

SELL-SIDE SECURITY ANALYSTS IN THE NEXUS OF PRINCIPAL-AGENT RELATIONS: AN INFORMATION ECONOMICS PERSPECTIVE

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Abstract

In this paper we investigate in depth the contractual partner relationships between sell-side security analysts and the correspondently involved parties, where the sell-side security analyst is considered as both principal and agent. We break the activities of security analysts down into a nexus of principal-agent relationships where the most striking contractual partner relationship in this network appears among sell-side analyst and the (to be) assessed company (evaluated). By analyzing the research question in this fashion we find considerable potential for information and moral hazard risks.

Keywords: Security Analysis, Principal-Agent Theory, Information Risk, Moral Hazard Risk, Financial Regulation

JEL Classification: G20, G24, G32, G38

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1 Introduction

It has been recognized for some time that, in the presence of informational asymmetries, contractual partner relationships are subject to imperfect market allocations (Arrow, 1971). In the financial system where intermediaries emerge as a result of both specialism and task sharing, market participants are inevitably affected by informational asymmetries. A certain group among financial intermediaries whose behavior, regulation and impact on capital markets has been controversially discussed over the last decades is security analysts. In this paper we investigate the contractual partner relationships between sell-side security analysts and the correspondently involved parties, where the sell-side security analyst is considered as both principal and agent. That is, we approach this issue by drawing on the New Institutions Economics (NIE) paradigm which addresses, models and tries to solve for imperfect market allocations and asymmetric distributed information in the framework of financing relationships (Jensen and Meckling, 1976; Fama and Jensen, 1983; Fama, 1988). In the spirit of Oehler and Voit (1999) we break the activities of security analysts down into a nexus of principal-agent relationships where the most striking contractual partner relationships in this network appear among

investors, analysts, assessed company and broker or banks.

Thus far, however, researchers have merely considered sell-side security analysts as agents (e.g. Fisch and Sale, 2003; Hodgkinson, 2001). By doing so, academics and regulators alike have scarcely paid attention to the information and moral hazard risks that come to light when this network of contractual relations is thoroughly explored. Our attempt is therefore to close this research gap and provide a holistic elucidation on security analysts' contractual partner relations. As our work touches upon this issue we close this research gap and believe that our work is informative in several ways. First, results from this piece of research can be used to understand the complex contractual partner relationships between investors, applicants and analysts in a consistent manner. Second, as academic researchers have by now considered security analysts only as agents we complete this picture and call regulators attention on information and moral hazard risks that become obvious when we approach this research question in the aforementioned fashion.

The paper is structured as follows: the next Section includes an overview of prior research undertaken in this field of study. Section 3 outlines the characteristics of the relation between security analysts and respective stakeholders while Section 4

addresses the exchange of information within the scope of analysts' activities. Section 5 examines the principal-agent relation where analysts are considered as principals and agents; Section 6 concludes.

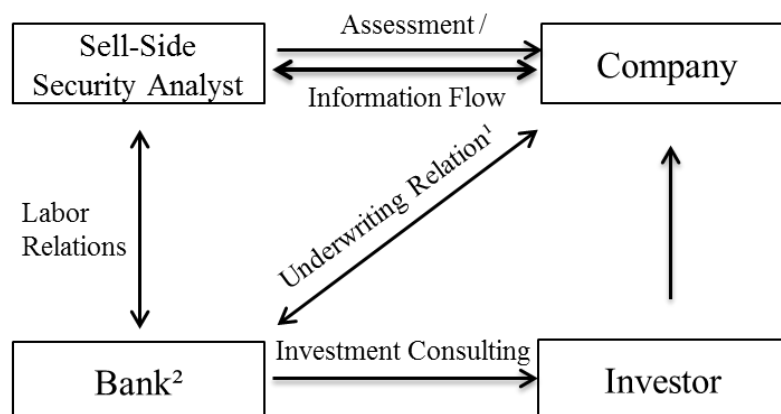
2 Related Research

As the relationship between contractual partners is affected by imperfect and asymmetric distributed information, NIE describes a situation where the behavior of one contracting party can potentially impair its counterpart's wealth (Ross, 1973; Grossman and Hart, 1983; Pratt and Zeckhauser, 1985; Oehler and Voit, 1999). Dating back to the pioneering contributions of Coase (1937), Jensen and Meckling (1976), Jensen and Fama (1983) and Fama (1988), it is the NIE's objective to model and design contracting partner relations in a fashion that accounts for imperfect and asymmetrically distributed information, concernment and power of decision. A crucial element within the NIE is the principal-agent theory which describes the framework of cooperating business partnerships in relation with the delegation of decision making power. Generally, principal-agent relations are characterized by an economic entity who gives instructions (principal) to the agent who acts as part of its professional activity on behalf of the principal. Undoubtedly, since the power of decision is temporarily delegated, the consequences and implications of the agent's operations must be borne by the principal (Garen, 1994; Sannikov, 2008). In this common and everyday situation the power of decision, information and concernment are asymmetrically distributed among the contractual partners (Arrow, 1985). As a consequence of the aforementioned asymmetries a set of risks emerge on the principal's side: First, there can possibly appear exogenous risks which are independently from the agent's behavior and, second, behavior-dependent risks which may come up as a result of the

aforementioned principal-agent situation and its respective asymmetries (Holmstrom and Milgrom, 1991). Inherently, it is rather difficult for the principal to recognize and assess the agent's professional qualification (qualification risk) and behavior (behavioral risk) *ex ante*. The latter risk specification emerges as a result of agent's poor elaborateness which is closely related with moral-hazard and the principal's inability to consistently supervise all actions undertaken by agents.

Analysts' behavior, regulation and impact on capital markets have been thoroughly studied by academics and practitioners alike. Findings from the extant literature show that analysts' research has an investment value in terms of recommendations, earnings forecasts or target prices (Lys and Sohn, 1990; Womack, 1996; Brav and Lehavy, 2003 and Liu, 2011). Further, there is evidence that security analysts deliver superior recommendations than naïve time series models (Brown and Rozeff, 1978; Givoly and Lakonishok, 1984; Capstaff et al., 1995 and Bailey et al., 2006). The momentousness of analysts' activities is further emphasized by Piotroski and Roulstone (2004) and Chan and Hameed (2006) who find that firms that are covered by analysts' exhibit greater return synchronicity which is evidence that analysts facilitate the incorporation of market-wide and industry-level information into stock prices. Thus far, however, the role of security analysts has not yet been examined holistically; in particular the literature on the regulation of security analysts does not grasp their activities in terms of information and moral hazard risks entirely (Fisch and Sale, 2003; Hodgkinson, 2001). Our attempt is therefore to close this research gap and provide a holistic discussion on analysts' contractual partner relations and associated information economics aspects.

Figure 1. Principal-Agent Relations within the Framework of Analyst's Activities



1) This only applies if the bank acts as an underwriter as part of the IPO-process.

2) Bank is synonymic for sell-side analyst's employer.

3 The Relation between Security Analysts and respective Key Stakeholders

By analyzing the activities of sell-side security analysts numerous implicit and explicit contractual partner relations become obvious which can be presented as a net of principal-agent relations. Figure 1 illustrates that analysts' activities initialize certain principal-agent relations either directly or indirectly. That is, beyond the quite obvious relation between analysts and investors, numerous stakeholders such as banks or brokers (as employers) and assessed companies (as evaluand) are affected by analysts' opinion. Investors and other intermediaries can make use of analysts' research findings to decide on investments and act as clients' investment advisory servant, respectively.

As sell-side analysts are generally employed at banks and investment firms which offer investment and advisory services, at first, research reports are conventionally passed down to the in-house investment banking division and to clients of the bank (Langevoort, 1990; Reidenbach, 2006). In the follow-up, a modified and abbreviated version of the report is published to address a larger potential group of investors and capital market participants in general.¹ Usually, banks publish reports of sell-side analysts after their research has been circulated internally in order to boost securities business transactions and related services.

If the evaluated company has an underwriting relation with the analyst's employer, certain conflicts of interest are likely to emerge. Thereof, in the following discussion we differentiate whether the bank is masterminding the initial public offer (IPO) process or not. Beyond the situation described in Figure 1 above it is obvious that analysts, banks and companies are in competition or exist co-evolutionary with other economic agents. In this respect, analysts' recommendations affect investors in several ways: That is, the bank utilizes analysts' research recommendations to act as investment advisor for investors. In the following, (potential) investors are likely to act as purchaser or seller of company stocks in response of banks advisory which, again, impacts the respective subject company². As the most striking relation in terms of information exchange and associated risks (information and moral hazard risk) appears among analyst and evaluand we focus in the following examination on these economic entities.

¹ It is interesting to note that before being published to ordinary investors, banks often oversimplify research reports in a way that recommendations are substantially altered (Forum Group, 2003).

² In this respect, Boot and Thakor (1997), Oehler (2000) and Oehler (2006) show that other financial intermediaries, such as stock exchanges, are in competition and co-exist in a complementary manner to each other.

4 On the Exchange of Information within the Scope of Analysts' Research

As a matter of principle, sell-side analysts employ public information using a range of different sources such as annual financial statements, letters to shareholders, industry sector reports, archive materials from earlier studies, central bank reports, press releases, research reports of other analysts, etc. (Capstaff et al., 1995; Bae et al., 2007). In particular the latter is crucial since sell-side analysts often use existing reports as a primary source to conduct research. Note, however, that regulators and legal practice insist that it is part of analysts' job to carry out individual and informative research and gather information which must be reflected in analysts' opinion (Langevoort, 1990; Cholakis, 1999; Meister, 2000; SEC, 2001; Reidenbach, 2006).³

Apart from publicly available information, analysts grasp a large proportion of the processed information directly from the evaluated company. By doing so, analysts either gather new information or merely gain an impression of internal processes, management and business culture. This additional source of information which goes beyond the publicity available information pool is mostly communicated by the firm within the framework of analyst conferences.⁴ In some cases analysts can directly refer to a companies' contact person which is particularly common in the Anglo-Saxon banking system (Lang and Lundholm, 1996). Generally, research on security analysts has shown that attendees of these conferences have a greater ability to make accurate forecasts. Note that these forecasts tend to be closer to the respective consensus forecast (Bowen et al., 2002). Another crucial differentiation emerges based on whether an analyst conducts either primary or secondary research. The former assesses companies when they go public, whereas the latter rather affects the secondary market. Secondary research supplies the market with information on a regular basis, whereas analysts who undertake primary research come up with reference quotations. Since it is difficult for investors to identify the value of company stocks during the IPO process, primary research plays an important part to supply potential investors with relevant information (Craft, 2001). As we will discuss later in more detail, analysts who undertake primary research are generally employed at underwriting member banks (Michael and Womack, 1999).

³ In this context, Brudney (1979) and Meister (2000) show that research which comprises new information impact the overall demand for research services positively.

⁴ Alternatively, analysts or analyst associations such as EFFAS (European Federation of Financial Analysts Societies), respectively may invite firms to hold conferences.

5 Principal-Agent Relations

5.1 The Analyst as Agent

With reference to the characteristics of principal-agent relations, banks as employers instruct sell-side security analysts to observe a number of companies, normally part of the same industry, and evaluate a company's prospects in terms of earnings, revenue and stock price forecasts on a regular basis. First, asymmetries emerge as the analyst has his hands on the competences to conduct research, whereas the evaluand can scarcely influence the definite appraisal. The evaluand as principal, on the other hand, is monetarily affected by analyst's opinion, creating a situation where positive forecasts can potentially lead to higher stock prices which are considered as a proxy for successful business operations.⁵ As a result, an analyst report that has been made public comes along with immediate consequences for the firm (asymmetric concernment).

A significant distinction in the network of contracts emerges during the IPO process when analysts evaluate companies that have business dealings with the analysts' employer. From a contractual perspective there exist explicit stipulations between the analyst's employer and the evaluand creating a complex situation for the analyst as agent. As the corporate finance division of the bank has an interest in successful IPO placings, numerous conflicts of interest may possibly arise with regard to analysts' objective to provide unbiased research (Michaely and Womack, 1999).⁶

The relationship between sell-side analyst and evaluand is characterized by asymmetric distributed information; leading to a situation where the evaluand as principal is concerned by potential information risks both at the beginning of and during the corresponding assessment process.⁷ In general, the analyst possesses an informational advantage with respect to the assessment criteria and weighing, respectively. In contrast, the evaluated company as principal does not possess this information and relies on the agent's willingness to release any information before publication. In the following, most appropriately, we should again differentiate whether

the analyst's employer has any business relation in the framework of an underwriting process or not.

If there is no such underwriting relation, the analyst requires and demands information from the evaluand. The principal, however, is unaware whether all relevant information is handed over, exposing herself with risks with respect to incomplete and missing information. Potentially, this can impair the overall research report negatively as the analyst cannot consider all information. If the evaluand drives a policy of greater information transparency, a more favorable report is likely to be conducted by the analyst. A significant remedy is therefore the analyst conference between the management of the assessed company and analysts. In this meeting open issues and supplementary information can be discussed and handed in, respectively.

If a bank acts as an underwriter for a firm, the information risk is less distinctive as the analyst can gather additional information at numerous occasions such as road shows, publicity ploys and within the framework of the due-diligence process (Lin and McNichols, 1998; Dugar and Nathan, 1995). As a result, underwriter analysts have an information advantage and are expected to be more knowledgeable and possess superior information than competing analysts whose employer does not have an underwriting relation with the firm (Allen and Faulhaber, 1989; Michaely and Womack, 1999). If this holds, investors should pay more attention to underwriter analysts as their forecasts are likely to be superior in terms of timing and accuracy. Even after the placing it is plausible that – as a result of a successful IPO transaction – the evaluand supplies the underwriter analyst with superior information (Michaely and Womack, 1999).

Aside from the informational risk there exist further challenges for the evaluand as principal which are rooted in potential changes of analysts' behavior. This behavioral pattern known as moral hazard goes at the expense of the principal both during and after the assessment process. A potential moral hazard risk can be observed when the report has not been conducted based on valid criteria. Further, the evaluand is likely to be concerned about an unfavorable change in assessment criteria or weightings, respectively, which can potentially cause a decrease in firm value (monetary concernment). If an analyst exhibits the aforementioned pattern in the long term he/she runs the risk of diminishing reliability and reputation. As an analyst acts as an individual within a large population of security analysts who are in competition to one another, certain selection and control mechanisms apply. That is, analysts' whose forecasts are rather inaccurate get less likely promoted and run the risk of job loss (Hong and Kubik, 2003; Loh and Mian, 2006). This creates a control mechanism because accuracy is rewarded whereas inaccurate analysts are likely to be sorted out.

⁵ What is more, a greater firm value provides a basis for e.g. successful mergers and acquisitions and capital increase measures (Jensen, 1986).

⁶ The Wall Street Journal (1992) unveiled an internal memo from Morgan Stanley which explicate conflicts of interest between a bank's corporate finance arm and its brokerage operations: "Our objective ... is to adopt a policy, fully understood by the entire firm, including the Research Department, that we do not make negative or controversial comments about our clients as a matter of sound business practice".

⁷ This also applies when analyses are carried out on a regular basis.

In the case of an underwriting relation between firm and broker the aforementioned considerations apply only with reservations. That is, conflicts of interest are likely to arise because the corporate finance division has an interest in a successful IPO transaction, whereas analysts aim to protect and ameliorate their reputation. As sell-side analysts compensation is a function of their individual reputation and “helpfulness” to achieve a favorable IPO placing, positively biased recommendations are likely to be published (Michaely and Womack, 1999; Dechow et al., 1997; Lin and McNichols, 1998). That is, from a principal-agent viewpoint, the evaluand that is going public faces a relatively modest moral hazard risk because the underwriter is more in control of analysts’ activities.

5.2 The Analyst as Principal

Aside from considering sell-side analysts merely as agents, the following remarks show that it is plausible to examine analysts also as principals. First, the evaluand as agent possesses an informational advantage (asymmetric distribution of information). In contrast to the principal, the firm is thoroughly aware of its strengths and weaknesses with respect to internal processes, corporate and financing policy and risks associated with ongoing and future projects. Second, further asymmetries emerge because the strategic alignment in terms of investment and financing policy can be hardly influenced by the analyst as principal. Finally, after the publication of investment reports a change in the evaluand’s behavior and activities can potentially undermine analysts’ reputation. In this specific situation an asymmetric concernment emerges which can potentially involve monetary consequences for the analyst including salary decline, job loss, etc.

The aforementioned characterization reveals the distinct information advantage of the evaluand as agent. The firm does not only possess more precise information with respect to internal plans, project risks and future business policy but can also evaluate its standing within an industry and sector more elaborately. As a consequence, the analyst relies largely on distinct firm-specific information. This creates a situation where the principal is concerned by information risk which is likely to emerge when the agent does not pass relevant information to the analyst. Again, the information risk is reduced because the evaluand does not know the exact assessment criteria and their respective weightings and, thus, the agent is prone to supply analysts sufficiently with information in order to avoid faulty and unfavorable recommendations. As we have seen, in the case of an underwriting relation between the evaluand and broker, analysts can gather more inside information which is not necessarily reflected by analysts’ public opinion due to the aforementioned conflicts of interest.

In terms of behavioral changes, the reputation of the principal is at risk when the evaluand acts contradictory to the primary communicated business strategy. That is, the firm can potentially choose riskier projects or go more into debt; the implementations of amended strategies force security analysts to correct and refine the initial published investment recommendation in the end. Obviously, such a correction goes at the expense of analyst’s reputation which ultimately impacts the principal’s salary (monetary concernment). Firms’ behavioral changes can best be inhibited by the analyst when the evaluand is assessed on a regular basis. Although, these behavioral changes merely come to light when a risk event occurs (hidden action), the analyst as principal can be considered as an effective watchdog. In this respect, security analysts are likely to play a decisive role as a supervision body within a firm’s governance structure (Jensen and Meckling, 1976; Chen and Steiner, 2000; Chung and Jo, 1996; Moyer et al., 1989). In order to facilitate an effective control mechanism, security analysts must communicate the outcome of their assessment effort. If such a piece of information has not yet been integrated into the publicly information pool, market participants react to analysts’ (adjusted) recommendations. In the case of a negative market reaction, pressure is put on the firm’s management. Obviously, this endows analysts with a certain control function.

6 Conclusion

In this paper we investigate the contractual partner relationships between sell-side security analysts and the correspondently involved parties, where the sell-side security analyst is considered as both principal and agent. We break the activities of security analysts down into a nexus of principal-agent relationships where the most striking contractual partner relationships in this network appear among sell-side analysts and the (to be) assessed company (evaluand). Furthermore, (potential) investors and banks as analyst’s employers are further key stakeholders within this nexus of contractual partner relationships.

A crucial differentiation which must be made is whether the analyst’s employer has an underwriting relation with the evaluand. If there is such a relation as part of an IPO process, conflicts of interest with respect to information and moral hazard risk are likely to emerge – especially when the analyst is examined as agent. On the other hand, if the sell-side analyst is considered as principal, his/her reputation is at risk due to evaluand’s potential behavioral changes and fragmentary information policy.

From a practical point of view, having analyzed this nexus of contractual partner relationships, numerous implications for regulators become obvious. First, and most importantly, the regulatory regime in terms of disclosure practice should be tightened in particular if a bank has an underwriting relation with

the evaluand. Aside from disclosure practices, analysts should be more independent from the bank's corporate finance division in terms of compensation. In this respect, we leave these issues for future research.

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