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Internationalization and the reliance of Analyst Forecasts in Stakeholder-oriented corporate governance: Evidence from Japanese MNEs

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Abstract

This paper investigates whether reliance of analyst forecasts on management forecasts is affected by the internationalization under a unique setting of effectively mandated management forecasts in Japan. We find that higher internationalization would result in lower reliance of analyst forecasts on management forecasts in Japanese corporations. This implies that firms with higher internationalization faces the complexity and uncertainties. Second, greater foreign shareholdings enhance the reliance of analyst forecasts on management forecasts in higher internationalized firms, suggesting the effectiveness of foreign shareholders' pressure. Finally, greater bank ownership would also enhance the reliance of analyst forecasts on management forecasts under stakeholder-oriented corporate governance.

Keywords: Reliance of analyst forecasts on management forecasts; Mandated Management Forecasts; Internationalization

1. Introduction

The rise in financial globalization has led to greater demands for transparency and accountability by institutional shareholders all over the world (Boone and White, 2015). In the process of internationalization, Multi-National Entities (MNEs) being urged for better disclosure and more effective corporate governance mechanisms should be expected (Aguilera et al., 2019). Better disclosure role of analyst forecasts is effectively functioned in foreign controlled MNEs (Chen et al., 2015). Due to increasing geographical diversification, analysts of MNEs tend to face complexity of providing accurate analyst forecasts (Duhn and Reeb, 2002). Thus, the credibility of analyst forecasts is keenly important for highly internationalized MNEs. Therefore, we focus on the role of analyst forecasts in Japanese MNEs with complexity due to geographical diversification.

Internationalization is an important driver for better disclosure in MNEs because they have to attract foreign shareholders with shareholder-oriented logic (Aguilera et al., 2018). International corporate governance research has shown that shareholder-oriented systems are different from stakeholder-oriented system in various ways (Shleifer and Vishny, 1997; Aguilera et al., 2017). In a stakeholder-oriented corporate governance system, highly internationalized MNEs tend to adopt International Financial Reporting Standards (IFRS) (Sakawa, et al., 2021e). Financial Service Agency (2015) shows that the main reason Japanese MNEs adopt IFRS is to enhance disclosure quality under the complexity of consolidated financial reporting. This implies that internationalization is a driver to realize better disclosure in the face of complex, highly internationalized MNEs.

Better disclosure in publicly listed firms is beneficial to reveal their private information about future cash flows and mitigate the information asymmetry with uninformed investors. Finance or accounting theory related to the evaluation of accounting information in the capital market has been developed since the 50-year legacy paper of Ball and Brown (1968) (Aman et al., 2019a). Better disclosure results in higher stock liquidity (Glosten and Milgrom, 1985) and lower cost of capital (Diamond and Verrecchia, 1991). Furthermore, the improvement of transparency prevents managers from seeking private benefits at the expense of other shareholders (Bushman and Smith, 2001). Thus, better disclosure is the key to resolving the information asymmetry problems between managers and shareholders.

The credibility of management forecasts has been a central issue in corporate disclosure (King et al., 1990). Under the mandatory-effective management forecast system in Japan, the reliance on analyst forecasts is based on the credibility of management disclosure (Aman et al., 2019b; Kato et al., 2009). Management forecasts are functioned as an important source of information for analysts (Conroy et al., 2000), particularly at the beginning of the fiscal year when alternative sources of corporate information are fewer in Japanese corporations (Ota, 2010; 2011). Therefore, the reliance of analyst forecasts on management forecasts *increases with* the credibility of management forecasts, which is the main source of management disclosure in Japanese corporations (Aman et al., 2019b).

The role of analyst forecasts in Japanese corporations differs from U.S. ones due to different corporate disclosure systems. The mandatory-effective management forecast system in Japanese corporations is differently characterized from voluntary

management forecast system in U.S. corporations (Kato et al., 2009)[1]. Due to increasingly pervasive management forecasts, management forecasts have become important information for analysts to decrease information asymmetry between managers and outside investors (Anilowski et al., 2007).

Revealing how analyst forecasts respond to management forecasts in Japanese corporation is an important topic for the development of finance theory (Aman et al., 2019a). In most countries like the U.S., management forecasts are voluntarily disclosed due to concerns about the legal costs of misleading forecasts. Thus, the roles of analyst forecasts are especially important in the enhancement of disclosure quality in corporations. However, managers in Japan are mandatorily required to disclose initial earnings forecasts at the beginning of the fiscal year. Thus, analyst forecasts tend to reflect the information on mandatory-effective management forecasts at the beginning of accounting year when alternative sources of corporate information are fewer in Japanese corporations (Ota, 2010; 2011). Therefore, the reliance of analyst forecasts on management forecasts (Aman et al., (2019b) is the important disclosure mechanisms in Japanese corporations.

In this paper, we aim to examine how the reliance of analyst forecasts on management forecasts is determined in highly internationalized Japanese MNEs that

[1] Under Japanese mandatory effective management forecast systems (Kato et al., 2009), the credibility of analyst forecasts is based on that of management forecasts. Thus, reliance of analyst forecasts on management forecasts followed as Aman et al. (2019b) is the important devices to confirm better disclosure in Japanese corporations. Additionally, reliance on analyst forecast of management forecasts cannot be precisely measured under U.S. voluntary management forecast systems. It is the uniqueness of mandatory effective management forecast systems which enables to measure reliance on analyst forecast of management forecasts.

face the complexity of consolidated financial reporting under the effectively mandated management forecast system. Notwithstanding the importance of internationalization under the financial globalization trends discussed previously (Aguilera et al., 2017; Boone and White, 2015), the role of internationalization in the reliance of analyst forecasts on management forecasts have not been fully investigated in prior studies. Therefore, this paper aims to answer the following research question: Does the increase of internationalization in Japanese firms increase the reliance of analyst forecasts on mandatory-effective management forecasts?

We focus on Japanese corporations because the Japanese setting has several advantages. First, Japan provides unique management forecast systems, where the forecasts in Japan are effectively mandated (Kato et al., 2009). Under the voluntary management forecasts systems in U.S., precise research centers on the managerial inventive to disclose forecasts (Ajinkya et al., 2005; Karamanou and Vafeas, 2005; Verrecchia, 2001). In this sense, the examination of credibility of management forecasts are in general difficult to make evidences in U.S. (Kato et al., 2009). Second, corporate governance research stresses that corporate governance mechanisms in Anglo-American shareholder-oriented economies are completely different from those in bank-dominated economies such as Germany and Japan (Shleifer and Vishny, 1997). In addition, internationalization is an important topic by the recent globalization trend. As for corporate governance, Aguilera et al. (2019) called the corporate governance of MNEs as “International Corporate Governance”. To analyze topics of International Corporate Governance is a valuable study for finance and international business scholars. Third, the Japanese Overseas Investment database provides detailed data related to internationalization diversification proxy variables such as the number of countries

where a firm has overseas subsidiaries and an international diversification index (David et al., 2010; Delios and Beamish, 1999; Lu and Beamish, 2004). Thus, we can investigate whether reliance of analyst forecasts on management forecasts would be entailed in firms with higher internationalization.

We investigate whether reliance on analyst forecasts is lower in Japanese firms with a higher degree of internationalization which faces complexity and uncertainties. In this paper, we analyze the relationship between the internationalization degree and the reliance of analyst forecasts on management forecasts in firms using a sample from the period: 2007-2018. We measure the reliance of analyst forecasts on management forecasts, followed as Aman et al. (2019b). We also adopt a proxy of the credibility of analyst forecasts measure: analyst forecast dispersion, followed as previous studies (Aman et al., 2019b; Ota, 2011). This paper examines the internationalization degree to adopt the internationalization diversification, using the Japanese Overseas Investment database (David et al., 2010; Delios and Beamish, 1999; Lu and Beamish, 2004).

The empirical results of our paper are summarized as following three points. First, we find that the reliance of analyst forecasts on management forecasts is lower in firms with higher internationalization degree. Due to the complexity and uncertainties, highly internationalization firms would lower the reliance of analyst forecasts on management forecasts. Second, the negative relation between the reliance of analyst forecasts on management forecasts and internationalization is positively moderated by foreign shareholders. As the disclosure pressure in firms is stronger in firms with greater foreign shareholders (Aguilera et al., 2017), the reliance of analyst forecasts on management forecasts is positively moderated by greater foreign shareholdings in firms with higher internationalization. Finally, greater bank ownership would also enhance the reliance of

analyst forecasts on management forecasts under stakeholder-oriented corporate governance. Our results are also confirmed by 2SLS methods to consider about the endogeneity issue.

The contributions of our paper are summarized as several points. First, our paper provides empirical evidences of reliance of analyst forecasts on management forecasts in a unique setting of effectively mandated management forecasts in Japan. We find that higher internationalization would result in lower reliance of analyst forecasts on management forecasts. We believe that the reliance of analysts is lower in more internationalized MNEs because these MNEs face more complexity and uncertainties. Second, greater foreign shareholdings enhance the reliance of analyst forecasts on management forecasts in firms with higher internationalization degree. This implies that disclosure pressures from foreign shareholders are stronger in internationalized MNEs. This is consistent with the previous finding that disclosure pressures from foreign shareholders are key to enhancing the credibility of management forecasts (Aguilera et al., 2017). This finding implies that disclosure pressure from foreign shareholders with shareholder-oriented logic effectively influences the stakeholder-oriented corporate governance system**.** In addition, this finding is also consistent with Indian MNE evidence that foreign control is effective to increase the disclosure quality (Chen et. al., 2015).

The rest of our paper is organized as follows. Section 2 describes the institutional backgrounds and hypotheses. We next introduce data, methodology, and descriptive statistics in Section 3. Section 4 explains the empirical results. Finally, we discuss and conclude in Section 5.

2. Institutional Backgrounds and Hypotheses developments

2.1. Institutional Backgrounds

The Japanese corporate governance system was characterized by a stable bank ownership structure during the 1990s (Aoki, 1990; Aoki et al., 1994). Long-term relationships between banks and client firms are common in stakeholder-oriented corporate governance systems like Japan, unlike market-oriented systems like the U.S (Desender et. al., 2016). Effective monitoring by banks mitigates agency problems in Japanese corporations (Kang and Shivdsani, 1995; Morck et al., 2000). In addition, information asymmetry is mitigated in firms with bank ties (Sakawa et al.,2014) while earnings quality is enhanced (Sakawa and Watanabel, 2021b).

Different from shareholder-oriented economics, internal monitoring, and inter-firm relationships tend to effectively substitute the outside shareholder monitoring and managerial incentive mechanisms (Aguilera et al., 2008). In addition, Japan has a bank-based financial system whose size is comparable to the market-based system in the U.S. (Levine, 2002). Bank monitoring would be important to enhance the credibility of management forecasts under long term bank-relationships between bank and their client firms (Kato et al., 2009). In fact, bank monitoring mechanisms are substituted to take effective monitoring roles in bank-dominated economies such as Japan (Aoki, 1990; Aoki et al., 1994).

The increase of foreign shareholders would be highly observed in Japanese corporations post 2000s (Aguilera et al., 2017). Desender et al. (2016) describe that foreign ownership only accounted for less than 5% in the early 1990s. Kato et al. (2009) report that the average ownership of foreign shareholders is about 5% during 1997-

2007. The average ownership of foreign shareholders is about 15% in 2010 and about 20% in 2017. The increase of foreign shareholders would function for disclosure pressure in Japanese corporations (Sakawa et al., 2014). In addition, the presence of foreign shareholders would urge managers to take higher corporate risk-taking (Sakawa et al., 2021d). Thus, the active monitoring of foreign shareholders is expected in Japanese corporations post 2000s.

The internationalization of Japanese firms has been progressed over the last two decades. In fact, Japan reaches the second largest FDI outflow economy in 2017 (measured as a diversity of host countries). Agency theory predicts that internationalization will lead to demand for better disclosure of MNEs regarding their corporate governance mechanisms and effective monitoring roles (Aguilera et al., 2019). In this sense, internationalized MNEs are expected to realize better disclosure for outside investors who urge the credibility of analyst forecasts.

2.2. Hypotheses Development

Under the mandatory-effective management forecast system in Japan, how analyst forecasts respond to management forecasts is an important research question (Kato et al., 2009). The reliance of analyst forecasts on management forecasts is based on the credibility of management forecasts (Aman et al., 2019b). Management forecasts are not necessarily credible because managers are incentivized to be biased in their forecasts (Rogers and Stocken, 2005). Despite managers' information advantage within the firms, firm performance is difficult to predict when the firm faces severe external economic conditions. On the other hand, analysts have a comparative advantage over managers of

accessing detailed macroeconomic information. In that case, management forecasts are less accurate than analyst forecasts and they would rather use the information from analyst earnings forecasts to inform their forecast revisions (Hutton et al., 2012). Due to the voluntary nature of U.S. management forecast systems, the sample of management forecasts is quite limited compared to Japanese corporations (Aguilera et al., 2017). Thus, the Japanese setting is more suitable to analyze the reliance of analyst forecasts on management forecasts.

Better disclosure is a difficult task for internationalized MNEs because they tend to face more uncertainties and business complexity. However, there might be conflicting views on whether internationalization enhances better disclosure. Under the voluntary disclosure management forecast system, the frequency of management disclosure is higher in U.S. cross listed firms with higher internationalization (Shi et al., 2012). This study implies that internationalization is a driver to realize better disclosure. On the contrary, internationalization might decrease the disclosure quality. Due to the geographical diversification between the home and host countries of MNEs, managers of MNEs often have a hard time managing international businesses (Reeb et al., 1998). In the U.S., international diversification results in less accurate analyst forecasts because firms face more complexity due to geographical diversification (Duru and Reeb, 2002). In addition, higher information complexity such as those of intangible assets would also mitigate the accuracy of analyst forecasts (Gu and Fang, 2005). These previous studies suggest that business complexity can result in lower credibility of analyst forecasts in the U.S.

From the view of managers in Japanese internationalized MNEs, the issuances of credible management forecasts are difficult tasks because internationalized MNEs face

higher degree of business complexity and uncertainties. On the other hand, the analyst forecasts reflect the information on the management forecasts under mandatory effective management forecasts in Japanese corporations (Conroy et al., 2000). Thus, the reliance of analyst forecasts on management forecasts depends on the credibility of management forecasts in Japanese corporations (Aman et al., 2019b). Therefore, the analysts depend less on management forecasts for highly complicated Japanese MNEs. We presume that higher internationalized Japanese MNEs with greater business complexity result in reducing the reliance of analyst forecasts on management forecasts as in following Hypothesis 1.

Hypothesis 1: The reliance of analyst forecasts on management forecasts is lower in firms with higher internationalization.

The demands for the practice of better disclosure would be different among different shareholders. Block shareholders have a strong incentive to monitor managers (Shleifer and Vishny, 1986). Institutional shareholders demand better disclosure because they actively monitor the firms using of accurate information (Sengupta, 2004). Better disclosure tends to be realized in firms with higher institutional shareholders (Karamanou and Vafeas, 2005). The bias of management forecasts is less optimistically biased in firms with a higher level of institutional shareholders (Ajinkya et al., 2005). In this sense, better managerial disclosures are demanded by the active monitoring of institutional shareholders in shareholder-oriented corporate governance.

In the process of internationalization, domestic firms must attract foreign shareholders that possess different national corporate governance logic (Aguilera et al.,

2018). In shareholder-oriented corporate governance dealing with foreign shareholders, better managerial disclosure practices are keenly important for short-term profit (Bushee and Noe, 2000). Under stakeholder-oriented corporate governance, foreign shareholders have shareholder-oriented logic (Desender et al., 2016). Japanese corporate governance is transitioning and foreign shareholdings are increasing (Hoshi and Kashyap, 2010) such that foreign investors have been functioning as active monitors in Japanese corporations (Sakawa and Watanabel, 2020; Sakawa et al., 2021d). In fact, the disclosure pressure of foreign shareholders on managers has been shown to mitigate information asymmetry (Sakawa et al.,2014), progress voluntary IFRS adoption (Sakawa et al., 2021e), and increase the accuracy of management forecasts (Nagata and Nguyen, 2017). These previous studies imply that the credibility of management forecasts is enhanced by greater pressure from foreign shareholders in stakeholder-oriented corporate governance.

In a situation where Japanese MNEs are dealing with foreign shareholders with shareholder-oriented logic, the foreign disclosure pressure can enhance the credibility of management forecasts, which is consistent with the findings of Nagata and Nguyen (2017). The reliance of analyst forecasts on management forecasts is thus based on credible management forecasts (Aman et al., 2019b). Thus, analysts are likely to rely on the credibility of management forecasts and enhance the reliance of analyst forecasts on management forecasts. Therefore, the negative relation between reliance of analyst forecasts on management forecasts and internationalization are positively moderated by foreign shareholdings as in following Hypothesis 2.

Hypothesis 2: Foreign shareholders positively moderate the negative relation between reliance of analyst forecasts on management forecasts and the degree of internationalization.

Japanese corporate governance is a stakeholder-oriented style of corporate governance which is supported by the long-term relationship between a bank and their client firms (Descender et al., 2016). The long-term relationships of bank and their client firms are supported by main bank monitoring (Aoki and Patrick, 1994; Morck et al., 2000). Even after the transition era of the 2000s, main bank monitoring would be effective in enhancing the earnings quality of their client firms (Sakawa and Watanabel, 2021b), lower the information asymmetry degree of their client firms (Sakawa et al., 2014), and mitigate the likelihood of their client firms' accounting frauds (Sakawa and Watanabel, 2021a). These previous studies suggest that bank monitoring enhances the quality of management disclosure in corporations with bank ties. In this case, the credibility of management is enhanced in MNEs with bank ties. Therefore, we predict that the reliance of analyst forecasts on management forecasts based on credible management forecasts is higher in firms with greater bank ownership. Followed as the above predictions, we construct the following Hypothesis 3A.

Hypothesis 3A: The reliance of analyst forecasts on management forecasts is higher in firms with greater bank ownership.

Alternately, we consider the relation between the reliance of analyst forecasts on management forecasts and bank ownership. Managers of firms with large shareholdings of same corporate groups may be under weaker external disclosure pressures because

these large owners share corporate insider information (Fama and Jensen, 1983; Morck et al., 1988). In this case, even if the banks are effectively monitoring their client firms, disclosed information may have already been shared among shareholders within the same corporate groups. In other words, the credibility of management forecasts is not enhanced in firms with bank-ties. Thus, the reliance of analyst forecasts on management forecasts is not higher in firms with greater bank ownership as in following Hypothesis 3B.

Hypothesis 3B: The reliance of analyst forecasts on management forecasts is not higher in firms with greater bank ownership.

3. Data, Methodology, and Descriptive Statistics

3.1. Data

We gained data from Japanese Overseas Investment, a resource that includes reliable Japanese FDI-related data and information on Japanese firms (Arregle et al., 2016; Goerzen and Beamish, 2005). The data on management forecasts and analyst forecasts are gained from the NPM database and Astra Manager. Corporate governance data are gained from Nikkei CGES (Aman et al., 2019b). We drop financial institutions because their accounts are different from non-financial firms (Aguilera et al., 2017). We exclude firms with missing data of management and analyst forecasts and financial variables[2]. Finally, our sample comprises of 9,914 firm-year observations during 2007-2018[3].

[2] Variables are defined in Appendix A1. We show criterion of our sample as in Appendix A2.

[3] Because the fiscal year of majority of Japanese firms is no later than March 31, we choose the firms for each of sample firms with a fiscal year ending no later than the end of March

3.2.Methodology

To test our empirical hypothesis, we adopt regression models using annual data. We test our hypotheses using the following equation.

$$
\begin{aligned}
& f(AFD\ Reliance\ ) \\
& = \beta_0 + \beta_1 International_{i,t-1} \\
& + \beta_2 International_{i,t-1} * Foreign_{\ i,t-1} + \beta_3 Foreign_{\ i,t-1} + \beta_4 Bank_{\ i,t-1} \\
& + \sum_j \beta_j\ Control_{i,t-1} + \theta Industry_i + \omega Year_t + \varepsilon_{i,t} \cdot\ \cdot\ \cdot (1)
\end{aligned}
$$

AFD Reliance is a dependent variable. $Control_{i,t-1}$ means control variables. All the independent variables are measured at the beginning of the fiscal year to reduce endogeneity concerns, followed as Nagata and Nguyen (2017). In addition, we adopt industry dummies and year dummies to control for industry and year effects. $\varepsilon_{i,t}$ is the error term. The subindex *i* and *t* refers to firm and year, respectively.

The reliance of analyst forecasts on management forecasts is measured as the methodology based on Aman et al. (2019b). We compute the level of reliance analysts place upon management's initial forecasts in making their own forecasts, namely, *AFD Reliance*. *AFD Reliance* is defined as the following equation (2);

$$AFD\ Reliance_t = -|AF_t - MF_t| \ldots (2)$$

where: MF_t is the initial management EPS forecast for year *t* and AF_t is the initial analyst consensus mean forecast EPS for year *t*. When the analysts rely entirely on the management forecast, *AFD Reliance* will be equal to zero. On the other hand, the

consensus analyst forecast deviates from the management forecast, *AFD Reliance* will take on a more negative value.

As for independent variables, the proxy of internationalization diversification as the following two variables, using the *Japanese Overseas Investment database* (David et al., 2010; Delios and Beamish, 1999; Lu and Beamish, 2004). *INTERNATIONAL* is measured as the total number of countries where a firm has overseas subsidiaries. *INTERNATIONAL2* is measured as an index of international diversification measured as the number of overseas subsidiaries and countries where a firm has overseas subsidiaries. We also adopt foreign ownership (*FOREIGN*) as foreign shareholdings divided by the total outstanding shares. Bank ownership (*BANK*) is also adopted as the shares of banks divided by the total outstanding shares (Nguyen, 2011).

We control for several firm characteristic variables which affect the reliance of analyst forecasts on management forecasts. Inside director ownership (*INSIDE*) measures inside directors' ownership divided by the total outstanding shares. Firms with greater inside director ownership tend to issue management forecasts (Ajinkya et al., 2005) and revise them (Nagata and Nguyen, 2017). The credibility of management forecasts would be higher which results in enhancing reliance of analyst forecasts on management forecasts. Firm size *(SIZE)* is controlled as the logarithm of total assets. Large firms are covered by a large number of analysts and have pressures on high quality disclosure (Nagata and Nguyen, 2017). We also adopt *LEVERAGE* as the complexity of firms, measured as total debt to equity. The firms with higher leverage face complexity on management (Coles et al., 2008). Thus, the reliance on analyst forecast would be lower in firms with complexity. For corporate performance measures, we adopt the return on total assets (*ROA*).

3.3. Descriptive Statistics

We show the descriptive statistics and Pearson correlation matrix of our sample in Table 1. Panel A reports the descriptive statistics. The average reliance of analyst forecasts on management forecasts (*AFD_REL*) is about -3.24. This implies that the consensus analyst forecasts deviate slightly from management forecasts. The average of *INTERNATIONAL* is 6.58. *INTERNATIONAL 2* is 0.06, which is almost the same as in previous studies (David et al., 2010; Lu and Beamish, 2004). This is consistent with the results of previous studies, which calculate *INTERNATIONAL2* of Japanese MNEs to be within the range of 0.04 to 0.07 (David et al., 2010; Delios and Beamish, 1999; Lu and Beamish, 2004). As for ownership structure variables, we find that the average of *FOREIGN* is about 17%, and that of *BANK* is about 24.5%. This is consistent with the recent increase in foreign shareholder presence in Japanese corporations (Desender et al., 2016; Sakawa and Watanabel, 2020). The average of inside director ownership (*INSIDE)* is about 4.4%, which is consistent with previous studies (Sakawa et al.,2012). *SIZE* and *LEVERAGE* are about 11.7 and 46% on average, which is almost the same as Sakawa et al. (2021d). The average *ROA* is about 7%, which is higher than Kato et al. (2009). In Table 2, we also show the sample correlation between the variables used in the estimation of equation (1).

Insert Table 1 and 2

4. Empirical Results

4.1. Main Results

Table 3 reports the results of regression in equation (1). Using Table 3, we find that *INTERNATIONAL* is significantly negative to *AFD_REL* for models (2) and (3), consistent with Hypothesis 1. This implies that the reliance of analyst forecasts on management forecasts is lower in firms with higher internationalization degree. MNEs that expanded to a large number of countries face the complexity of consolidated financial reporting. Thus, the credibility of analyst forecasts would be lower. As a result, the reliance on the analyst forecasts, which are based on the credible management forecast, would be lower. We also find that the interaction terms of *INTERNATIONAL* and *FOREIGN* are significantly positive for *AFD_REL* for models (3) and (5). This implies that foreign shareholders would positively moderate the negative relation between *INTERNATIONAL* and *AFD_REL*, consistent with Hypothesis 2. We interpret that the active monitoring of foreign shareholders would contribute to enhancing the disclosure quality, consistent with previous studies (Nagata and Nguyen, 2017). Finally, we show that bank ownership (*BANK*) is positive and significant to *AFD_REL* for models (2), (3), (4), and (5). This result supports our Hypothesis 3A. Bank monitoring would be effective in enhancing the client firm's earnings quality in Japanese corporations (Sakawa and Watanabel, 2021a). We can interpret that effective bank monitoring would enhance the reliance of analyst forecasts on management forecasts under stakeholder-oriented corporate governance.

Insert Table 3

As for control variables, *SIZE* is significant and positive to *AFD_REL*. *LEVERAGE* is significantly negative to AFD_REL. *LEVERAGE* is adopted as the proxy of the complexity of management (Coles et al., 2008). This implies that analyst forecast is

difficult to predict MNEs with complexity. Finally, *ROA* is significantly positive to *AFD_REL*.

4.2. Robustness of the results

An important concern is that our results could be biased by the endogeneity of the firm's ownership structure. To address the endogeneity among *AFD_REL* and *BANK*, we adopt the two-stage least square (2SLS) method. The instrumental variable (IV) is *Firm Age*, defined as the number of years after firm was founded. This IV is relevant because firm age can serve as a proxy of stronger bank relationships (Nguyen, 2011). Matured firms are more likely to have a greater amount of their shares held by the bank compared to small and medium enterprises in bank-centered financial systems (Sakawa and Watanabel, 2021b).

Insert Table 4

In Table 4, the first stage regression results where the dependent variable is *BANK* are presented. The explanatory variables include the instrument variable and several control variables in column (1), (2), (3), and (4). The second stage regression results are shown in column (5), (6), (7), and (8)[4]. In Table 4, we firstly show that *INTER* and *INTER2* are

[4] We also confirmed the validity of instrument variable (*Firm AGE*). First, the reported results of F tests are significant at the 1% level in all four columns (1), (2), (3), and (4), suggesting that *Firm Age* can provide a valid explanation for bank ownership (*BANK*). Next, we obtained the values of under-identification (Anderson LM test), weak identification (Cragg-Donald Wald test), and Stock–Yogo statistics using ivreg2 in Stata.

significantly negative to *AFD_REL* in models (5), (6), (7), and (8), consistent with Hypothesis 1. Second, the interaction terms of *INTER* (*INTER2*) and *FOREIGN* are significantly positive to *AFD_REL* in models (2) and (6) ((4) and (8)), consistent with Hypothesis 2. Third, *BANK* is significantly positive to *AFD_REL* in models (5), (6), (7), and (8), consistent with Hypothesis 3A.

To confirm the robustness of results, we also adopted an alternative internationalization proxy, namely the ratio of *foreign sales and total sales (FSALE)* as suggested by Doukas and Lang (2003). Using Table 5, we find that *FSALE* is significantly negative with *AFD_REL*, consistent with Hypothesis 1. We also find that the interaction terms of *FSALE* and *FOREIGN* is also significantly positive with *AFD_REL*, thus supporting our Hypothesis 2. Finally, *BANK* also has a significantly positive relationship with *AFD_REL*, consistent with Hypothesis 3A.

Insert Table 5

5. Discussions and Conclusions

This paper investigates whether reliance of analyst forecasts on management forecasts is affected by the internationalized diversification in Japanese corporations. Due to the financial globalization trends, the demands for transparency and accountability are required in internationalized MNEs (Boone and White, 2015). Japan

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We found that the Cragg-Donald's F-statistics was greater than Stock and Yogo's (2005) critical value (at 10% level) in all four columns (5), (6), (7), and (8), rejecting the null hypothesis that our equation is weakly identified. We can thus interpret firm age as a strong instrument.

has a unique setting of effectively-mandatory management forecast systems (Kato et al., 2009). Thus, the reliance of analyst forecasts on management forecasts is based on the credibility of management forecasts (Aman et al., 2019b).

Our main findings show that reliance of analyst forecasts on management forecasts is lower in firms with higher internationalization degree. We can interpret that the reliability and credibility of analyst forecasts can suffer in highly internationalized firms facing complexities and uncertainties in the process of internationalization. Consistent with evidence from U.S. MNEs (Duru and Reeb, 2002), disclosure quality is lower in MNEs with high geographical diversification. Our second finding shows that greater foreign shareholdings positively moderates the relation between reliance of analyst forecasts on management forecasts and internationalization. We interpret that greater foreign shareholdings would give pressure for managers to enhance the credibility of management forecasts in firms with higher internationalization degree. We interpret that disclosure pressure from greater foreign shareholders with shareholder-oriented logics (Aguilera et al., 2017) are important to enhance disclosure quality in internationalized MNEs. Finally, we find that greater amounts of bank shareholdings also improve the reliance of analyst forecasts on management forecasts. This implies that analysts are likely to rely on management forecasts with bank ties under stakeholder-oriented corporate governance.

Our paper provides several contributions to the existing literature. First, our analysis contributes to the understanding on the evaluation of accounting information in the capital markets in an MNE setting (Ball and Brown, 1968; Aman et al., 2019a). Our main result show that internationalization of MNEs lowers the reliance of analyst forecasts on management forecasts because they face complexity and uncertainty.

Second, our study contributes to international corporate governance research by revealing the role of foreign shareholders in MNEs (Aguilera et al., 2017). Our result reveal that pressures from foreign shareholders enhance the reliance of analyst forecasts on management forecasts in internationalized MNEs. Finally, this study contributes to the literature on bank monitoring in stakeholder-oriented corporate governance (Aoki, 1990; Desender et al., 2016 etc.). We revealed that the reliance of analyst forecasts on management forecasts is higher in firms with bank ties, suggesting the effectiveness of bank monitoring in bank-dominated corporate governance.

We would like to propose some future research avenues as well. First, our study does not reveal whether earnings quality itself is affected by the internationalization of MNEs. The examination of this issue is an important future research topic. Second, the internationalization of MNEs has progressed globally, especially in Asian Pacific countries. Thus, future research can study whether internationalization affects the role of analyst forecasts in other Asian Pacific countries as well.

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Appendix A1. Variable Definition

Variable	Definition
AFD_REL	AFD Reliance is defined as - |AF−MF|. Analyst Forecasts (AF) is defined as the initial analyst (based on consensus mean) forecast EPS for the year (t) deflated by the share price. Management Forecasts (MF) is defined as the initial management forecast of EPS for the year (t) deflated by the share price (* 100). (Aman et al., 2019b)
INTERNATIONAL	Total number of countries in which the firm has overseas subsidiaries (Lu and Beamish, 2004)
INTERNATIONAL 2	The international diversification index (Lu and Beamish, 2004)
FOREIGN	Percentage ownership of foreign investors for the year (t-1)
BANK	Percentage ownership of bank for the year (t-1) (Nguyen, 2011)
INSIDE	Percentage ownership of management and board members for the year (t-1)
SIZE	Log of total assets for the year (t-1)
LEVERAGE	Percentage of Debt-Equity ratio for the year (t-1).
ROA	Percentage of Return on Assets for the year (t-1)

Appendix A2. Sample Selection Procedures

Firm-year observations		27,088
Less:	Financial institutions	-1,919
	Firms missing stock data	-4,016
	Firms missing management forecast data	-180
	Firms missing analyst forecast data	-10,137
	Firms missing financial data	-922
Final observations		9,914

Table 1. Descriptive Statistics

Variable	Number	Mean	Stan. dev.	Q1	Median	Q3
AFD_REL	9,914	-3.24	6.51	-3.65	-1.81	-0.76
INTERNATIONAL	9,914	6.58	8.34	1.00	4.00	9.00
INTERNATIONAL2	9,914	0.06	0.09	0.01	0.03	0.08
FOREIGN	9,914	17.08	12.28	7.18	15.10	24.76
BANK	9,914	24.48	12.63	14.76	23.64	34.13
INSIDE	9,914	4.42	8.83	0.12	0.53	4.03
SIZE	9,914	11.70	1.60	10.62	11.57	12.69
LEVERAGE	9,914	46.45	18.96	31.90	46.13	60.72
ROA	9,914	7.03	6.98	3.49	6.17	9.59

Table 2. Correlation Matrix

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. *AFD_REL*								
2. *INTERNATIONAL*	0.005							
3. *INTERNATIONAL2*	0.005	0.977 *						
4. *FOREIGN*	0.061 *	0.433 *	0.398 *					
5. *BANK*	0.060 *	0.364 *	0.335 *	0.343 *				
6. *INSIDE*	-0.020 *	-0.248 *	-0.225 *	-0.208 *	-0.390 *			
7. *SIZE*	0.051 *	0.559 *	0.548 *	0.564 *	0.528 *	-0.405 *		
8. *LEVERAGE*	-0.120 *	0.118 *	0.142 *	-0.096 *	0.135 *	-0.062 *	0.289 *	
9. *ROA*	0.127 *	-0.080 *	-0.082 *	0.154 *	-0.096 *	0.204 *	-0.177 *	-0.294 *

Note. Number = 9,914. * $p<0.05$

Table 3. OLS Estimated Results

	(1)		(2)		(3)		(4)		(5)	
					AFD_REL					
INTERNATIONAL			-0.021	*	-0.051	**				
			(-2.45)		(-3.38)					
*INTERNATIONAL * FOREIGN*					0.001	*				
					(2.31)					
INTERNATIONAL2							-1.873	**	-4.974	**
							(-2.77)		(-3.44)	
*INTERNATIONAL2 * FOREIGN*									0.107	*
									(2.35)	
FOREIGN			-0.024	**	-0.032	**	-0.025	**	-0.032	**
			(-3.28)		(-3.98)		(-3.35)		(-4.03)	
BANK			0.036	**	0.038	**	0.036	**	0.037	**
			(6.21)		(6.49)		(6.20)		(6.45)	
INSIDE			-0.007		-0.008		-0.007		-0.007	
			(-0.93)		(-1.00)		(-0.92)		(-0.99)	
SIZE	0.481	**	0.510	**	0.517	**	0.511	**	0.519	**
	(9.03)		(6.38)		(6.55)		(6.39)		(6.56)	
LEVERAGE	-0.047	**	-0.052	**	-0.052	**	-0.052	**	-0.052	**
	(-9.88)		(-10.54)		(-10.52)		(-10.52)		(-10.51)	
ROA	0.083	**	0.090	**	0.091	**	0.090	**	0.091	**
	(4.90)		(5.00)		(5.03)		(5.00)		(5.03)	
Intercept	-4.229	**	-5.186	**	-5.140	**	-5.220	**	-5.191	**
	(-4.67)		(-4.74)		(-4.68)		(-4.75)		(-4.71)	
Industry Effects	Yes		Yes		Yes		Yes		Yes	
Year Effects	Yes		Yes		Yes		Yes		Yes	
Number	9914		9914		9914		9914		9914	
Adjusted R2	0.085		0.089		0.090		0.089		0.090	
F Value	32.73	**	28.50	**	27.45	**	28.51	**	27.45	**

Note. Models (1), (2), (3), (4), and (5) are estimated using liner regression. See Appendix A1 for definitions and measurements of the variables. + p<0.10, * p<0.05, ** p<0.01

Table 4. 2SLS Estimation

	1st Stage								IV regression							
	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)	
	BANK								***AFD_REL***							
FIRM AGE	0.229	**	0.231	**	0.229	**	0.231	**								
	(34.38)		(34.85)		(34.48)		(34.91)									
INTERNATIONAL	-0.030	*	0.316	**					-0.023	**	-0.062	**				
	(-2.14)		(8.76)						(-2.65)		(-3.53)					
INTERNATIONAL			-0.012	**							0.001	*				
** FOREIGN*			(-11.66)								(2.52)					
INTERNATIONAL2					-3.736	**	29.330	**					-2.007	**	-5.997	**
					(-3.42)		(7.78)						(-2.92)		(-3.56)	
INTERNATIONAL2							-1.145	**							0.138	*
** FOREIGN*							(-10.25)								(2.55)	
FOREIGN	0.119	**	0.205	**	0.119	**	0.194	**	-0.026	**	-0.036	**	-0.027	**	-0.036	**
	(10.12)		(16.36)		(10.19)		(15.69)		(-3.73)		(-4.42)		(-3.83)		(-4.50)	
BANK									0.070	**	0.068	**	0.070	**	0.069	**
									(3.20)		(3.18)		(3.21)		(3.19)	
INSIDE	-0.124	**	-0.111	**	-0.123	**	-0.112	**	0.000		-0.002		0.000		-0.002	
	(-11.80)		(-10.62)		(-11.73)		(-10.69)		(-0.02)		(-0.19)		(-0.01)		(-0.17)	
SIZE	1.809	**	1.669	**	1.837	**	1.706	**	0.418	**	0.436	**	0.418	**	0.436	**
	(16.71)		(15.22)		(16.92)		(15.48)		(4.21)		(4.57)		(4.19)		(4.54)	
LEVERAGE	0.026	**	0.024	**	0.026	**	0.025	**	-0.054	**	-0.054	**	-0.054	**	-0.054	**
	(4.20)		(3.97)		(4.24)		(4.06)		(-10.07)		(-10.05)		(-10.06)		(-10.04)	
ROA	0.095	**	0.084	**	0.095	**	0.085	**	0.086	**	0.088	**	0.086	**	0.088	**
	(4.81)		(4.35)		(4.81)		(4.39)		(5.25)		(5.29)		(5.24)		(5.29)	
Intercept	4.032	**	3.626	**	3.692	**	3.498	*	-5.116	**	-5.065	**	-5.140	**	-5.113	**
	(2.98)		(2.64)		(2.71)		(2.53)		(-4.69)		(-4.62)		(-4.68)		(-4.65)	
Industry Effects	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
Year Effects	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
Number	9798		9798		9798		9798		9798		9798		9798		9798	
Adjusted R2	0.446		0.456		0.447		0.455		0.088		0.089		0.088		0.089	
F Value	407.1	**	429.8	**	405.4	**	424.9	**								
Under-identification (Anderson LM test)									1034.8	**	1050.3	**	1039	**	1053.7	**
Weak identification (Cragg-Donald Wald test)									1182.3		1214.2		1189.2		1218.5	
10% maximal IV size (Stock and Yogo)									16.38		16.38		16.38		16.38	

Note. Models (5), (6), (7), and (8) are estimated using two-stage least squares for estimation results. 10% maximal IV size shows value of 10% maximal IV size of Stock-Yogo. See Appendix A1 for definitions and measurements of the variables. + p<0.10, * p<0.05, ** p<0.01

Table 5. Robustness Results

	Regression				1st Stage				IV Regression			
	(1)		(2)		(3)		(4)		(5)		(6)	
	AFD_REL				***BANK***				***AFD_REL***			
FIRM AGE					0.228	**	0.229	**				
					(34.02)		(34.00)					
FOREIGN SALES	-1.975	**	-2.488	**	-0.972	*	-0.089		-2.000	**	-2.516	**
	(-6.04)		(-6.24)		(-2.07)		(-0.14)		(-6.02)		(-6.25)	
FOREIGN SALES			0.036	**			-0.062	*			0.036	*
** FOREIGN*			(2.59)				(-2.26)				(2.56)	
FOREIGN	-0.016	*	-0.023	**	0.116	**	0.128	**	-0.019	**	-0.026	**
	(-2.17)		(-3.30)		(9.60)		(10.37)		(-2.60)		(-3.78)	
BANK	0.033	**	0.033	**					0.059	**	0.058	**
	(5.87)		(5.92)						(2.73)		(2.68)	
INSIDE	-0.012		-0.012	+	-0.132	**	-0.131	**	-0.005		-0.006	
	(-1.62)		(-1.67)		(-12.53)		(-12.43)		(-0.55)		(-0.62)	
SIZE	0.470	**	0.468	**	1.747	**	1.747	**	0.415	**	0.416	**
	(6.18)		(6.15)		(16.70)		(16.72)		(4.12)		(4.15)	
LEVERAGE	-0.050	**	-0.050	**	0.023	**	0.023	**	-0.052	**	-0.052	**
	(-10.16)		(-10.11)		(3.72)		(3.66)		(-9.71)		(-9.65)	
ROA	0.086	**	0.086	**	0.096	**	0.095	**	0.089	**	0.090	**
	(5.30)		(5.33)		(4.72)		(4.66)		(5.33)		(5.36)	
Intercept	-4.994	**	-4.916	**	4.954	**	4.831	**	-5.181	**	-5.104	**
	(-4.63)		(-4.55)		(3.77)		(3.66)		(-4.67)		(-4.58)	
Industry Effects	Yes		Yes		Yes		Yes		Yes		Yes	
Year Effects	Yes		Yes		Yes		Yes		Yes		Yes	
Number	9645		9645		9543		9543		9543		9543	
Adjusted R2	0.096		0.096		0.449		0.449		0.095		0.096	
F Value	29.16	**	28.10	**	396.6	**	383.2	**				
Under-identification (Anderson LM test)									1030.4	**	1031.4	**
Weak identification (Cragg-Donald Wald test)									1157.1		1155.7	
10% maximal IV size (Stock and Yogo)									16.38		16.38	

Note. Models (1) and (2) are estimated using liner regression. Models (5) and (6) are estimated using two-stage least squares for estimation results. 10% maximal IV shows means value of 10% maximal IV size of Stock and Yogo. See Appendix A1 for definitions and measurements of the variables. + p<0.10, * p<0.05, ** p<0.01