicate that analysts prefer to provide short-run trading tips for firms with higher investor interest, higher financial performance, and better analysts' consensus. The sample firms are typically significantly more profitable and characterized by greater operating liquidity, while they face significantly lower financial distress issues. Their market-driven indicators suggest that analysts provide short run tips for firms that earn significantly higher excess returns, but have also greater volatility than the control firms. On the other hand, the losers in terms of short-run provided information also suffer from lower investor interest characteristics. Results show that sample firms have greater market capitalization, lower book to market ratio, and are of bigger size. Sample firms are also heavily traded, and both total institutional holdings and total number of institutions holding these particular stocks are significantly greater. The institutional holdings per type of institutional investor indicate that both transients' and quasi-indexers' institutional investors number and holdings are greater for stocks with short-run analysts provided information. Moreover, analysts prefer to provide short-run trading tips for firms with significantly more and better EPS and recommendations estimates. Sample firms also have significantly higher percentages of buy recommendations and lower percentages of hold and sell recommendations. Overall, results indicate that analysts selectively provide their short-run trading ideas, preferring firms with greater performance and potential of revenue generation.

4. Short-Run Informativeness of Tactical Ideas Announcements

In this section, we examine whether the information content of tactical ideas is associated with abnormal returns around those announcements. Specifically, we compute the cumulative abnormal returns around each announcement and aim to explain its magnitude based on the information included in the tactical report. Abnormal returns are computed using the market

model over the period beginning on the day and ending one day subsequent to the firm's tactical idea announcement.³⁵

Table 3 Panel A indicates that the average abnormal returns around the tactical ideas are increasing in the favorableness of the short run trading tip. The average abnormal return on the announcement of an upcoming stock rise (drop) is statistically significant and positive (negative), 2.03% (-1.94%). On the other hand, the announcement of discontinuing a previous short run tip is not that informative, as shown by the insignificant positive return (0.21%) on the announcement of closing previous tactical idea. Conditioning on the content of the previous short term tip that investors should no longer rely on, the market reacts inversely but insignificantly. For example, the closing of a stock rise (drop) tip generates -0.37% (0.161%) abnormal returns. Combining these findings with those in the extant literature which suggests significant positive (negative) market reaction on upgrades (downgrades) (see for example Stickel (1995), Womack (1996)) and positive (negative) earnings revisions (e.g. Francis and Soffer (1997)) provides early evidence that investors perceive short run trading tips as informative regarding the future short-run stock price movements.

Panel B presents the results from examining the average informativeness in a multivariate setting, controlling for the factors included in the tactical idea report, as well as for industry and year effects. Model 1 presents the regression results for all short-run trading tips, while models 2 and three refer to rises and drops respectively. Findings indicate that the market reaction on the announcement of the short tip is inversely related to the level of the concurrent recommendation, suggesting that market reacts significantly more positively (but insignificantly differently) to positive (negative) short run tips referring to sell recommendations. The informativeness of the report is also determined by the direction of the short run tip. The negative coefficient in model 1 suggests that a drop tip will affect significantly more negatively the market compared to a rise short tip. Moreover, the greater interval within analysts forecast that upcoming rise or drop of the stock price increases the market reaction suggesting that investors are significantly less happy when they know that a price drop will last for a greater period. Even if short run tips generate significant market reaction on their announcement, the above analysis raises an interesting topic regarding the incremental information power of tactical ideas over upcoming recommendation changes and

³⁵ Abnormal returns are also computed using risk adjusted buy and hold returns, as well as for alternative event windows. Results are qualitatively and quantitatively similar.

incrementally of concurrent recommendations. Section B extends our analysis to determine whether tactical ideas can predict future recommendation changes.

5. Long- Run Dynamics

5.1 Next recommendation Predictability

The previous analysis indicates that tactical ideas convey new information for the market. The informativeness of tactical ideas could potentially be driven by the fact that the research tactical idea note is “the result of differing investment horizons, methodologies, market events, and other factor.” However, it cannot directly suggest whether this information is subtle or if it can necessitate an upcoming recommendation revision. In this section, we aim to examine the degree to which short-run analysts’ research is used as an input to long-run analysts’ valuation process.

To examine whether the content of the short-run tactical ideas can significantly affect the upcoming change in the recommendation, we use regression analysis. We run regressions of the probability of a firm being upgraded on dummy variables for the content of our short-run announcements, and after controlling for the previous recommendation. Table 4 consists of 4 models. Model 1 aim to explain the probability of a firm being upgraded after a rise or drop tactical idea, conditioning on the level of the previous recommendation. Models 2 to 4 present regression analysis separately for each level of the previous recommendation. The independent variable takes the value of 1 when the upcoming recommendation is an upgrade or when there is a reiteration to buy, and 0 otherwise.

Results in model 1 indicate that the better the previous recommendation, the greater the probability of a firm to be upgraded or remain in the buy category, as shown by the significant and positive coefficient of *Previous Recommendation*.³⁶ Moreover, after conditioning on the level of the previous recommendations, this probability can be significantly affected by the announcement of a short-run rise or drop in the share price. More specifically, a *Rise (Drop)* announcement can significantly increase (decrease) the probability of an upcoming upgraded recommendation. When upcoming recommendation changes are categorized based on the level of the previous recommendation, models 2 to 4 are calculated. Results in model 2 suggest that a *Rise* announcement can significantly increase the probability of an upcoming

³⁶ All tests are based on heteroscedasticity consistent standard errors.

upgraded recommendation only in the cases of a previous buy recommendation. On the other hand, model 4 suggests that a *Drop* announcement can significantly decrease the probability of an upcoming upgraded recommendation only in the cases of a previous sell recommendation. Both models 2 and 4 suggest that a short-run announcement cannot significantly affect the probability of an upcoming upgraded recommendation when the previous recommendation is on the opposite direction compared to the tactical idea. However, when a firm has a neutral previous recommendation, the probability of an upcoming upgraded recommendation is significantly affected both by a short-run *Rise* or *Drop* announcement.

Overall, the findings of the analysis are consistent with prior literature suggesting that individual research outputs have different informational value and that their information content is not subsumed in each other. Thus, the evidence presented in Table 4 supports the hypothesis that short-run tactical ideas are informative for the upcoming recommendation change, conditionally on previous stock recommendations. We find that the predictive power of the short-run news over the long run research horizon is strongest when the direction of the short-run trading tip and the previous recommendation coincide rather than when they differ.

5.2 Next recommendation Informativeness

To examine whether the existence of short run tactical ideas on a stock could potentially explain the differential market reaction to an upcoming recommendation change, we use multivariate regression analysis. We run regressions of risk adjusted abnormal returns on the announcement of the upcoming recommendation on dummy variables indicating whether the upcoming recommendation was upgraded (downgraded) and whether there was a rise (drop) short run tactical idea before the recommendation switch.

In this multivariate setting, we control for firm fundamentals characteristics, investors' interest on the stock as well as for the analysts' information environment before the recommendation change. Firm operating performance could potentially explain the recommendation change and could also drive the short run tactical idea. Accordingly we control for profitability and operating cash flow on total assets. We also compute total liabilities over total assets as a predictor of financial distress (e.g. Zmijewski, 1984). We measure the potential for investor interest by calculating market capitalization, and book to market ratio. Moreover, we use firm size as a proxy to the potential of brokerage revenue as suggested by Collins et al. (1987). Also, Jegadeesh et al. (2004) show that analysts are keen to follow growing firms,

characterized by lower book to market ratios since they are more likely to be held by institutional investors.

Finally, given that the market reaction to a recommendation change may include a delayed response to other relevant information prior to the recommendation change, we control for the information environment around it. We control for such information using momentum and analysts' consensus information. Momentum is measured by the risk adjusted abnormal return during the six months ending five days before the recommendation day. To measure the analysts' information environment for these firms, we include the number of consensus recommendations, the number of recommendation downgrades, the average consensus recommendation, as well as the consensus recommendation changes. We measure consensus recommendation change as the change in the average consensus recommendation in the last month before the actual recommendation change.

Table 5 presents the results of the analysis. Panel A compares the market reaction to recommendation changes for firms with and without a short-run rise tactical idea. Similarly, Panel B presents the same analysis comparing the market reaction to recommendation changes for firms with and without a short-run drop tactical idea. Panel A presents 6 models. Models 1 and 2 compare the incremental effect of rise tactical ideas on recommendations changes, comparing all recommendations upgrades and reiterations to buy versus downgrades. Models 3 and 4 examine the same effect by using a subgroup of Models 1 and 2, and comparing all recommendations upgrades only versus downgrades, while Models 5 and 6 focus on reiterations to buy. Panel B presents 2 models. Given the low number of drop tactical ideas, Models 1 and 2 of Panel B compare the incremental effect of drop tactical ideas on recommendations changes, comparing all recommendations downgrades and reiterations to hold and sell versus upgrades.

Consistently with previous literature, the coefficient of *Post Upgrade* is positive and significant, indicating that when there is no short-run predicted rise in the stock price, an upcoming upgrade generates significantly more positive market reaction compared to a downgrade. Results indicate that this relation is economically stronger in the cases of upgrades, rather than reiterations to buy. However, when an analyst announces a *Rise* tactical idea but the upcoming recommendation is not ungraded, the market reacts significantly more negative compared to the cases of firms without short-run rise announcement. This finding

could potentially indicate that short-run positive news on a stock generates positive long run perceptions to investors. The positive sign after a rise is so strong for investors that when the firm does not manage to be upgraded, the market seems to significantly “punish” the underlying firm.

Moreover, the incremental effect of short-run rise estimates before recommendation upgrades is highly economically and statistically significant. For instance, results indicate that the incremental effect of a rise tactical idea on the initial price reaction to an upgrade is almost +2.7% after an upgrade, as shown by the interaction term *Post Upgrade*Rise* in model 3. Note that neither the strong operating performance, nor the higher analysts’ information environment can affect the differential impact of recommendation changes preceded by short-run rises compared to simple recommendation changes. Results show that the short run trading tips are able to differentiate the magnitude of the positive impact of an upcoming recommendation upgrade on stock prices. Given that within the new three tier system coarser recommendation grids potentially entail a lower level of information transmission, analysts’ recommendations have become less unconditionally informative (Kadan et al. 2009). Thus, the positive opinion of analysts on a firm and in an interval shorter than that of recommendations can significantly increase the informativeness of positive long term news.

The change in rating system came after regulators were concerned with the literal meaning of the recommendations. For instance, NASD Rule 472 suggests that “hold rating should not mean or imply that an investor should sell a security”. Thus, the market reaction of investors to downgrades or reiterations to hold and sell was also expected to change. However, prior evidence suggests that the change in rating system is somewhat cosmetic (Kadan et al. 2009). In model 1 of Panel B and consistently with previous literature, the coefficient of *Post Downgrade* is negative and significant, indicating that when there is no short-run predicted rise in the stock price, an upcoming downgrade generates significantly less positive market reaction compared to an upgrade. However, when an analyst announces a *Drop* tactical idea but the upcoming recommendation is not downgraded, the market reacts significantly more positively compared to the cases of firms without short-run drop announcement, as shown by model 2. This finding could potentially indicate that similarly to short-run positive news, short-run negative news generates negative long run perceptions to investors. However, when

these negative perceptions are not justified by a downgrade, investors seem to significantly “reward” the underlying firm.

Additionally, results in model 2 show that the incremental effect of short-run drop estimates before recommendation downgrades is economically and statistically significant. Results indicate that the incremental effect of a drop tactical idea on the initial price reaction to a downgrade is -2.2% as shown by the interaction term *Post Downgrade*Drop*. Note that this finding exists after controlling for operating performance and analysts’ information environment that can affect the differential impact of recommendation changes preceded by short-run drops compared to simple recommendation changes.

5.3 Robustness Checks

In order to validate our findings, this section presents additional tests.³⁷ We use an alternative sample to show the differential impact of recommendation changes preceded by short-run rises compared to simple recommendation changes. Given that the previous analysis considers as similar upgrades both an upgrade from sell to hold and an upgrade from sell to buy, models 1 and 2 of Table 6 focus on upgrades to buy only. Models 1 and 2 compare the incremental effect of rise tactical ideas on recommendations changes, comparing all recommendations upgrades and reiterations to buy versus downgrades, and all recommendations upgrades only versus downgrades, respectively.

Consistent with the results shown in Table 5, the incremental effect of short-run rise estimates before recommendation upgrades is highly economically and statistically significant. For instance, results indicate that the incremental effect of a rise tactical idea on the initial price reaction to an upgrade is almost +2.5% after an upgrade to buy, as shown by the interaction term *Post Upgrade*Rise* in model 2. The models control for operating performance and analysts’ information environment that seem to cannot significantly affect the differential impact of recommendation changes preceded by short-run rises compared to simple recommendation changes. Results show again that the short run trading tips are able to differentiate the magnitude of the positive impact of an upcoming recommendation upgrade on stock prices.

³⁷ Given the small number of short-run tactical drop announcements, the robustness checks for the drop sample do not guarantee strong statistical reference.

6. Summary and Conclusions

Recent regulatory changes resulted in a widespread transition to a three-tier rating system, in contrast to the traditional five-tier scale. Prior literature provides evidence on coarser recommendation grids potentially entailing a lower level of information transmission, and financial analysts' recommendations becoming less informative (Kadan et al. 2009). Using the unique hand collected sample of 1509 short-run trading ideas, which is a new research product of Morgan Stanley, we examine the information content of short-term trading tips and their potential use as a valuable input in the longer-term research output.

We document that analysts prefer to provide short-run trading tips for firms with greater performance and potential of revenue generation. More specifically, firms with trading tips have higher operating and stock performance, better consensus estimates as well as they are characterized by higher institutional investors' holdings, suggesting that financial analysts could potentially be selective on providing short-run tips for firms with higher trading incentives.

The announcement of the tactical ideas elicits significant abnormal returns depending on the direction of the short term tip. Trading tips are incrementally informative, conditional on concurrent stock recommendations. We also ask whether short-term trading tips can close a gap in analysts' research, by predicting upcoming adjustments into recommendations' levels. We find that the predictive power of the short-run news over the long run research horizon is strongest when the direction of the short-run trading tip and the previous recommendation coincide rather than when they differ. We also find that the market reaction to upcoming recommendation changes is greater for firms with short-run trading tips. Examining the two day market reaction, an upcoming recommendation upgrade that is accompanied by a short-term rise estimate elicits up to +2.8% higher abnormal returns. Results are consistent with short-run price estimates increasing the overall informativeness of upcoming recommendations' changes.

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Table 14: Descriptive Analysis of the Content of Short term tip announcement

The short-run trading reports are manually collected by Thomson One for the period 2008 to 2013. This table reports descriptive statistics for the content of tactical ideas announcements. Panel A presents descriptive statistics for the reason of the short-term tip announcement. Panel B provides a description of analysts' estimated probability of short term tip realization, while Panel C reports the analysts' estimated days until the short-term tip realization. Panel D shows the average length of the reports depending on their reason, while Panel E and F report statistics on the concurrent recommendations and industry views respectively.

<i>Panel A: Reason of Short Term Tip Announcement</i>	
Rise of the share price	728
Drop of the share price	240
Close previous tactical idea	541
Close previous Rise of the share price	378
Close previous Drop of the share price	150
Missing	13
Total	1509

<i>Panel B: Research Analyst Estimated Probability of Short Term Tip Realization</i>			
	Total	Rise of the share price	Drop of the share price
50-60%	12	6	6
60-70%	190	121	69
70-80%	466	349	117
80%+	300	252	48
Total	968	728	240

<i>Panel C: Research Analyst Estimated Days until Short Term Tip Realization</i>		
	Rise of the share price	Drop of the share price
Mean	47.637	43.687
Median	60	45
Min	15	15
Max	60	60

<i>Panel D: Number of Pages of Short Term Tip Announcements</i>			
	Close previous tactical idea	Rise of the share price	Drop of the share price
Mean	5.71165	5.80632	5.65833
Median	6	6	6
Min	3	5	3
Max	8	8	8

<i>Panel E: Concurrent Research Analyst Recommendation</i>			
	Total	Rise of the share price	Drop of the share price
Sell	95	12	83
Hold	430	286	144
Buy	443	430	13
Total	968	728	240

Panel F: Concurrent Research Analyst Industry View

	Total	Rise of the share price	Drop of the share price
Cautious	102	48	54
In-Line	438	323	115
Attractive	425	355	70
Total	968	728	240

Table 15: Mean and Median Differences between firms with and without short term tips

Table 2 reports mean and median differences between firms with and without short-term tips with regards to the firm's operating and stock performance, as well as its potential for investor interest. Operating performance is measured by return on assets (ROA) and operating cash flow on total assets. We also compute total liabilities over total assets as a predictor of financial distress (e.g. Zmijewski, 1984). Excess returns and stock idiosyncratic volatility are also computed. We measure the potential for investor interest by calculating market capitalization, book to market ratio, trading volume, percentage of institutional holdings, and number of institutions both totally as well as per institutional investor category (Quasi-indexers, Transient, and Dedicated). Firm size is calculated as the logarithm of total assets, while B/M ratio proxies for growth. We include the number of EPS estimates (Numest) and recommendations (Numrec), the average recommendation (Meanrec), as well as the average percentages of Buy, Hold and Sell recommendations of these firms. Quarter q corresponds to the quarter when the tactical idea announcement is made.

	Mean			Median		
	Tactical	Non-tactical	Sign. of Diff	Tactical	Non-tactical	Sign. of Diff
<i>Investor Interest Characteristics</i>						
IO% q-1	0.78677	0.71548	<0.0001	0.81201	0.78402	<0.0001
# Institutions q-1	416.3278	336.4765	<0.0001	325.5	256	<0.0001
QIX IO% q-1	0.53889	0.48462	<0.0001	0.55999	0.52531	<0.0001
# QIX Institutions q-1	236.98701	192.16781	<0.0001	172	134	<0.0001
TRA IO% q-1	0.19295	0.18041	0.0005	0.17693	0.16438	<0.0001
# TRA Institutions q-1	133.81818	109.80784	<0.0001	113	95	<0.0001
DED IO% q-1	0.02996	0.03922	0.0196	0.0008	0.00195	0.0004
# DED Institutions q-1	2.22334	2.13837		2	2	
B/M ratio q-1	0.49714	0.55712	0.0037	0.41252	0.44588	0.0049
Trading volume q-1	1476234.65	1074869.87	0.0064	683528.11	432646.55	<0.0001
Market Capitalization q-1	19478.98	14167.84	0.0023	6454.76	5044.24	0.0002
Size q-1	8.99126	8.86568	0.0997	9.03396	8.76751	0.0422
<i>Performance Indicators</i>						
ROA q-1	0.01593	0.01133	0.0005	0.01414	0.01166	0.0049
Cash flow / Total Assets q-1	0.02756	0.02252	0.0003	0.02486	0.02380	0.0058
Total Liabilities / Total Assets q-1	0.57660	0.59791	0.0558	0.57999	0.59537	0.0971
Excess Returns q-1	0.00011	0.000033	0.0058	0.0009	0.000033	0.0031
Stock Volatility q-1	0.0087325	0.007795	0.0002	0.007875	0.00685	<0.0001

Analysts' Consensus

Numest EPS m-1	16.81	15.25	<0.0001	16	15	<0.0001
NumRec m-1	18.23379	17.04276	0.0005	17	17.5	0.0013
MeanRec m-1	2.32268	2.39580	0.0001	2.3	2.36	0.0003
Buy% m-1	52.11548	47.78046	<0.0001	52.38	48	<0.0001
Hold% m-1	40.68783	44.14663	<0.0001	40.77	43.75	0.0001
Sell% m-1	7.19657	8.07288	0.0348	4.88	5	

Table 16: Informativeness of Short term tip announcement

This tables shows whether the information content of tactical ideas is associated with abnormal returns around those announcements. Informativeness is computed by the cumulative abnormal returns around each announcement, using the market model over the period beginning on the day and ending one day subsequent to the firm's tactical idea announcement. Panel A shows the average abnormal returns around the tactical ideas bases on the favorableness of the short run trading tip. Panel B presents the results from examining the average informativeness in a multivariate setting, controlling for the factors included in the tactical idea report, as well as for industry and year effects. The multivariate analysis refers only to drops or rises and excludes the closed tactical ideas. Model 1 presents the regression results for all short-run trading tips, while models 2 and three refer to rises and drops respectively. Momentum is measured by the cumulative risk adjusted return starting 6 months before and ending 5 days before the announcement. Rating measures the concurrent recommendation using a scale from 1 to 3. The greater the rating the higher the favorableness of the recommendation. Probability is a scale variable indicating the magnitude of the assigned probability on behalf of the analysts in the occurrence of the short-run trading tip. Probability varies from 1 to 4; 1 refers to 50-60%, 2 refers to 60-70%, 3 refers to 70-80% and 4 refers to probability greater than 80%. Industry view measures analysts' opinion on the industry where the firm operates. It is a scale variable taking the value of 1 for "Cautious" industries, 2 for "In-Line" industries and 3 for "Attractive". Drop is an indicator variable that equals 1 if the short-run trading tip refers to an upcoming drop in the share price. Days until rise drop refers to the expected interval that the short-run tip will take place. It takes the values of 15, 30, 45, or 60.

Panel A: CAR on the Short-Run Tip Announcement

Windows		Close previous tactical idea	Close previous Rise of the share price	Close previous Drop of the share price	Rise of the share price	Drop of the share price
		N=488	N=341	N=137	N=663	N=220
(0,+1)	Mean	-0.0021	-0.0037	0.00161	0.02029 ^a	-0.0194 ^a
	Median	-0.0019	-0.0031	0.00053	0.01272 ^a	-0.0184 ^a
	Min	-0.34	-0.34	-0.29	-0.34	-0.54
	Max	0.26	0.26	0.20	0.76	0.37

Panel B: Multivariate Regression

	(1)	(2)	(3)
<i>Intercept</i>	0.02128 <i>0.7531</i>	-0.00862 <i>0.8969</i>	-0.03127 <i>0.5301</i>
<i>Momentum</i>	-0.00942 <i>0.0498</i>	-0.00669 <i>0.2081</i>	-0.02006 <i>0.0704</i>
<i>Rating</i>	-0.00539 <i>0.1877</i>	-0.00870 <i>0.0723</i>	0.00538 <i>0.5016</i>
<i>Probability</i>	0.00009 <i>0.9814</i>	0.00308 <i>0.4834</i>	-0.00761 <i>0.2956</i>
<i>Industry View</i>	0.00140 <i>0.7141</i>	-0.00122 <i>0.7959</i>	0.00494 <i>0.4781</i>
<i>Drop</i>	-0.04125		

	<i><0.0001</i>		
<i>Days until rise drop</i>	0.00026	0.00022	0.00056
	<i>0.0775</i>	<i>0.1688</i>	<i>0.0521</i>
Industry Effects	YES	YES	YES
Year Effects	YES	YES	YES
N	880	661	219
Adj. R ²	0.1099	0.0750	0.0310

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Table 17: Next Upgrade Predictability

Table 4 examines whether the content of the short-run tactical ideas can significantly affect the upcoming change in the recommendation. We run regressions of the probability of a firm being upgraded on dummy variables for the content of our short-run announcements, and after controlling for the previous recommendation. Model 1 aim to explain the probability of a firm being upgraded after a rise or drop tactical idea, conditioning on the level of the previous recommendation. Models 2 to 4 present regression analysis separately for each level of the previous recommendation. The independent variable takes the value of 1 when the upcoming recommendation is an upgrade or when there is a reiteration to buy, and 0 otherwise. Control sample consists of firms that are in the same investment bank, same industry and same quarter as the firms with tactical ideas.

	All Changes	Changes from Buy	Changes from Hold	Changes from Sell
<i>Intercept</i>	-10.9954	-12.7898	-10.5854	0.6159
	0.9478	0.9358	0.9573	0.6456
<i>Rise</i>	0.5431	0.7704	0.3928	1.0769
	<0.0001	<0.0001	0.0294	0.1179
<i>Drop</i>	-0.5781	-0.8365	-0.4496	-0.6655
	0.0013	0.2383	0.1039	0.0292
<i>Previous Recommendation</i>	0.1653			
	0.0084			
Industry Effects	YES	YES	YES	YES
Year Effects	YES	YES	YES	YES
N	2543	921	1230	392
Adj. R ²	0.0472	0.2885	0.0847	0.1302

Table 18: Next Recommendation Informativeness

We run regressions of risk adjusted abnormal returns on the announcement of the upcoming recommendation on dummy variables indicating whether the upcoming recommendation was upgraded (downgraded) and whether there was a rise (drop) short run tactical idea before the recommendation switch. We control for firm fundamentals characteristics, investors' interest on the stock as well as for the analysts' information environment before the recommendation change. Accordingly we control for profitability (Positive ROA) and operating cash flow on total assets (Cash). We also compute total liabilities over total assets as a predictor of financial distress (Lev). We measure the potential for investor interest by calculating market capitalization (MCAP), book to market ratio (B/M). Moreover, we use firm size calculated as the logarithm of total assets. We also control for momentum and analysts' consensus information. Momentum is measured by the risk adjusted abnormal return during the six months ending five days before the recommendation day. To measure the analysts' information environment for these firms, we include the number of consensus recommendations (Numrec), the number of recommendation downgrades (Numrec Down), the average consensus recommendation (Meanrec), as well as the consensus recommendation changes (MeanRec Change). We measure consensus recommendation change as the change in the average consensus recommendation in the last month before the actual recommendation change. Panel A compares the market reaction to recommendation changes for firms with and without a short-run rise tactical idea. Similarly, Panel B presents the same analysis comparing the market reaction to recommendation changes for firms with and without a short-run drop tactical idea. Panel A presents 6 models. Models 1 and 2 compare the incremental effect of rise tactical ideas on recommendations changes, comparing all recommendations upgrades and reiterations to buy versus downgrades. Models 2 and 3 examines the same effect by using a subgroup of Models 1 and 2, and comparing all recommendations upgrades only versus downgrades, while Models 5 and 6 focuses on reiterations to buy. Panel B presents 2 models. Given the low number of drop tactical ideas, Models 1 and 2 of Panel B compare the incremental effect of drop tactical ideas on recommendations changes, comparing all recommendations downgrades and reiterations to hold and sell versus upgrades.

Panel A: Recommendation changes after Rise Tactical Idea

	All Upgrades and Reiterations to Buy		All Upgrades		Reiterations to Buy	
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Intercept</i>	-0.01108	-0.07157	-0.05412	-0.14206	0.00449	0.01106
	0.6861	0.0114	0.1125	0.0005	0.9367	0.8087
<i>Momentum</i>	0.01577	0.00410	0.03344	0.02798	-0.00086094	-0.00993
	<0.0001	0.2686	<0.0001	<0.0001	0.8534	0.0104
<i>BM</i>	0.03076	0.01999	0.00459	0.01067	0.03966	0.02066
	<0.0001	<0.0001	0.3928	0.2426	<0.0001	<0.0001
<i>Size</i>	-0.00389	-0.00325	0.00131	0.00348	-0.00484	-0.00602
	0.0002	0.2790	0.4281	0.5212	0.0001	0.0550
<i>Lev</i>		0.04713		0.06146		0.02246

		<0.0001		<0.0001		0.0282
<i>Positive ROA</i>		-0.00616		-0.00301		-0.00857
		0.1758		0.6952		0.0772
<i>Cash</i>		0.12583		0.36264		-0.23003
		0.0160		<0.0001		0.0006
<i>MCAP</i>		-0.00121		-0.00178		-0.00028710
		0.7060		0.7620		0.9303
<i>Post Upgrade</i>	0.02744	0.02931	0.05944	0.05582	0.00413	0.00400
	<0.0001	<0.0001	<0.0001	<0.0001	0.3330	0.2584
<i>Rise</i>	-0.01347	-0.01085	-0.01021	-0.00909	-0.01248	-0.00787
	0.0222	0.00534	0.2311	0.2774	0.1025	0.1891
<i>Post Upgrade * Rise</i>	0.02087	0.01802	0.02677	0.02808	0.02225	0.01402
	0.0082	0.0119	0.0398	0.0287	0.0215	0.0649
<i>Mean Rec</i>		0.01481		0.01666		-0.00072771
		<0.0001		0.0110		0.8565
<i>NumRec</i>		0.00031409		-0.00046311		0.00095836
		0.1973		0.2908		<0.0001
<i>Mean Rec Change</i>		-0.01700		-0.08199		0.10568
		0.6378		0.1481		0.0094
<i>NumRec Down</i>		-0.00205		0.00039967		-0.00357
		0.3914		0.9120		0.2079
<i>Industry Effects</i>	YES	YES	YES	YES	YES	YES
<i>Year Effects</i>	YES	YES	YES	YES	YES	YES
<i>N</i>	1729	1593	745	691	984	902
<i>Adj. R²</i>	0.1374	0.1336	0.2437	0.3093	0.1680	0.1127

Panel B: Recommendation changes after Drop Tactical Idea

	All Downgrades and Reiterations to Hold or Sell	
	(1)	(2)
<i>Intercept</i>	0.02605	-0.00694
	0.3711	0.8103
<i>Momentum</i>	0.01471	0.00134
	0.0004	0.7310
<i>BM</i>	-0.12632	-0.0865
	0.0207	0.6591
<i>Size</i>	-0.00226	0.00546
	0.0477	0.0144
<i>Lev</i>		0.01899
		0.0134
<i>Positive ROA</i>		-0.0286
		0.5701
<i>Cash</i>		0.12819
		0.5046
<i>MCAP</i>		-0.01098
		<0.0001
<i>Post Downgrade</i>	-0.02992	-0.02948
	<0.0001	<0.0001
<i>Drop</i>	0.01680	0.02315
	0.1472	0.0237
<i>Post Downgrade * Drop</i>	-0.01628	-0.02223
	0.2306	0.0614
<i>Mean Rec</i>		0.01364
		0.0005
<i>NumRec</i>		0.00049868
		0.0614
<i>Mean Rec Change</i>		-0.01153
		0.7599
<i>NumRec Down</i>		-0.00375
		0.1300
Industry Effects	YES	YES
Year Effects	YES	YES
N	1556	1431
Adj. R ²	0.0557	0.1067

Table 19: Robustness Checks

This table uses an alternative sample to show the differential impact of recommendation changes preceded by short-run rises compared to simple recommendation changes. Models 1 and 2 focus on upgrades to buy only. Models 1 and 2 compare the incremental effect of rise tactical ideas on recommendations changes, comparing all recommendations upgrades and reiterations to buy versus downgrades, and all recommendations upgrades only versus downgrades, respectively. We run regressions of risk adjusted abnormal returns on the announcement of the upcoming recommendation on dummy variables indicating whether the upcoming recommendation was upgraded (downgraded) and whether there was a rise (drop) short run tactical idea before the recommendation switch. We control for firm fundamentals characteristics, investors' interest on the stock as well as for the analysts' information environment before the recommendation change. Accordingly we control for profitability (Positive ROA) and operating cash flow on total assets (Cash). We also compute total liabilities over total assets as a predictor of financial distress (Lev). We measure the potential for investor interest by calculating market capitalization (MCAP), book to market ratio (B/M). Moreover, we use firm size calculated as the logarithm of total assets. We also control for momentum and analysts' consensus information. Momentum is measured by the risk adjusted abnormal return during the six months ending five days before the recommendation day. To measure the analysts' information environment for these firms, we include the number of consensus recommendations (Numrec), the number of recommendation downgrades (Numrec Down), the average consensus recommendation (Meanrec), as well as the consensus recommendation changes (MeanRec Change). We measure consensus recommendation change as the change in the average consensus recommendation in the last month before the actual recommendation change.

Panel A: Recommendation changes after Rise Tactical Idea

	Upgrades to Buy and Reiterations to Buy	Upgrades to Buy
<i>Intercept</i>	-0.04556	-0.11316
	0.0947	0.0042
<i>Momentum</i>	0.00276	0.02538
	0.4469	<0.0001
<i>BM</i>	0.01787	0.00953
	0.0003	0.3061
<i>Size</i>	0.00207	0.01163
	0.4964	0.0442
<i>Lev</i>	0.01861	0.01087
	0.0483	0.4931
<i>Positive ROA</i>	-0.00648	-0.00273
	0.1460	0.7168
<i>Cash</i>	0.15244	0.44998
	0.0043	<0.0001
<i>MCAP</i>	-0.00574	-0.00704
	0.0752	0.2612
<i>Post Upgrade</i>	0.02617	0.05635
	<0.0001	<0.0001
<i>Rise</i>	-0.01086	-0.00721
	0.0316	0.3422

<i>Post Upgrade * Rise</i>	0.01656	0.02454
	0.0169	0.0532
<i>Mean Rec</i>	0.01028	0.01104
	0.0068	0.1053
<i>NumRec</i>	0.00039063	-0.00045643
	0.1003	0.2940
<i>Mean Rec Change</i>	0.03956	0.01643
	0.2732	0.7768
<i>NumRec Down</i>	-0.0389	-0.00346
	0.0975	0.3250
Industry Effects	YES	YES
Year Effects	YES	YES
N	1478	576
Adj. R ²	0.1216	0.3450

Conclusions

The informational role of sell-side financial analysts has been in the forefront of academic literature over the past decades. Regulators and academics acknowledge that financial analysts exert considerable influence on capital markets (e.g. Womack, 1996), but also raise concerns regarding the conflicts of interest that they potentially face. This study focuses three important issues; firstly, the role of financial analysts in capital markets with respect to enhanced corporate disclosure, secondly their incentive to withhold their negative expectations when terminating research coverage, and finally analysts' short-term research enhancing the informativeness of long-run research.

Our findings suggest that the informativeness of stock recommendations stems mainly from analysts' ability to interpret firm disclosures, supporting the complementarity relation between the two sources of information. We show that analysts act primarily as information interpreters, and therefore additional firm disclosure better facilitates this role, increasing the informativeness of analyst recommendations. For both stock upgrades and downgrades, and consistent with prior research, our results also suggest that the complementarity effect on analysts' recommendations changes is more pronounced in countries with a strong level of legal enforcement, after controlling over the performance of voluntary adopters with Europe, or even a US sample of firms.

In addition, this study provides evidence on analysts' reluctance to provide firm specific termination reasonings when they announce drop of coverage. Instead, they attribute their decision to resources constraints which significantly undervalues the negative impact of bad news into stock prices. By proposing a unique way to separate exogenous from endogenous reallocation terminations, we find that non-credible terminations' reasonings are associated with significantly lower returns six and 12 months after the termination, significantly lower profitability, higher delisting probability, and more negative earnings surprises. Also compared to the performance of firm-specific terminations, the overall effect of non-credible terminations on firm performance is as negative as explicit negative news, but timing delays market's efficiency. Our findings imply that the lack of explicit and comprehensive reasoning behind the termination decision can affect significantly negatively the profitability of capital market participants.

Finally given the coarser recommendation grids that potentially entail a lower level of information transmission, this study documents that analysts prefer to provide short-run trading tips for firms with greater performance and potential of revenue generation, suggesting that financial analysts could potentially be selective on providing short-run tips for firms with higher trading incentives. The announcement of the short run trading tips elicits significant abnormal returns depending on the direction of the short term tip. Trading tips are also incrementally informative, conditional on concurrent stock recommendations. The study also shows that the predictive power of the short-run news over the long run research horizon is strongest when the direction of the short-run trading tip and the previous recommendation coincide rather than when they differ. Moreover, the market reaction to upcoming recommendation changes is greater for firms with short-run trading tips. Overall, results are consistent with short-run price estimates increasing the overall informativeness of upcoming recommendations' changes.