

Exploring the impact of ownership structure on earnings predictability: Insights from Japan

Abstract

Using a very recent data over the period from 2007 to 2012 (sample period 2001-2012), this study estimates the relationship between ownership structure and earnings predictability in Japanese listed companies. In particular, this study investigates how three important categories of ownership (i.e. domestic institutional, foreign, and insider ownership) associated with earnings predictability in Japanese listed firms. The results show that higher domestic institutional (financial) ownership is associated with greater earnings predictability. The findings support the argument that institutional shareholders especially financial institutions ensure effective monitoring over corporate reporting practices which lead to better earnings quality. In sharp contrast, this study finds that incremental foreign institutional ownership in Japanese listed firms is associated with lower earnings predictability. Such finding is contrary to the oversimplifying assumption that increasing cross-border shareholdings always associated with better earnings quality. This study demonstrates interesting insights regarding the impact of ownership structure on earnings predictability which surely carry significance for Japanese corporate policy makers and future researchers.

Keywords: Earnings Predictability, Foreign Ownership, Insider Ownership, Institutional Ownership, Ownership Structure.

1.0 INTRODUCTION

The main purpose of corporate financial reporting is to provide information to shareholders and other stakeholders for appropriate decisions making. As owners of the business, shareholders always have the top-most priority to demand information with better quality. Earnings information is the core item in the corporate financial statements, and therefore, quality of reported earnings is the issue of great interest to shareholders. However, due to the variations in the incentives and abilities of different types of shareholders to monitor corporate reporting behavior, the degree of earnings quality is expected to vary among the listed firms. For that

reason, exploring the impact of such variations on reported earnings quality has long been an issue of great interest to the empirical researchers. As an attempt to add further insight to this end, this study investigates the impact of corporate ownership structure on earnings predictability in the Japanese context.

According to conceptual framework of accounting, earnings information is considered to be of high quality if it is faithfully represented and relevant for decision making. Earnings information is considered to be faithfully represented if earnings number and description match with what really existed or happened. On the other hand, Earnings information is considered to be relevant if it has the capacity to influence the future decisions of the users. Earnings predictability is one of the core elements of earnings relevance. Predictability refers to the extent to which current earnings help the investors to predict the future earnings and/or future cash flows of a firm. Earnings numbers are viewed as high quality when they enable investors to better estimate a firm's future prospects (Valury and Jenkin, 2006; Dichev et al., 2013). Affleck-Graves et al. (2002) contend that low earnings predictability increases information asymmetry in the market. They find that firms with relatively less predictable earnings have a higher cost of equity capital than comparable firms with more predictable earning streams, *ceteris paribus*. Based on a survey study of more than 400 chief financial officers (CFOs), Graham et al. (2005) find that top managers tend to believe that less predictable earnings command a risk premium in the capital markets. Moreover, a lack of correspondence between current and future earnings can also provide a helpful indication of earnings management practice. Francis et al. (2004) also argue that predictability is an essential attribute of earnings from the perspectives of standard setters and analysts. Therefore, in this study, earnings predictability is used as a proxy of earnings quality. This study is unique in the sense that no other study in Japan investigates how variation

in ownership structure affects predictability of reported earnings. In particular, this study investigates how three important categories of ownership (i.e. domestic institutional, foreign institutional, and insider¹ ownership) associated with earnings predictability in Japanese listed firms.

The results show that higher domestic institutional (financial) ownership is associated with better earnings predictability. This finding supports the argument that institutional shareholders especially financial institutions have the incentives as well as ability to ensure effective monitoring over corporate reporting practices which lead to better earnings predictability. In sharp contrast, this study finds that incremental foreign institutional ownership in Japanese listed firms is associated with poorer earnings predictability. The findings are contrary to the oversimplifying assumption that increasing cross-border shareholdings always associated with better reporting quality. However, such finding is in harmony with 'transient investment hypothesis' and/or 'information asymmetry hypothesis' which state that due to short investment horizon and/or deficiency of information due to physical distance, foreign investors lack necessary incentives and control to ensure the effective monitoring over corporate earnings quality. This study also finds that though the ownership by domestic business corporations (non-financial) is almost as large as ownership by domestic financial institutions, but it has no significant relationship with earnings predictability. In addition, the study fails to find any significant relationship between insider ownership and earnings predictability.

The findings of this study are expected to be helpful for the Japanese corporate regulators/policy makers to understand the roles played by different groups of investor on corporate reporting behavior and guide them to formulate policy regarding corporate ownership structure. For

¹ In this study, insider ownership refers to the shareholdings by directors who are also the top-executives in the company.

investors and creditors, the findings would help them to assess the predictability of reported earnings number based on the ownership structure of the listed firms. This study also expands the research corpus of earnings quality and its' determinants by providing evidence from a country which represents the third largest economy as well as capital market in the world.

This paper is structured as follows: Section 2 presents the available literature and develops the necessary hypothesis for this study. Section 3 provides details of sample and research design, while section 4 reports the main results. Finally, section 5 summarizes and concludes this study.

2.0 LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

From a corporate governance viewpoint, governance and control are the most important determinant of earnings quality (Ebihara et al., 2012). Effective monitoring and control limit both managerial discretion and errors in earnings' reporting (Doyle et al., 2007; Klein, 2002), and ensure that reported earnings to be more informative about firms' current and future corporate performance. As a mechanism of corporate governance and control, corporate ownership structure is anticipated to be an important determinant of earnings quality. Fan and Wong (2002) mention, "just as the share ownership structure delineates a firm's agency problem, it also impacts the firm's reporting" (p. 408). Cohen et al. (2004) identify ownership structure as external governance mechanism which affects financial reporting quality. Wang (2006) argue that ownership structures affect both the demand and supply of quality financial reporting in the listed firms. Ben-Nasr et al. (2009) state that ownership structure could explain cross-firms differences in the quality of accounting information. Corporate ownership in Japan has historically been dominated by the domestic institutional investors. On an average, a fifty percent

share in the Japanese companies is still owned by domestic institutions. Two major groups of domestic institutional investors are financial institutions (i.e. city & regional banks, trust banks, insurance companies and other financial institutions) and other business corporations (i.e. parent and associate companies, business partner companies and others). After the financial crisis in the 1990s and subsequent reforms², the ownership by financial institutions has reduced to great extent. Indeed, the average proportion of market stock held by financial institutional investors has declined from 45.2 percent in 1990 to 23.8 percent in 2012 (TSE, 2012). On the other hand, the average ownership by other domestic business corporations has changed very little from 25.2 percent to 23.3 percent (TSE, 2012). In addition, after the financial crisis in the 1990s, cross-border investors are increasingly occupying the greater percentage of ownership in Japanese listed companies. Indeed, the average proportion of market stock held by foreign investors increased from 4.2 percent in 1990 to 24.3 percent in 2012 (TSE, 2012). At present, the magnitude of ownership by foreign investors in Japanese companies is highest among the listed firms in Asian countries. Majority of the foreign ownership are institutional in nature which mostly includes mutual funds and pension funds (Cheung et al., 1999). On the other hand, while the insider ownership in Japanese companies is very low, but such ownership is expected to have significant role over corporate reporting behaviors due to insider-oriented corporate boards and life-time employment system. The following discussion deals with prior studies that have provided arguments as well as evidence about the roles played by different types of ownership on the corporate earnings quality. Based on the discussion, necessary hypotheses will be formulated in this study.

² In particular, Anti-Monopoly Act 1977 being effective from 1987 (Ferris & Park, 2005), BIS regulations and Banks' Shareholdings Restriction Act 2001 (Miyajima & Kuroki, 2006) and the changing of accounting standard regarding disclosure of accrued gains or loss from share investment being effective from fiscal year 2000 and 2001 (Okabe, 2002).

2.1 Institutional Ownership and Earnings Quality

The conflict of interests between shareholders and managers in the listed firms gives rise to agency costs which become more intense in the presence of diffused individual shareholdings.³ The presence of institutional investors, with their larger ownership can influence such conflicts by the level of their involvement and monitoring (Shleifer & Vishney, 1986). Institutional investors as external governance mechanism could supplement the oversight function of internal governance mechanisms (i.e. board monitoring, audit). Qi et al. (2000) state that ownership by legal persons (institutions or corporate investors) entails even better monitoring than state. Institutional investors have the incentives, expertise, ability and power to discipline managerial and corporate behaviors. Claessen and Fan (2002) suggest that the involvement of institutional investors' equity participation may improve corporate governance practices in Asian firms. They can provide active monitoring that is difficult for smaller, more passive or less-informed investors (Almazan et al., 2005). This is called '*efficient monitoring hypothesis*'. Empirical researchers have explored this hypothesis to examine the relationship between institutional ownership and various corporate aspects.

Following '*efficient monitoring hypothesis*', expectation can logically be formed that institutional investors would equally play significant role for upholding and enhancing corporate reporting behavior, and thus, earnings quality. Institutional owners are also efficient and skilled in monitoring the corporate reporting behavior of managers which discipline the managers to report earnings with better quality. As sophisticated investors, they are more adept at

³ Dispersed or wider individual shareholdings do not provide sufficient incentives for shareholders to monitor corporate aspects due to large monitoring costs and free-riders problem. Warfield et al. (1995) mention that shareholders of corporations with diffuse ownership structures lack the resources, incentives, and access relevant information to monitor managerial activities. In addition, disperse shareholdings allow the managers to do more opportunistic activities at the costs of the shareholders' welfare.

accumulating and evaluating public information than individual investors. They are expected to have the ability to trace any sort of discrepancies between the reported earnings and underlying performance. Balsam et al. (2002) state that institutional investors as sophisticated investors are capable of detecting earnings management more quickly and easily than non-institutional investors. Koh (2003) asserts that institutional investors can act as a complementary corporate governance mechanism in mitigating myopic aggressive earnings management when they have a sufficiently high ownership level. Roychowdhury (2006) also asserts that institutional investors have a greater ability to analyze the long-term implications of current managerial actions which would act as a disincentive for managers to engage in real earnings manipulation. Moreover, due to large monetary value tied to these large shareholdings, institutional investors is expected to be more powerful, and choose to be more informed about firms' profitability than other investors with small shareholding.

Institutional investors also have other incentives for monitoring earnings quality. First, reported earnings with high quality are greatly reflected in the market price/return of shares. Alternatively speaking, lower level of earnings quality is associated with severe market repercussions. Balsam et al. (2002) analyze stock returns over a short window following the release of quarterly financial statements by companies for which there is ex post evidence of earnings management. They report a negative association between unexpected discretionary accruals and cumulative abnormal returns over a 17-day window. Second, reported earnings with high quality are associated with lower information risk, and thus, reduce costs of firm debts. Sengupta (1998) documents that higher level of disclosure quality is associated with lower costs of debt. The issue would be of great interest to institutional shareholders with large investments because higher costs of debts reduce the net financial benefits or wealth of the residual claimants

(i.e. shareholders). Third, unlike individual investors, institutional investors have greater accountability to their own shareholders which compel them to more actively manage for their investments in listed firms. When institutional investors have relatively large number of shares in a company, they cannot easily convert their investments into cash if the company faces any reporting failure, and therefore, they have more incentive to monitor reporting quality. Finally, institutional investors are more concerned about reputation which encourages them to constrain any reporting failure including poor earnings quality. Apart from monitoring and controlling the reporting behaviors of the managers, institutional investors often are able to share their reporting know-how which assists and guides the managers reporting earnings information with highest quality.

However, the alternative possibility is that institutional investors do not play an active role in monitoring quality of reported earnings. Dechow and Schrand (2004) argue that growth of institutional investors with no interest in firm's business is one of the major causes that decline earnings quality. Alves (2012) states that institutional investors may be incapable of exerting their monitoring role over managers because it may affect their business relationships with the firm. This is also called as '*strategic alliance hypothesis*'. Further possibility is that institutional investors as controlling investors may collude with management to take the advantage of insider information and indoor trading (Pound 1988). Sundaramurthy et al. (2005) state that institutional investors might be passive, collusive or myopic. As they have access to inside information of the company, they would be more inclined to mask the true performance of the company and reduce the quality of reported earnings to maximize their own benefit at the costs of minority or non-institutional shareholders. This is often called as '*private benefit of control hypothesis*' (Velury & Jenkin, 2006).

Rajgopal et al. (1999) find that the absolute value of discretionary accruals is negatively related to the level of institutional ownership. This finding is consistent with managers recognizing that institutional owners are better informed than individual investors, which reduces the perceived benefit of managing accruals. Using discretionary accounting accruals as the measure of earnings management, Chung et al. (2002) find that the presence of large institutional shareholdings inhibit managers from increasing or decreasing reported profits towards the managers' desired level or range of profits. Jung and Kwon (2002) investigate the relationship of ownership structure with earnings quality in Korea. Their findings indicate that earnings informativeness increases with the increasing holdings of institutional investors. Mitra and Cready (2005) find that aggregate institutional ownership is negatively related to managerial flexibility on the accrual process. Using data from the Standard & Poor's 500 companies during the period 1994–2002, Wang (2006) find positive relationship between institutional ownership and earnings quality i.e. lower absolute abnormal accruals and less persistence of transitory loss components. Using the US evidence over the period 1992-1999, Velury and Jenkins (2006) provide a comprehensive insight by examining the role of institutional ownership on the quality of reported earnings using the Financial Accounting Standards Board's (FASB) conceptual framework as a basis. They demonstrate significant evidence that higher level of institutional ownership is associated with higher earnings quality. Roychowdhury (2006) find that institutional investors constrain real earnings management in the firms in which they invest.⁴ Based on Chinese data, Dong-lin and Gang (2008) examine the relation between institutional ownership and three attributes of earnings: discretionary accrual, value relevance, and conservatism. They find that firms with institutional ownership have better earnings quality than firms without institutional

⁴ Bushee (1998) finds that R&D reductions to avoid earnings decreases are more severe among firms with lower institutional ownership.

ownership. They suggest that fast development of institutional investors is beneficial for both the corporate governance system and the information environment in capital market. Using Malaysian evidence, Al-Dhamari and Ismail (2013) find that predictability of earnings is high when firms have high shareholdings by institutions. Based on Japanese evidence in the 1990s, Teshima and Shuto (2008) find that institutional ownership in Japanese context inhibits earnings management using discretionary accruals. Tokoro and Nagata (2012) also find that the probability of issuing optimistically biased managerial forecasts is lower for firms with greater percentage of institutional ownership.

On the contrary, based on emerging market (Jordan) evidence, Al-Fayoumi et al. (2010) find that institutional ownership has no significant impact on managerial behavior of earnings management.

From the discussion above, it appears that there is no general agreement regarding the effect of institutional ownership on earnings quality. Therefore, this study devises first hypothesis as following:

H1: There is a significant relationship between institutional ownership and earnings quality (earnings predictability).

According to the share-ownership survey-2012 conducted by Tokyo Stock Exchange (TSE), on average, ownership by domestic institutions comprises about fifty percent of the listed equities of Japanese companies at market value. Domestic institutional shareholders are of two major types: financial institutional shareholders (city and regional banks, trust banks, insurance companies, and other financial institutions) and other business corporate shareholders. On average, each of these two categories of owners holds approximately one quarter of listed shares of Japanese companies (TSE, 2012). Okabe (2004) mentions that historically, financial institutions play a

significant role in the corporate governance system of Japan. According to the share-ownership survey-2012, banks own the lion portions of shares (around eighty percent) in the category of financial institutional ownership. Banking relationships in Japan are very long-term in nature and bank monitoring is often considered as the primary means of monitoring even for both large and small firms in Japan (Yoshikawa & Rasheed, 2010). They usually have dual monitoring roles as investors as well as debt providers over corporate aspects including reporting behaviors. In their study, Yoshikawa and Rasheed (2010) consider banks as pressure resistant institutional investors in Japan. Therefore, ownership by financial institutions which mostly comprises ownership by banks is supposed to have significant role over the quality of reported earnings in the Japanese companies.

In contrast, the ownership category of ‘domestic business corporations’ usually includes parents and business partner firms of the listed companies (Miyajima & Kuroki, 2006; Yoshikawa & Rasheed, 2010). Tokoro and Nagata (2012) posit that ownership by non-financial companies in Japan reflects cross-shareholdings in Japanese context. Even though the term ‘cross-shareholdings’ literary means mutual shareholdings among firms, but in Japanese context such phenomenon is also an indication of long-standing business relationships. Due to the presence of reciprocal ownership as well as potential business relationships, this category of owners may have different incentives or reservation to monitor the earnings quality of investee listed firms. In Japanese context, Chung et al. (2004) mention that Japanese firms are typically cross-held by other business corporations. They find that value relevance of discretionary accruals is lower for cross-held firm.⁵ In order to provide more insights, it is really essential to separately investigate the impact of financial as well as other business corporate ownerships on earnings predictability.

⁵ Using Korean evidence, Bae and Jeong (2007) find that cross-equity or reciprocal ownership negatively affects value-relevance of earnings.

Hence, the first hypothesis is decomposed into following two hypotheses:

H1a: There is a significant relationship between domestic financial institutional ownership and earnings quality (earnings predictability).

H1b: There is a significant relationship between domestic business corporate ownership and earnings quality (earnings predictability).

2.2 Foreign Ownership and Earnings Quality

Although the domestic institutions are still the most important shareholders of Japanese firms, the fraction of foreign ownership in Japanese firms has significantly increased over the last two decades. Indeed, the proportion of stock held by foreign investors increased from 4.2 percent in 1990 to 24.3 percent in 2012 (TSE, 2012). Majority of those foreign investors are institutional in nature (Cheung et al., 1999; Haider et al., 2013; Hiraki et al., 2003), which typically include mutual funds and pension funds. In a study of RIETI (The Research Institute of Economy, Trade and Industry), Naoki (2009) mentions:

“Since the 1990s, cross-shareholding for maintaining stable shares has been dissolved and ownership by institutional investors, especially, ownership by foreign institutional investors continued to rise, and they have taken a lead in exercising their rights as investors to monitor corporate management” (p. 5).

Unlike many Asian countries (e.g. China, Philippine, South Korea, Singapore, Malaysia, Thailand), no binding constraints on foreign equity ownership in Japan (Jiang & Kim, 2004, Liang et al., 2012).⁶ Stulz (1999) shows that the openness of domestic capital markets to foreign

⁶ Except domestic air carriers and broadcasting companies where voting rights to foreign investors restricted to 1/3 and 20 percent, respectively. For details, please follow the link:
<http://www.dir.co.jp/english/souken/research/report/macro/mlothers/12101501mlothers.pdf>

investors is associated with a higher demand for good corporate governance and higher corporate transparency. Ahmadjian (2004) asserts that foreign institutional investment associated with changing corporate governance practices. Thus, exploring the relation between foreign ownership (in particular, foreign institutional ownership) and earnings quality in Japan are important to demonstrate the significance of their monitoring effect on corporate governance. There are two alternative hypotheses that could explain the role of foreign institutional shareholdings on earnings quality. The first one is called '*outsider expertise hypothesis*'. According to this hypothesis, foreign investors have the expertise and tendency to improve the corporate governance and disclosure standards of business firms to international level. Frydman et al. (1999) argue that foreign owners have the financial resources, managerial know-how, and corporate governance expertise that give them an advantage over other owners in monitoring corporate aspects. As foreign institutional shareholders do not usually have any sort of business ties with the firms, it is likely that they have the incentives to independently monitor the corporate reporting behaviors including reporting quality.⁷ Firth et al. (2007) argue that the foreign investors will put pressure on companies to continue to improve the quality of their accounting information. According to An (2009), "external monitoring by foreign investors as large institutional investors can constrain the opportunities for discretionary choices of management in providing financial accounting information, thereby increasing earnings quality" (p. 77). Foreign investors use reported earnings to evaluate the performance of their investments more often and frequently than domestic investors due to geographical distance. So, there is a strong incentive from the side of the foreign investors to seek for higher earnings quality. Using

⁷ Foreign investors in Japan are less tied to system of cross-shareholding as well as reciprocal obligations or favors (Ahmadjian, 2004), which allow their incremental monitoring role over corporate reporting behaviors. Moreover, foreign institutional shareholders have limited or no opportunity of private benefit extraction due to physical, cultural, legal, and institutional differences.

Korean evidence, Bae and Jeong (2007) find that foreign equity ownership positively associated with value-relevance of earnings. An (2009) also finds that foreign ownership in Korean listed firms increases earnings quality (persistence and value relevance). Using a unique dataset of 174 privatized firms from 29 countries between 1980 and 2003, Ben-Nasr et al. (2009) find that foreign ownership is associated with less persistence of negative earnings changes i.e. greater conservatism.

In sharp contrast, it also can be argued that foreign institutional owners usually invest for short-horizon, and they lack adequate incentive to monitor the earnings quality of listed firms. This alternative view is called '*transient investment hypothesis*'. Hsu and Koh (2005) find that firms with greater transient institutional investors are associated with upward accruals management. Liu and Peng (2008) find that firms with higher transient institutional ownership have lower accruals quality. Jiang and Anandarajan (2009) find that when firms' stocks are held predominantly by institutions with short investment horizons, the role of shareholder rights in constraining aggressive and opportunistic management of earnings is significantly diminished or rendered essentially ineffective. Unlike domestic institutional investors, foreign investors in Japan which mainly include mutual funds and pensions funds trade their shares very frequently.⁸ Yoshikawa and Rasheed (2010) mention that foreign investors in Japan may seek financial returns rather than strategic interests. . This tendency of foreign investors may tempt managers to manage earnings myopically which lead to poor earnings quality. Liu and Peng (2008) treat institutional investors with high portfolio turnover as transient and find that such category of institutional ownership is negatively associated with accruals quality

⁸ According to a study conducted by TSE, in the year 2011, the trading of foreign investors comprises 54 percent of total trading value (683 trillion Japanese yen, approximately), whereas the trading value by domestic institutional investors represents only 7 percent. For details, please follow the link: <http://frontier-conference.com/index.php/download/category/6-conference-day-2-sept-5th-2012?download=169:1505-panel-japanese-capital-markets>.

In addition, a corroborative argument is that even though foreign investors are holding significant ownership in the listed firms of Japan but they are not active in exercising their right over the firms' governance aspects due to lack of physical and cultural proximity.⁹ Lack of proximity also reduces monitoring effectiveness. Moreover, foreign investors in Japan may be disadvantaged in gaining access to private or exclusively shared information about a firm's current and future prospects (Cheung et al., 1999; Kang & Kim, 2010).¹⁰ Domestic institutions usually have greater advantages (e.g., sharing the same culture and language) than foreign institutions which is called home court advantage. Ayers et al. (2011) mention that domestic institutions also enjoy lower information acquisition costs because they can more easily arrange face-to-face meetings with local executives and are more readily exposed to local media, which tends to provide greater coverage of local firms. Unfamiliarity of foreign investors with domestic environment and consequent monitoring failure could provide managers both incentives and discretions to report earnings far different from underlying economic performance. This tendency can be simply termed as '*information asymmetry hypothesis*'. Based on evidence from 37 non-U.S. countries from 2000 to 2009, Kim et al. (2013) find that domestic institutional investors are more effective than foreign institutional investors at constraining earnings management. Using Japanese evidence over the period from 1999 to 2004, Mitani (2010) finds that higher level of foreign institutional ownership in Japanese firms is associated with higher earnings management.

⁹ In an interview conducted by Global Custodian in 2004, Yoshiaki Tamura (Senior Vice President, Information Products TSE) who was then officially responsible for the proxy voting platform mentions, "as per some estimates, the foreign investors' votes count approximately 25 percent of the stocks held by them. On the other hand, almost 100 percent of shares held by Japanese banks and 95 percent held by investment trusts and insurance companies already are being voted" (p. 1). For details please visit the following link: <http://www.tse.or.jp/english/listing/meeting/b7gjc60000003wvq-att/gc.pdf>

¹⁰ Jiang and Kim (2004) also mention that, due to Japanese institutional environment, foreign investors are disadvantaged in gaining access to private information about a firm's future prospects and/or business strategies.

From the discussion above, it appears that there is no general agreement regarding the effect of foreign ownership on earnings quality. Therefore, the hypothesis is devised as following:

H2: There is a significant relationship between foreign ownership and earnings quality (earnings predictability).

2.3 Insider Ownership and Earnings Quality

In Japanese context, insider ownership simply means the ownership right of the corporate directors or managers in the listed firms.¹¹ There are two alternative explanations available in the existing literature that could explain the role of insider ownership on earnings quality. The first one is called '*interest alignment hypothesis*'. According to this hypothesis, more managerial stake in the ownership of firms aligns the interest of the managers and that of shareholders. Managers with marginal or no equity stake have the tendency to manage earnings for masking the true economic performance to increase their performance related compensation, to seek protection against dismissal when underperforming, and to fulfill other personal motives (e.g., Healy, 1985; Healy & Wahlen, 1999; Shuto, 2007; Yang et al., 2008). However, as capital bonding increases, the incentive of managers to act in the interest of shareholders also increases. This incentive-alignment leads managers to adopt accounting policies, disclosure standards and estimation techniques that reflect the underlying economic performance of the firm. Moreover, due to ownership stake, managerial interests also become tagged with the value of the share, and managers become increasingly interested to report better quality earnings that have long term implications on market price. Warfield et al. (1995) argue that because of greater personal investment and relatively less influence from capital markets, highly invested managers are more

¹¹ In Japanese unique style of governance, corporate boards are occupied by the internally promoted directors who are also the managers of the firms. Therefore, following prior studies (Shuto, 2007; Shuto & Takada, 2010; Teshima & Shuto, 2008), the terms 'managers' and 'directors' have been used interchangeably throughout this study.

likely to make accounting choices that reflect firm economics rather than personal motives. Using data from the US firms, they find that managerial ownership is positively associated with earnings informativeness and negatively associated with magnitude of discretionary accruals.

A competing view is the '*managerial entrenchment hypothesis*', which is based on the argument that greater managerial ownership increases the discretionary power of the manager which is ultimately used to expropriate wealth from other shareholders. It is often called moral hazard phenomenon. Greater ownership in firms allows managers feel less pressured from capital market and allow them to reduce the transparency of earnings information without being disciplined by outside shareholders (Sanchez-Ballesta & Garcia-Meca, 2007). When managers own relatively large shares in the company, their control over the operation as well as governance of the firms substantially increases, which induces them to impair the faithful determination of earnings number. Moreover, managerial ownership limits accounting information flows to outside investors, and creates information asymmetry (Pergola et al., 2009). Information asymmetry allows managers to lower the transparency and informativeness of earnings in order to maximize their own interests or not to signal their private information. Fan and Wong (2002) examine the ownership structure of 977 companies in seven East Asian countries (Hong Kong, Indonesia, Malaysia, Singapore, South Korea, Taiwan and Thailand). They find that managers who had controlling interests report accounting information for self-interested purposes causing reported earnings to lose credibility to outside investors. Using data from Denmark, Gabrielsen et al. (2002) find that as managerial ownership increases, the informativeness of earnings declines. Cheng and Warfield (2005) focus on the relation between managerial equity incentives and signed abnormal accruals, and find that managers with high

equity incentive are more likely to involve with earnings management. Cohen et al. (2008) also find that discretionary accruals are positively related to managerial equity incentives in the pre- and post Sarbanes-Oxley Act 2002 periods for US firms. Interestingly, Francis et al. (1999) and Rajgopal et al. (1999) find no evidence that managerial share ownership has a significant impact on income-increasing or decreasing accruals of US firms. In Japanese firms, the ownership by managers is not very large.¹² However, as corporate boards of Japanese firms are mainly dominated by the insiders and there is a provision of life-time employment, this small fraction of ownership could play significant role over corporate governance and reporting practices either favorably or unfavorably. Therefore, it is reasonable to expect that ownership by corporate insiders would have significant impact on earnings quality of Japanese firms. Darrough et al. (1998) investigate the relationship between managerial ownership and discretionary accruals in Japanese context, and find a significant positive relationship in 1989 but no significant relationship in subsequent three years.

Based on the discussion in this part, this study formulates the following hypothesis in non-directional way:

H3: There is a significant relationship between insider ownership and earnings quality (earnings predictability).

3.0 SAMPLE AND RESEARCH DESIGN

3.1 Sample Description

The sample of Japanese firms is selected from the period 2001 to 2012 (estimation period from 2007 to 2012) based on the following criteria:

¹² Jiang and Kim (2004) mention that management ownership (i.e. inside holding) is not significant in Japan and stock options plans are very rare.

- (i) Firms are listed on Japanese stock markets
- (ii) Financial companies including banks, securities, and insurance firms are excluded.
- (iii) The accounting period of the firms is unchanged during the period 2001 to 2012.
- (iv) The necessary data for the study are available in Nikkei-NEEDS database.
- (v) Industry sectors having less than 10 firms are also excluded.
- (vi) No data required for this study is missing during the sample period.

The selection process yields 7,248 firm-year observations as estimation sample size and 14,496 firm-year observations as total sample size for 1,208 non-financial firms publicly traded in Japanese stock exchanges. Table 1 details the breakdown of observations across different industry-sectors.

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3.2 Empirical Model Specification

In order to empirically examine the relationship between foreign ownership and earnings predictability (EP), the following regression model is formulated:

$$\begin{aligned}
 EP_{j,t} = & \alpha_0 + \beta_1 \text{Fin_Share}_{j,t} + \beta_2 \text{Corp_Share}_{j,t} + \beta_3 \text{For_Share}_{j,t} + \\
 & \beta_4 \text{Insider_Share}_{j,t} + \theta_1 \text{Size}_{j,t} + \theta_2 \text{Lev}_{j,t} + \theta_3 \text{Profitability}_{j,t} + \theta_4 \text{Growth}_{j,t} + \\
 & \theta_5 \text{Loss_Dummy}_{j,t} + \sum_{k=1}^{24} \delta_k \text{Industry} + \sum_{y=1}^5 \varphi_y \text{Year} + \varepsilon_{j,t} \text{-----(1)}
 \end{aligned}$$

The subscript j denotes each firm and subscript t denotes each year. The next section provides necessary description of the variables incorporated in the above regression model.

3.3 Variables Measurement and Description

3.3.1 Earnings Predictability (EP)

Earnings predictability is one of the core elements of earnings' relevance as suggested by the FASB and IASB joint conceptual framework. Lipe (1990) define predictability specifically as "the ability of past earnings to predict future earnings". If earnings predictability is high, then current earnings information is more informative for predicting future earnings. Chaney et al. (2011) argue that users of accounting information are generally interested in assessing current performance as well as estimating future performance. Therefore, earnings that produce better predictions of future performance are treated as being higher quality.

Ashbaugh and Pincus (2001) find that earnings predictability is an essential component of firm valuation. Affleck-Graves et al. (2002) contend that low earnings predictability increases information asymmetry in the market. They find that firms with relatively less predictable earnings have a higher cost of equity capital than comparable firms with more predictable earning streams, *ceteris paribus*. Francis et al. (2004) also argue that predictability is an essential attribute of earnings from the perspectives of standard setters and analysts. Based on a survey study of more than 400 chief financial officers (CFOs), Graham et al. (2005) find that top managers tend to believe that less predictable earnings command a risk premium in the capital markets. Crabtree and Maher (2005) examine the extent to which earnings predictability plays a role in establishing a firm's cost of debt capital, and find that predictable earnings have positive and direct debt market benefits that manifest firm in the form of higher bond ratings and a lower cost of debt capital. Prior literature also demonstrates that earnings predictability can affect the market response to an earnings release and analyst forecasts accuracy (Imhoff & Lobo, 1992; Pincus ,1983). Earnings that produce better predictions of future earnings would be preferred by

the investors. Therefore, in this study, the predictability of earnings is considered as the proxy of earnings quality.

Lipe (1990) argues that volatility reduces predictability of earnings. Dichev and Tang (2009) mention that earnings volatility is a parsimonious statistic which summarizes a considerable amount of information about earnings predictability. Following Lipe (1990), the predictability of earnings is measured by regressing current earnings on lagged earnings:

$$X_{j,t} = \varphi_{0,j} + \varphi_{1,j}X_{j,t-1} + \vartheta_{j,t}$$

$$EP = \sqrt{[\sigma^2(\widehat{\vartheta}_{j,t})]}$$

Where,

X = earnings before extra-ordinary items scaled by total assets at the beginning of the year *t*.

The above equation is estimated for each firm-year over rolling seven-year windows from *t*-6 to *t*. The estimated residuals ($\widehat{\vartheta}_{j,t}$) reflect earnings shocks of firm *j* in the period *t*. Variance of earnings shocks $\sigma^2(\widehat{\vartheta}_{j,t})$ indicates the magnitude of future earnings unrelated to past earnings i.e., if $\sigma^2(\widehat{\vartheta}_{j,t})=0$, then past earnings predict future earnings perfectly. The ability of past earnings to predict future earnings decreases (increases) as $\sigma^2(\widehat{\vartheta}_{j,t})$ increases (decreases). Like Francis et al. (2004), this study considers the square root of variance i.e., $\sqrt{\sigma^2(\widehat{\vartheta}_{j,t})}$ as a proxy of earnings predictability. This study denotes this measure of earnings predictability as 'EP'. Large (small) values of this measure imply less (more) predictable earnings, and thus, less (more) earnings quality.

3.3.2 Ownership Structure Variables

Considering the ownership structure of Japanese companies, this study focuses on four categories of ownership in Japanese listed firms. They are domestic financial institutional ownership, domestic corporate ownership, foreign ownership and insider ownership. Ownership by domestic financial institutions denoted as '*Fin_Share*' (fraction of total shares owned by domestic banks, insurance and other financial companies), ownership by domestic companies denoted as '*Corp_Share*' (fraction of total shares owned by domestic non-financial companies), and ownership by foreign institutional investors denoted as '*For_Share*' (fraction of total shares owned by foreign institutions). In addition, ownership by directors is denoted as '*Insider_share*' (fraction of total shares owned by directors).

3.3.3 Other Control Variables

This study also controls for several other factors that have been found as significant determinants of earnings quality in previous studies (Ben-Nasr et al., 2009; Jung & Kwon, 2002; Katz, 2009; Koh, 2003; Wang, 2006). These are firm's size, leverage, growth, profitability and incidence of negative earnings or loss. '*Size*' is defined as the natural logarithms of total assets, '*Lev*' is defined as total debt divided by total assets at beginning of the year t, '*Growth*' is defined as growth in sales for firm i at year t, '*Profitability*' is defined as income before extra-ordinary items divided by total assets at beginning of the year t, and '*Loss_dummy*' is defined as a dummy variable that contains value '1' if net income before extra-ordinary items is negative or '0' otherwise.

In addition, this study includes industry dummies and year dummies in regression model to control for the industry-specific and time-specific macro-economic conditions that might have some influence on quality of reported earnings.¹³

4.0 RESULTS AND INTERPRETATIONS

4.1 Descriptive Statistics

Table 2 reports the descriptive statistics of the variables considered in this study. Predictability measure (*EP*) has a mean value of 0.024; as a benchmark, Boonlert-U-Thai et al. (2006) report mean value of 0.032 for their sample of 16,461 firm-year observations of Japanese listed firms over 1994-2003.

Regarding ownership structure variables, on average, ownership by domestic financial institutions (*Fin_Share*) is about 25.5 percent and ownership by domestic business corporations (*Corp_Share*) is about 27 percent, indicating the strong control of domestic institutional shareholders on Japanese companies. Ownership by foreign institutional shareholders (*For_Share*) is around 11 percent, on average, which indicates relatively large stake by foreign institutions in Japanese firms. The average of directors' ownership (*Insider_Share*) is about 3.3 percent of total shares of Japanese listed firms, which is less than the value (5.0 percent) suggested by Tehshima and Shuto (2008) based on the evidence of 1990s. Regarding firm characteristic variables, firm size (*Size*) is measured as the natural logarithm of firm's total assets, and the mean value is 11.32. The average of leverage (*Lev*) ratio is about 52 percent of

¹³ Following prior studies, this study prefers to use industry fixed effects rather than firm fixed effects. Zhou (2001) notes that a potential problem of inferences based on the firm fixed effects approach is that, when ownership levels change very slowly across time, it may mask a significant ownership effect. Pant and Pattanayak (2007) argue that using firm level fixed effects is problematic as it removes all cross-sectional variation which is important for governance study.

total assets at the beginning of fiscal year , which is less to the value (59 percent) reported by Shuto and Takada (2010) for their sample of 27,485 firm-year observations for the period 1991-2005 . Nonetheless, this implies that the Japanese firms are yet largely dependent on debt financing. The average of growth ratio (*'Growth'*), measure by sales growth, is around 1.1 percent. The average of profitability (*'Profitability'*) is about 4.8 percent. In comparison, using 16,368 firm-year observations for the period 1991-2000, Shuto (2007) finds that the mean value of profitability of Japanese firms is about 1.9 percent. This indicates that Japanese firms are making better profit than what they have earned during the financial crisis in the 1990s. Further, the mean value of the variable *Loss_Dummy* which indicates incidence of reporting negative earnings or loss shows that approximately 9.3 percent of firm-year observations show negative profitability during the sample period of this study.

[INSERT TABLE 2 ABOUT HERE]

4.2 Correlation matrix and Multi-collinearity Check

Table 3 reports the correlation matrix of the variables considered in this study. The correlation matrix shows negative significant relationship between financial institutional ownership (*'Fin_Share'*) and earnings predictability measure which indicate that higher level of financial institutional ownership is associated with higher level of earnings predictability in Japanese firms. Ownership by domestic business corporations (*'Corp_Share'*) is also negatively correlated with earnings predictability measure (*'EP'*). In sharp contrast, ownership by foreign institutions (*'For_Share'*) is significantly and positively correlated with earnings predictability measure which indicates that higher level of foreign institutional ownership is associated with lower level

of earnings quality in Japanese firms. In addition, correlation between ownership by directors (*'Insider_Share'*) and earnings predictability is positively significant.

With respect to remaining variables, earnings predictability measure is negatively correlated with firm size. The results indicate that, in general, larger firms report earnings which have better predictability than the earnings with smaller firms. In addition, earnings predictability measure is also negatively correlated with firm leverage (*'Lev'*). The results support the monitoring role of debt financing by the debt providers that ensure greater earnings predictability. The results also show positive correlations of earnings predictability with profitability (*'Profitability'*), sales growth (*'Growth'*) and incidence of negative earnings (denoted by *'Loss_Dummy'*) which indicate that more profitable, growing and/or firms with negative earnings disclose earnings number which has less predictability. None of the correlation coefficients is large enough to consider the multicollinearity problem in this study.

As an alternative way to confirm multicollinearity issue, this study also checks VIF values of the variables considered in this study. The highest VIF value is 2.36 (tolerance value is 0.424) for the variable *'Size'*. According to Hair et al. (1998), VIF values less than 10 (tolerance value greater than 0.10) do not indicate any serious multicollinearity problem.

The above relationships, however, are seen on a univariate basis, and thus they do not control for possible confounding factors. In order to investigate relations in a more robust manner by controlling for alternative explanations, in next section, this study reports results of multivariate regression specifications.

[INSERT TABLE 3 ABOUT HERE]

4.3 Regression Analysis and Findings

According to the earnings predictability proxy used in this study, higher (lower) the value of predictability measure indicates lower (higher) earnings predictability. As a result, negative (positive) coefficients of independent variables indicate favorable (unfavorable) impact on earnings predictability, and thus earnings quality. The results of regression analysis are reported in table 4.

The study finds that the coefficient of '*Fin_Share*' is negative and significant at the 1% level (-0.014 , $t=-2.91$). It means greater (smaller) the ownership by financial institutions, lower (higher) the value of earnings predictability measure. The result suggests that reported earnings of firms with higher (lower) level of stock ownership by domestic financial institutions demonstrate better (poorer) earnings predictability, and thus better (poorer) earnings quality. The finding is consistent with 'efficient monitoring hypothesis' which claim that financial institutions as investors have the necessary skill, ability and incentives to monitor the reporting behaviors of listed firms. However, the study estimates negative but insignificant coefficient (-0.005 , $t=-1.60$) for '*Corp_Share*'. Thus, it fails to conclude any significant role of ownership by domestic business corporations on earnings predictability. On the other hand, the coefficient of '*For_Share*' is positive and significant at the 1 percent level (0.028 , $t=4.70$). This indicates that firms with higher (lower) level of stock ownership by foreign institutions have lower (higher) earnings predictability, and thus lower (higher) earnings quality. The finding is consistent with 'transient investment hypothesis' and/or 'information asymmetry hypothesis'. This study also fails to find significant coefficient (0.013 , $t=1.38$) of '*Insider_Share*',

As for the control variables, table 4 reports several significant relations. There is a positive and significant coefficient for firm profitability, indicating that earnings predictability is less in highly profitable firms. In addition, there is a positive and significant coefficient for ‘*Loss_Dummy*’, suggesting that firms with negative income have lower earnings predictability. Furthermore, this study reports a negative and significant coefficient for ‘*Size*’, which is consistent with argument that larger firms report earnings that have better predictability of future earnings than smaller firms. However, this study does not find any significant coefficients for firms’ leverage (‘*Lev*’) and growth potentials (‘*Growth*’).

[INSERT TABLE 4 ABOUT HERE]

5.0 SUMMARY AND CONCLUSION

This study empirically examines the relationship between ownership structure and earnings predictability in Japanese listed companies. In particular, this study investigates how three important categories of ownership (i.e. domestic institutional, foreign, and insider ownership) associated with earnings predictability in Japanese listed firms. The results show that higher domestic institutional (financial) ownership is associated with greater earnings predictability. The findings support the argument that institutional shareholders especially financial institutions ensure effective monitoring over corporate reporting practices which lead to better earnings quality. In sharp contrast, this study finds that incremental foreign institutional ownership in Japanese listed firms is associated with lower earnings predictability. Such finding is contrary to the oversimplifying assumption that increasing cross-border shareholdings always associated

with better earnings quality. However, this study fails to find any significant impact of domestic corporate ownership and insider ownership on earnings predictability.

The findings of this study are expected to be helpful for the Japanese regulators/policy makers to understand the roles played by different groups of investor on corporate reporting behavior and guide them to formulate or revise policies regarding corporate ownership structure. After the financial crisis in the 1990s, Japanese government adopted various regulatory measures, including Banks' Shareholdings Restriction Act 2001, which forced the financial institutions to reduce their shareholdings in the listed firms. Indeed, the average proportion of market stock held by financial institutional investors has declined from 45.2 percent in 1990 to 23.8 percent in 2012 (TSE, 2012). At the same time, foreign ownership in the domestic listed firms was encouraged which led the average proportion of market stock held by foreign investors to increase from 4.2 percent in 1990 to 24.3 percent in 2012 (TSE, 2012). Thus, the evidence derived from this study is expected to assist Japanese regulators to evaluate and reconsider their adopted policies regarding the ownership structure in the listed companies.

For investors and creditors, the findings would help them to assess the predictability of reported earnings number based on the ownership structure of the listed firms. Wang (2006) mentions that understanding about how an earnings quality varies with ownership structure provides potential benefits to investors.

This study also has a research implication as no other study explore the relationship between earnings predictability and ownership structure in the Japanese context.

The limitation of this study is that though attempt has been to control for other factors that affect the earnings predictability of a firm, there could be omitted correlated variables that may affect

the association between ownership structure and earnings predictability. Moreover, the endogeneity issue associated with corporate ownership structure is not addressed in this study. Dealing with these limitations could be an avenue for future research. In addition, decomposing earnings into components (i.e., cash flows from operation and total accruals) and investigating the predictability issue would also be an interesting issue for future research. Further research should also try to address other constructs of earnings quality to revisiting the similar phenomena such as earnings persistence and value relevance of earnings.

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Table 1: Industry-wise sample classifications over the sample period 2007-2012

Industry name	Observations	Percent	Cum.
Chemicals	732	10.10	10.10
Construction	528	7.28	17.38
Electric Appliances	744	10.26	27.65
Electric Power & Gas	102	1.41	29.06
Foods	330	4.55	33.61
Glass & Ceramics Products	156	2.15	35.76
Information & Communication	282	3.89	39.65
Iron & Steel	204	2.81	42.47
Land Transportation	270	3.73	46.19
Machinery	702	9.69	55.88
Marine Transportation	72	0.99	56.87
Metal Products	216	2.98	59.85
Nonferrous Metals	126	1.74	61.59
Other Products	198	2.73	64.32
Pharmaceutical	138	1.90	66.23
Precision Instruments	132	1.82	68.05
Pulp & Paper	66	0.91	68.96
Real Estate	114	1.57	70.53
Retail Trade	270	3.73	74.25
Rubber Products	66	0.91	75.17
Services	294	4.06	79.22
Textile & Apparels	210	2.90	82.12
Transport Equipment	426	5.88	88.00
Warehousing and Harbor transportation	162	2.24	90.23
Wholesale Trade	708	9.77	100.00
Total	7,248	100.00	

Source: Author's research.

Table 2: Descriptive statistics

Variable	Observation	Mean	Std. Dev.
EP	7248	0.024	0.019
Fin_Share	7248	0.255	0.126
Corp_Share	7248	0.270	0.174
For_Share	7248	0.109	0.108
Insider_Share	7248	0.033	0.067
Size	7248	11.322	1.394
Leverage	7248	0.522	0.195
Profitability	7248	0.048	0.050
Growth	7248	0.011	0.161
Loss_Dummy	7248	0.093	0.290

Source: Author's research.

Note: (1) Variable descriptions

EP= earnings predictability measure following Lipe (1990) using seven years rolling window,

Fin_Share= fraction of total shares owned by domestic financial institutions,

Corp_Share= fraction of total shares owned by domestic business corporations,

For_Share= fraction of total shares owned by foreign institutional investors,

Insider_Share= fraction of total shares owned by directors,

Size = natural logarithm of total assets,

Profitability = income before extra-ordinary items divided by total assets at the beginning of the year,

Lev= total liabilities divided by total assets at the beginning of the year,

Growth= sales growth rate,

Loss_Dummy = 1 if net income before extra-ordinary items is negative, 0 otherwise.

Table 3: Correlation matrix

Variable	EP	Fin Share	Corp Share	For Share	Insider Share	Size	Leverage	Profitability	Growth	Loss Dummy
EP	1									
Fin_Share	-0.1032**	1								
Corp_Share	-0.0400**	-0.5460**	1							
For_Share	0.1032**	0.3838**	-0.3801**	1						
Insider_Share	0.0882**	-0.2938**	-0.1738**	-0.1080**	1					
Size	-0.1451**	0.5388**	-0.2300**	0.5991**	-0.2712**	1				
Leverage	-0.1770**	0.0330**	0.0502**	-0.2462**	-0.0963**	0.1458**	1			
Profitability	0.1048**	0.0640**	-0.0395**	0.3276**	-0.0963**	0.0712**	-0.3159**	1		
Growth	0.0206	0.0136	0.0115	0.0686**	0.0319**	0.0429**	0.007	0.3692**	1	
Loss_Dummy	0.2046**	-0.0938**	-0.022	-0.1094**	-0.0112	-0.1215**	0.0938**	-0.4934**	-0.2700**	1

Source: Author's research.

Note: (1) ** and * indicate statistically significant at 1% and 5%, respectively.

Table 4: Regression results of earnings quality (EP) on ownership structure (2007-2012)

Variable	Model	
	coef.	t-stat
Dependent variable: EP		
Fin_Share	-0.014***	-2.91
Corp_Share	-0.005	-1.60
For_Share	0.028***	4.70
Insider_Share	0.013	1.38
Size	-0.003***	-5.10
Lev	-0.004	-1.40
Profitability	0.061***	4.50
Growth	0.003	1.51
Loss_Dummy	0.015***	11.58
Constant	0.044***	8.33
Industry dummy	Included	
Year dummy	Included	
N	7248	
adj. R-sq	0.317	
F-statistics	29.00	

Source: Author's research.

*Note: (1) t-statistics are based on heteroskedasticity and auto-correlation corrected standard errors; (2) ***, **, and * indicate statistically significant at 1%, 5%, and 10%, respectively.*