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Analyst Coverage, Financial Reporting Credibility, Investor Base and Listing Location

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Abstract

This study examines the impact of financial reporting credibility and investor base, factors that are rarely investigated, and listing location, a factor not previously examined, on analyst coverage using a sample of UK listed companies. A study using UK data is warranted as we find that institutional ownership is much more prevalent in the UK than is the case in the USA. Listing on the main board as opposed to the junior market is significantly and positively related to the number of analysts following the company's shares. Moreover, factors that significantly influence analysts following do depend upon listing location.

Key words: Analyst Coverage, Security Analyst, Institutional Investors, AIM

JEL: G12; G14; M4**;** G230, G240, M490

1. Introduction

Analysts collect a wide variety of information about the firms they follow, analyse it and produce their reports. These reports may include buy, sell or hold recommendations, the competitive position of the firm relative to its rivals and analysts' forecasts of earnings and cash flows (Bhushan, 1989). Demand for analyst services arises in situations characterised by information asymmetry where agency problems among outside providers of finance and management may arise. With the separation of the ownership of a company's resources from its control, two agency problems can arise between the management of a business and its providers of external funding. First, outside providers of finance may be unfamiliar with the day-to-day activities of the business and have little or no access to internal information; by contrast, managers are fully informed about these matters. Thus, managers know more about the intrinsic value of their firms relative to the external providers of finance who do not have the same level of knowledge. In such a situation, the external providers of finance will value all firms at their average price. This penalises businesses with higher expected future cash flows, and they will eventually leave the market. As these firms leave the capital market, the proportion of firms with lower expected cash flows in the market "crowd out" and investors lose confidence in the market (Palepu et al., 2013).

Second, as the ownership stake within their company declines, management may have a greater incentive to act in a self-interest fashion rather than maximising the goals of those who provide external funding. Any adverse effect on firm value from management self-interest will be disproportionately borne by the providers of external funding. In such a situation, analyst coverage helps mitigate these problems by providing private information to

both current and potential investors and to the financial intermediaries they represent about the quality of investment opportunities.

Empirical findings provide some evidence to support these arguments. For example, Doukas et al. (2005) and Jung et al. (2012) suggest that financial analysts facilitate more effective monitoring of the firms' activities thereby reducing agency costs and increasing shareholders' value. Results of Baik et al. (2010) and Gotti et al. (2012) shows that more analysts following increases firm value and reduces audit fees. In addition, Lang et al. (2012) document higher liquidity and lower transaction costs when the number of analysts following a firm is higher. Unsurprisingly, prior studies have tried to explore factors that drive analyst coverage but mainly for the US market. In this context, this study contributes to the current literature by examining determinants of the number of analysts following in a different context, i.e. the UK market for 2011. This is important because as we later report, institutional ownership, an important factor in determining analysts coverage, is much more prevalent in the UK than in the USA. We also show that the percentage of institutional ownership is significantly and inversely related to the number of analysts following only for the UK main market.

Bhushan (1989) introduced a simple model where he suggests a number of firm characteristics that may impact analyst coverage. Following Bhushan (1989) seminal paper, prior empirical studies have investigated the determinants of analyst coverage at both the country and firm levels. Multi-country studies examine the impact of different institutional environments on analyst coverage such as investor protection and corporate governance (Bushman et al., 2004; Lang et al., 2004; Boubakri & Bouslimi, 2010; Yu, 2010; Baik et al.,

2010), cross-listing and the accounting standards (e.g., Chen et al., 2007; Abdallah et al. 2012).

In firm level studies, scholars are either interested in examining the association between different company characteristics and analyst following (e.g., Bhushan, 1989; Marston, 1997; Barth et al., 2001; Brennan & Hughes, 1991; Lang & Lundholm, 1996; Rajan & Servaes, 1997; Lehavy et al., 2011; Jiraporn et al., 2012) or addressing endogeneity issues associated with their research question (e.g., Brennan & Subrahmanyam; 1995; Chung & go, 1996; Hussain, 2000). These studies apply variations of the classical linear regression model to datasets where the dependent variable (number of analysts following) is a count integer. This generates impossible predicted values for the dependent variable. For example, it generates negative values for the predicted number of analysts following, which results in biased/inconsistent parameter estimates and invalid inferences. As a result, an econometric procedure that considers for the count nature of the dependent variable is required (Rock et al., 2001; Boubaker & Labégorre, 2008).

Marston (1997) examined Bhushan's model for 251 firms from the top 500 UK companies in 1991. However, due to the unavailability of similar data on the main proxies (i.e., the number of analysts following, institutional holding and insiders holding) to those employed in Bhushan (1989), Marston recommended repeating the study using all UK quoted companies, if it were possible to obtain data on analyst following to further examine the validity of Bhushan's model in the UK context. Hussain (2000) re-examined analyst following UK FTSE 350 companies as of January 1998 using a simultaneous equation framework to address the potential endogeneity problem between analyst following and institutional ownership. However, Marston (1997) and Hussain (2000) employed a classical

linear regression model that does not suit datasets where the dependent variable (the number of analysts following a firm) is a discrete variable that takes only a finite number of nonnegative integers (Rock et al., 2001).

Therefore, this study initially employs Bhushan's (1989) model using a negative binomial regression model that does adjust for the discrete nature of the number of analysts following a firm. It contributes to the current literature in several ways. First, it examines the impact of investor base on analyst coverage and whether it is investor base or ownership structure that counts in attracting analyst coverage in a market dominated by institutional investors; the Office of National Statistics (2006) reports that only 12.8% of UK ordinary shares are held by individual investors. Second, in contrast to prior studies, it examines the credibility of financial reporting rather than the level of information disclosure on analyst coverage (e.g., Lang & Lundholm, 1996; Botosan & Harris, 2000; Barth et al., 2001). These two variables are only rarely investigated in the literature. Third, it extends prior studies by exploring the effect of listing location on analyst following, in particular, it extends previous studies by examining not only companies listed on the main stock exchange (e.g. FTSE350) but also companies listed on the alternative investment market (AIM) for a recent period (2011). To the best of the authors' knowledge this variable is not investigated in the current literature.

Consistent with prior work, we find that the main factors that drive the number of analysts following a firm in the UK market are firm size, the number of lines of business, systematic risk and an industry-effect. We add the credibility of financial reporting, the size of the firm's investor base and listing location to this list of significant factors. Altogether,

these factors explain 82% of the variation in the number of analysts following a UK listed company.

Importantly, listing on the main board as opposed to the junior market is significant and positively related to the number of analysts following the company's shares. Moreover, once we separately examine listing location, we find that different factors influence the number of analysts following. For the main FTSE350 market only, the percentage of institutional ownership is negatively and the residual variance and financial reporting credibility are positively associated with the number of analysts following. Meanwhile, firm size and the number of shareholders is positively associated with the number of analysts following only for the junior market. Finally, the overall relationship between the number of analysts following and each of the ownership structure, return variability and number of cross-listing is not individually significant but the analysis shows that they are jointly significant determinants of analyst coverage.

The remainder of this paper is organized as follows. In section 2, we develop the research model while section 3 describes the research sample and discusses the results. Section 4 provides concluding remarks.

2. Research Model

This paper examines determinants of the number of analysts following a UK listed company using a variation of the Bushman (1989) model. Bhushan (1989) suggests that the equilibrium total expenditure by investors on analyst service for a particular firm in a given period is a function of various firm characteristics that can either affect the aggregate demand

for or supply of analyst service or both. He assumes that both the aggregate demand and supply functions are continuous and twice differentiable in all their arguments. He also assumes that the demand curve is downward sloping and the supply curve is upward sloping, thus:

$$TC^*(k_1,k_2,....,k_n) = P^*(k_1,k_2,....,k_n)Q^*(k_1,k_2,....,k_n) \quad (1)$$

In (1), TC* is the equilibrium total expenditure by investors on analyst service for a particular firm in a given period, Q* is the corresponding equilibrium of the aggregated demand for analyst service for the firm during this period, P* is the equilibrium price and $k_1,k_2,....,k_n$ are the company characteristics. Using comparative statics, Bhushan (1989) deduced that the effect of any firm characteristic k_i on the equilibrium total expenditure by investors on analyst services depends on the respective price elasticities of aggregate demand and supply. A change in a firm characteristic k_i can result in a shift in either the demand curve or the supply curve or both. Bhushan (1989) assumes that the aggregate demand for analyst services is elastic given that the demand for securities is highly elastic. This in turn means that if the price of analyst services on a particular firm increases slightly, then investors can change their investment portfolios replacing a security with other close substitutes that have less expensive analyst services.

Bhushan (1989) considers a number of company characteristics that can affect either the demand for or the supply of analyst services or both. These firm characteristics are: ownership structure, firm size, returns variability, number of lines of business, and the correlation between firm return and market return. In addition, Bhushan (1989) considers the effect of industry type on his model.

Hussain (2000) suggests that the number of analysts following and the percentage of shares owned by institutions can be considered as endogenous because the percentage ownership by institutions is also inversely related to another independent variable, the percentage ownership by insiders. Meanwhile, Baik et al. (2010) observe that firm size and the number of analysts following can be simultaneously determined because analyst coverage can lead to higher valuations while analysts are more likely to follow firms with higher value. Therefore, we are motivated to test for possible endogeneity between the number of analysts following and institutional ownership on the one hand, and the number of analysts following and firm size on the other hand using a Hausman (1978) specification test. We find that the Hausman derived fitted value of institutional ownership and the Hausman derived fitted values for the natural logarithm of firm market value is not significantly related to the number of analysts following in the corresponding structural equation. Therefore, we conclude that a separate equation for the percentage ownership of institutions or for the logarithm of firm market value is not appropriate.[1]

Therefore, we initially proceed with the Bhushan's (1989) model and then extend it to include three new variables, namely the size of investor base, financial reporting credibility and listing location. In the initial model, we account for firm characteristics recommended by Bhushan (1989) and other factors recommended in other prior studies such as the number of cross-listing and market beta. In particular, we introduce a variable (NLISTING) to control

[1] The details of these Hausman endogeneity tests are available from the corresponding author upon request.

for the number of cross-listing because cross-listing is likely to increase the demand on analyst services (Marston, 1997). We also examine the impact of systematic risk on analyst coverage and use market beta (BETA) to proxy for a firm's systematic risk. The rationale of including market beta in the research model is that a firm's systematic risk may impact analyst activity through institutional clientele effect (Hussain, 2000; Baik et al., 2010; Boubaker & Labégorre, 2008). Therefore we expect a positive association between market beta and analyst coverage for UK listed companies. In addition, we use the number of segments (NSEG) to proxy for the number of lines of business. Furthermore, the industry-effect is tested through the impact of a dummy variable regulation (REG) which takes the value of one for firms in the utilities, telecommunications and financial sectors, and zero otherwise. This test is based on an argument that industry sectors that are more heavily affected by regulatory bodies or legal regulation and constraints, reduce investors' demand for external financial analysis by providing a substitute source of monitoring (Hussain, 2000). Therefore, our initial research model takes the following form:

$$NANAL_i = b_0 + b_1 NINST_i + b_2 \%INST_i + b_3 \%INSID_i + b_4 RES.VAR_i + b_5 NSEG_i$$

$$+ b_6 NLISTINGi + b_7 MVALUE_i + b_8 REG_i + b_9 BETA_i + \varepsilon_i \qquad (2)$$

In (2), NANAL is the number of analysts following the firm to proxy for total expenditure on analyst services. NINST is the number of institutions holding shares in the firm, % INST is the percentage of shares held by these institutions, % INSID is the percentage of insider holdings to proxy for ownership structure and RES.VAR[2] is the proxy for the return

[2] We did consider other variables such as the variance of the idiosyncratic return of the firm after removing the effect of market wide factors, and the squared correlation coefficient between a firm's daily return

variability of the firm. In addition, NSEG is the number of recorded segments as a proxy for the number of lines of business, MVALUE is the market value of equity of the firm to proxy for firm size, and REG and BETA proxy for the industry-effect and systematic risk respectively as previously explained. The definition of each variable and the expected sign is reported in Table 1. We use a negative binomial regression model which suits the count data variable nature of the dependent variable.

< Insert table 1 about here>

Then we extend equation (2) and consider three new variables that might affect analyst coverage: listing location, credibility of financial reporting and size of the firm's investor base that are only rarely (or not at all) investigated in the current literature. We introduce a dummy variable (MRT) that takes the value of one for main board listings of firms (FTSE350), and zero otherwise, to control for the effect of the listing location since our sample includes securities that are quoted on the main market and the AIM market.

Audit firm size (BIG4) is included as a proxy for the firm's credible financial reporting. BIG4 is a dummy variable that takes the value of one if the auditor is one of four dominate accounting firms and zero otherwise. Barton (2005) suggests that firms that are more visible in the capital markets tend to engage highly reputable auditors, consistent with

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and the market daily return for 2011. However these two variables were redundant as they merely replicated the same information that we have in RES.VAR and have less number of observations available (254). Therefore, in order to avoid multicollinearity problem and to maximise the number of observations, only RES.VAR is included in the analysis.

such firms trying to build and preserve their own reputations for credible financial reporting. In addition, Francis et al. (2013) suggest that earnings quality is higher for clients of the large audit firm where Big 4 client accruals are smaller in magnitude, clients are more likely to report losses, and clients exhibit more timely loss recognition. Behn et al. (2008) suggest that high-quality audit provided by big auditors is associated with better forecasting performance by analysts. Thus credible financial reporting may reduce the costs of collecting and analysing firm information disclosure and help financial analysts to produce better forecasts, which may attract more analysts to follow the firm.

Brennan & Hughes (1991) suggest a model which predicts that the number of analysts following a firm will increase after a stock split due to an increase in price volatility, a wider bid-ask spread, and an increase in the number of shareholders. Frankel et al. (2006) examine the effect of the number of shareholders on the informativeness of analyst reports in the US market and argue that such an association is ambiguous. Sabherwal & Smith (2008) examined the impact of the number of shareholders on analyst coverage in the context of the US market and find a significant and positive association. This study examines the influence of the number of shareholders (NOSHOLD), as a proxy for the size of the firm's investor base, on analyst coverage. Wider investor base is expected to increase the demand for analyst service and hence increase the number of analysts following. The definition of these three new variables is included in Table 1. Therefore, the research model takes the following form after the inclusion of these three new variables:

$$NANAL_i = b_0 + b_1 NINST_i + b_2 \%INST_i + b_3 \%INSID_i + b_4 RES.VAR_i + b_5 NSEG_i + b_6 NLISTING_i + b_7 MVALUE_i + b_8 REG_i + b_9 BETA_i + b_{10} MRT_i + b_{11} BIG4_i + b_{12} NOSHOLD_i + \varepsilon_i \quad (3)$$

3. Data collection and analysis

3.1 The research sample

The data for this study are collected from the Bloomberg and FAME databases. The initial sample consists of 1,028 companies in the financial year 2011. After removing companies with no observation on the number of analysts following the firm, the final sample consists of 272 FTSE350 and 508 AIM companies, thus 780 observations in total.

3.2 Descriptive analysis

Table 2 provides the descriptive analysis of all variables. It shows that the average number of analysts following a UK listed company is seven while the median is two. The percentage of shares held by institutions and insiders for an average UK listed company is 77% and 21% respectively. This implies that UK listed companies are mostly owned by institutions with an average number of 151 institutions holding shares in a firm. This result is consistent with the Office of National Statistics (2006) which reports that only 12.8% of all UK shares are held by individual investors. In contrast, in the US market, institutions hold only 35% and only 93 institutions hold shares in the average company (Bhushan, 1989: 265). These facts highlight the differences between the UK and US market and demonstrate why a study of the UK market is warranted.

Additionally, a UK listed company is on average listed on 17 stock exchanges worldwide and has 3 recorded segments. The market value of the companies included in the sample varies from £1.96 billion to £89.758 billion. Systematic risk is on average 1 and the average number of shareholders is 51,000.The difference between the minimum value and the maximum value of each variable reflects the composition of the sample firms which includes companies of radically different sizes listed on different markets. This suggests that outliers might form a problem; therefore we use the natural logarithm of each variable where practical.

< Insert table 2 about here>

3.3 Univariate- analysis

Table 3 reports the results of the correlation test among the research variables. It shows that the number of analysts following a firm (NANAL) has a significant association with almost all the explanatory variables in line with prior expectation except RES.VAR, NSEG and REG. This result indicates that large companies listed on the main market and widely listed on foreign stock exchanges with higher number of recorded subsidiaries, higher institutional holding, less insiders holding, higher systematic risk, wider investor base and credible financial reporting have more analysts following.

The association between NANAL and NSEG is positive and significant contrary to prior expectations. The results also show no association between each of RES.VAR, REG and NANAL. However, these results only focus on the association between a pair of variables; a multivariate analysis may yield different conclusions.

< Insert table 3 about here>

The correlation between firm size (MVALUE) and NINST is positive and significant (0.758), indicating that large firms attract more institutional holdings. In addition, the correlation between MVALUE and %INSID is negative and significant (-0.183) indicating that smaller firms are closely held by insiders. The correlation between MVALUE and each of NSEG, MRT, NLISTING, BIG4 and NOSHOLD is positive and significant, indicating that larger firms have more segments, are listed on the main market, are widely listed on foreign stock exchanges, are audited by a BIG4 audit firm and have a wider investor base. The correlations between firm size and the rest of the variables are not significant. Most of these results correspond to the results obtained by Bhushan (1989) and Marston (1997).

3.4 Multivariate analysis

This section reports the results of a negative binomial regression of the research models (2) and (3) discussed earlier after controlling for hetroskedasticity using quasi maximum likelihood (Huber/White) standard errors. Ordinary least squares (OLS) assumes that the dependent variable is continuous where clearly our dependent variable, the number of analysts following a given company, is discrete, taking on values from zero to 42 as reported in Table 2. Using OLS in this context can lead to biased and inconsistent estimates (Long, 2007: 217). The negative binomial count data regression corrects for the discrete, count data nature of our dependent variable and is especially suitable when there is "excess variability" in the count variable, i.e. when the standard deviation of the count variable is larger than its mean, as is the case here and shown in Table 2. First, we run model (2) for FTSE350 and AIM companies separately and then we combine both markets in the last regression.

< Insert table 4 about here>

The results for both markets in Table 4 show that only six variables, the percentage of institutions holding shares in a firm (%INST), the number of lines of business (NSEG), firm size (MVALUE), the industry-effect (REG), market beta (BETA) and listing location (MRT), can explain about 80% (adjusted R^2) of the variance in the number of analysts following a UK listed firm. These results are in line with prior empirical results and prior expectations (Bhushan, 1989; Marston, 1997; Hussain, 2000). In addition, the association between NANAL and %INST is positive and significant indicating that the service of in-house analysts might not substitute the service of outside analysts for the total sample in contrast to FTSE350 sample.

The association between NANAL and the number of lines of business (NSEG) is negative and significant as expected (Bhushan, 1989). This result indicates that as the number of lines of business increase, analysts will have to follow more lines of business which involves more effort and cost. Thus, an increase in the number of lines of business will increase the cost of information acquisition. In turn, this will lead to an inward shift in the aggregate supply of analyst services. With elastic demand, the equilibrium total expenditure (the number of analysts following) will be lower for such a firm. The significant positive relationship between firm size and NANAL is also consistent with the interpretation that the aggregate demand and supply of analyst services increase with firm size. It is also consistent with the notion that firm size is a "catch all" variable which proxy for the overall effect of other firm characteristics that were omitted from the analysis.

There is also evidence that industry sector affects the number of analysts following a firm. It seems that demand for analyst services decreases for firms which operate in sectors that have greater regulation of activities. This in turn indicates that regulation may act as a substitute source of information for investors (Hussain, 2000). Alternatively, it might indicate that following these companies involves more effort from analysts to check the adherence of these companies to these regulations, thus increasing information costs. This will lead to an inward shift in the aggregate supply of analyst services and with elastic demand; the equilibrium total expenditure will be lower for such a firm. Furthermore, the findings show that the percentage of insiders holding, return variability, and the number of cross-listing have no association with the number of analysts following. The association between market beta (BETA) and analyst coverage is positive and significant for the total sample in line with prior expectations.

It is remarkable that listings on the main board "MRT" has a significant positive influence on the number of analysts following that is independent of firm size and other control variables. In turn, this suggests that one benefit of moving to the main board is that more analysts are likely to follow the firm and potentially this can improve the market for the firm's shares by reducing asymmetric information. This finding for the "MRT" is consistent with the interpretations that listing on the main market increases the aggregate demand for analyst services, since companies listed on the main market have wider investor bases and are more in the public eye than their AIM counterparts.

Table 4 also markedly shows that some of the results are sensitive to the listing location. For example, the percentage of institutional ownership is negatively and significantly associated with analyst coverage of FTSE350 companies. In other words, as the

percentage of institutional ownership increases for a FTSE350 company, it relies on in-house analyst service as a substitute of outside analyst' service. Return variability (RES.VAR) has a significant positive association with NANAL for FTSE350 companies but has no association with NANAL for AIM companies. This may indicate that private information is more valuable for FTSE350 companies compared to their AIM counterparts (Bhushan, 1989). The results also show that the association between firm size (MVALUE) and NANAL is positive and only significant for AIM companies. This result indicates that firm size plays a more important role in attracting analysts in the AIM market.

We re-run all these three models using a restricted form of the research model by dropping the variables that were not significant for each model. The results show that dropping these variables reduce both the adjusted R^2 and the log likelihood ratio which indicate that these variables are jointly significant and thus they should not be dropped from the model.

Secondly, we run equation (3) considering the new variables that might affect analyst coverage: credibility of financial reporting and size of the firm's investor base as well as listing location. Table 5 shows our estimates of equation (3) after the inclusion of each of these new variables individually for each market and then jointly for the total market.

<Insert table 5 about here>

Table 5 shows generally consistent results with those obtained in Table 4. The association between the number of analysts following and each of three new variables is positive and significant for the total market and percentage of institutional ownership is no

longer significant. This result indicates that firms listed on the main market with credible financial reporting (BIG4) and wider investor bases (NOSHOLD) attract more analysts (NANAL). The introduction of these variables slightly improved the adjusted R^2. In addition, the log likelihood is also improved for the total market. Table 5 also shows the results for the individual markets which are generally consistent with those obtained in Table 4. It also shows that having one of the Big4 accounting firm to audit accounts only attracts more analyst coverage for FTSE350. This may indicate lack of ability of AIM companies to hire one of the Big4 accounting firms due to higher audit fees costs. Interestingly, the association between analyst coverage and institutional ownership is only significant for FTSE350 companies but the association with the size of investor base is only significant for AIM companies. This result emphasis the differences in the ownership structure between FTSE350 and AIM companies.

Finally, we re-run the three models in Table 5 after dropping the insignificant variables. The results show that dropping these variables reduced both the adjusted R^2 and the log likelihood ratio which indicate that these variables are jointly significant and thus they should not be dropped from the model.

4. Concluding remarks

This study extends the literature on analyst coverage by examining the impact of the size of investor base, financial reporting credibility and listing location that are rarely, or as in the case of listing location, never investigated in prior studies. This study employs UK data, a useful dataset as the UK market is structurally different from the US market because

institutional ownership is more prevalent in the UK market. In contrast to prior UK studies, we use a negative binomial regression analysis which best suits a discrete dependent variable.

The initial results show that the main factors that drive the number of analysts following a firm in the UK market are: firm size, institutional holding, market beta, listing location and the number of lines of business. There is also evidence that the industry sector affects the number of analysts following a firm. These variables explain 80% of the variance in the number of analysts following a UK listed company. Interestingly, we find that listing on the main board of the UK market has a significant impact on the number of analysts following that is independent of firm size and other control variables. This suggests that one benefit from moving from the junior AIM market to the main FTSE350 market is that the firm can attract more analysts' coverage. Potentially, this can reduce information asymmetries and lead to an improvement in the market for the firm's shares. We also find some differences in the determinants of the number of analysts following that are related to the listing location. Specifically, the percentage of institutional ownership is negatively and the residual variance and financial reporting credibility are positively associated with the number of analysts following only for the main FTSE 350 market while firm size and the number of shareholders is positively associated with the number of analysts following only for the junior AIM market.

We also extend the analysis by introducing new variables, which to the best of the authors' knowledge, were rarely, or not at all, considered as determinants of analysts following. As well as listing location, these variables are credibility of financial reporting and

the size of the firm's investor base. The results show that these variables are significantly and positively associated with the number of analysts following.

Our results are of interest to investors and managers alike in that they improve our understanding of how analysts follow UK listed firms, which helps appreciate the qualities of the information thereby provided. Our results also show specific characteristics of companies, such as listing location, which managers can control in order to attract more analyst coverage and mitigate agency problems between management and outside finance providers.

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Table 1: Variable definition

Variable	Definition	Expected sign
NANAL	Number of analysts making recommendations for the security.	
Log (1+NINST)	The natural logarithm of one plus the number of Institutional holders as a proxy for ownership structure.	+/-
Log (1+%INST)	The natural logarithm of one plus the percentage of outstanding shares held by institutional investors as a proxy for ownership structure.	+/-
Log (1+%INSID)	The natural logarithm of one plus the percentage of outstanding shares held by insiders as a proxy for ownership structure.	-
RES.VAR	The variance of the total return of the firm as a proxy for return variability. Total return is defined as the continuously compounded return for security i on day t. This variance is estimated using daily data for 2011.	+
Log (1+NSEG)	The natural logarithm of one plus the number of recorded segments as a proxy for number of lines of business.	-
Log (1+NLISTING)	The natural logarithm of one plus the number of cross-listing	+
Log (MVALUE)	The natural logarithm of the market value of the equity of the firm at the end of 2011 as a proxy for firm size. It is obtained by multiplying the closing share price at the 2011 year-end by the number of outstanding shares of the firm.	+
MRT	A dummy variable that takes one if the firm is one of the FTSE350 and zero if the firm is listed on the AIM market	+
REG	A dummy variable that takes one for utilities, telecommunications and financial companies and zero otherwise.	-
BETA	A coefficient which measures the systematic risk via the market model using weekly data and the representative market index for two years.	+
BIG4	A dummy variable that takes the value of one if the auditor is one of the four dominate accounting firms and zero otherwise, to proxy for credible financial reporting.	+
Log (NOSHOLD)	The natural logarithm of the number of shareholders as a proxy for the size of the firm's investor base.	+

Table 2: Descriptive Analysis

	Mean	Median	Max.	Min.	STD	Skewness	Kurtosis	Obs.
NANAL	7	2	42	0	9.29	1.35	3.83	780
NINST	151	78	1176	0	173.57	2.38	9.62	765
%INST	76.71	85.46	99.88	0	25.54	-0.91	2.83	764
%INSID	20.7	7.13	97.71	0	27.48	1.51	4.24	765
RES.VAR	0.39	0.01	122.03	0	5.2	22.32	517.98	582
NSEG	3	1	23	0	2.83	3.43	18.67	574
NLISTING	17	11	43	1	11.93	0.49	1.63	780
MVALUE (£M)	1959.5	48.83	89757.75	0.38	8105.74	7.48	68.29	762
BETA	0.72	0.69	2.25	-1.33	0.40	0.14	3.88	775
NOSHOLD (000)	51	39	175	1	36.96	0.78	2.66	771

Variable definitions are shown in Table 1

Table 3 Pearson correlation

Variables	NANAL	NINST	%INST	%INSID	RES.VAR	NSEG	NLISTING	MVALUE	REG	MRT	BIG4	BETA
NINST	0.858**	1										
%INST	0.362**	0.364**	1									
%INSID	-0.423**	-0.413**	-0.453**	1								
RES.VAR	-0.049	-0.027	0.028	-0.044	1							
NSEG	0.504**	0.591**	0.135**	-0.209**	-0.030	1						
NLISTING	0.830**	0.749**	0.385**	-0.443**	-0.042	0.463**	1					
MVALUE	0.512**	0.758**	0.041	-0.183**	-0.017	0.476**	0.383**	1				
REG	0.055	0.121**	0.015	0.060	-0.033	0.069	0.061	0.074	1			
MRT	0.823**	0.678**	0.384**	-0.415**	-0.053	0.411**	0.922**	0.297**	0.086*	1		
BIG4	0.539**	0.446**	0.337**	-0.325**	-0.057	0.268**	0.545**	0.189**	0.053	0.595**	1	
BETA	0.497**	0.402**	0.264**	-0.306**	0.018	0.265**	0.515**	0.139**	0.030	0.525**	0.356**	1
NOSHOLD	0.797**	0.818**	0.518**	-0.507**	-0.054	0.444**	0.768**	0.484**	0.063	0.760**	0.559**	0.287**

Variable definitions are shown in Table 1. **Significant at 5% level or less (two-tailed). *Significant at 10% level (two-tailed).
Included observations: 419 after adjustments.
Balanced sample (list wise missing value deletion)

Table 4: This table reports the factors that determine the number of analysts following firms (NANAL) in the UK FTSE350, AIM markets and both markets combined using the negative binomial count regression method. Variable definitions are shown in Table 1. The regression model takes the following form: $NANAL_i = b_0 + b_1 \text{ Log } (1+NINST_i) + b_2 \text{ Log } (1+ \%INST_i) + b_3 \text{ Log } (1+ \%INSID_i) + b_4 RES.VAR_i + b_5 \text{ Log } (1+ NSEG_i) + b_6 \text{ Log } (NLISTING_i) + b_7 \text{ Log } (MVALUE_i) + b_8 REG_i + b_9 BETA_i + b10 MRT_i + \varepsilon_i$

Variable		FTSE350	AIM	Total
C		0.223	-2.019**	-1.316**
		(0.702)	(0.001)	(0.000)
Log (1+NINST)	+/-	0.413**	0.218*	0.094
		(0.000)	(0.094)	(0.165)
Log (1+%INST)	+/-	-0.147*	0.013	0.202**
		(0.091)	(0.942)	(0.012)
Log (1+%INSID)	-	0.003	0.068	0.014
		(0.900)	(0.133)	(0.494)
RES.VAR	+	0.121**	-0.068	-0.015
		(0.010)	(0.131)	(0.252)
Log (1+NSEG)	-	-0.049	-0.063	-0.079**
		(0.166)	(0.719)	(0.051)
Log (NLISTING)	+	0.186	-0.119*	-0.072
		(0.273)	(0.089)	(0.266)
Log (MVALUE)	+	0.054	0.526**	0.262**
		(0.121)	(0.000)	(0.000)
REG	-	-0.094**	-0.355**	-0.144**
		(0.030)	(0.024)	(0.003)
BETA	+	0.009	0.029	0.104**
		(0.822)	(0.757)	(0.011)
MRT	+			1.058**
				(0.000)
N		210	204	414
Adjusted R-squared		0.58	0.62	0.81
Log likelihood		-638	-307	-994

Values in parentheses are probabilities of significance. **Significant at 5% level or less (two-tailed). *Significant at 10% level (two-tailed)

Table 5: This table reports the factors that determine the number of analysts following UK listed companies as reported in Table 4 plus three additional variables including: BIG4 and NOSHOLD as well as MRT. Variable definitions are shown in Table 1. The regression model takes the following form: $NANAL_i = b_0 + b_1$ Log $(1+NINST_i) + b_2$ Log $(1+\%INST_i) + b_3$ Log $(1+\%INSID_i) + b_4$ RES.VAR$_i + b_5$ Log $(1+ NSEG_i) + b_6$ Log $(NLISTING_i) + b_7$ Log $(MVALUE_i) + b_8$ REG$_i + b_9$ BETA$_i + b_{10}$ MRT$_i + b_{11}$ BIG4$_i + b_{12}$ Log $(NOSHOLD_i) + \varepsilon_i$

Variable		FTSE350	AIM	Total
C		-0.151	-2.393**	-1.426**
		(0.805)	(0.000)	(0.000)
Log (1+NINST)	+/-	0.375**	0.166	0.069
		(0.000)	(0.204)	(0.306)
Log (1+%INST)	+/-	-0.187**	-0.017	0.073
		(0.035)	(0.924)	(0.376)
Log (1+%INSID)	-	0.004	0.080*	0.019
		(0.827)	(0.072)	(0.347)
RES.VAR	+	0.117**	-0.067	-0.015
		(0.011)	(0.123)	(0.298)
Log (1+NSEG)	-	-0.053	-0.027	-0.073*
		(0.129)	(0.874)	(0.065)
Log (NLISTING)	+	0.257	-0.107	-0.051
		(0.140)	(0.117)	(0.422)
Log (MVALUE)	+	0.056	0.481**	0.230**
		(0.107)	(0.000)	(0.000)
REG	-	-0.091**	-0.313**	-0.135**
		(0.035)	(0.045)	(0.004)
BETA	+	0.008	0.013	0.090**
		(0.848)	(0.889)	(0.024)
BIG4	+	0.248*	-0.038	0.213**
		(0.093)	(0.741)	(0.019)
Log (NOSHOLD)	+	0.061	0.238**	0.207**
		(0.279)	(0.043)	(0.000)
MRT	+			0.922**
				(0.000)
N		210	204	414
Adjusted R-squared		0.58	0.64	0.82
Log likelihood		-636	-305	-983

Values in parentheses are probabilities of significance. **Significant at 5% level or less (two-tailed). *Significant at 10% level (two-tailed)