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Japanese Corporate Ownership Structure in the 21st Century: Does the Increased Equity Ownership by Foreign Institutional Investors Promote Corporate Governance Improvements?

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Abstract

This dissertation explores the effects of the shift from a previously insider-based to a more shareholder-oriented ownership structure on corporate governance by focusing on the role of increased equity ownership by foreign institutional investors in Japanese firms. In an attempt to uncover the governance role played by foreign institutional investors after the surge in their equity ownership in the 21st century, as a first step, this research examines whether foreign institutional investors influence firms to adopt better corporate governance practices. By investigating their impact on firm's strategic policies related to cash management and investment, I further assess whether foreign institutional investors are effective in putting disciplining pressure on firms' management to adopt shareholder-oriented practices. In this dissertation, my approach differs from previous research in that I pursue the investigation of foreign ownership as one of the driver of governance improvements by using both ownership level and the investment horizon of foreign institutional investors.

Findings from a direct examination suggest that foreign institutional ownership is positively associated with the quality of corporate governance in Japan, where shareholder rights are "legally" well protected, but in fact, the corporate governance has been "shareholder-unfriendly" due to the presence of "management-friendly" cross-shareholders. This highlights that foreign institutional investors not only have preferences to invest in firms with strong governance, but they also affect the quality of corporate governance. In contrast, equity ownership of large domestic investors such as banks and insurance companies, who have potential business relationships with the invested firms, negatively impact corporate governance. Interestingly, the negative effect of relationship-oriented shareholders is more likely to be mitigated when foreign institutional investors hold large stakes in the firms.

Furthermore, this study attempts to revisit the agency explanation of cash holdings and explores if outsider-investors' dominance leads to a reduction in the level of liquid assets that can be easily appropriated by the self-interested managers. Consistent with the predictions of this study, it was found that foreign institutional investors cause a decline in cash balances only in the presence of a higher propensity of wasteful managerial behavior. In addition, coupled with enhancing the marginal

value of liquid assets, the results show that firms with a larger presence of foreign institutional investors deploy their excess cash reserves in ways that significantly improve operating performance.

Lastly, based on the notion that improved corporate governance leads to efficient investment decisions, this dissertation investigates the association between ownership structure and investment efficiency concentrating on the relationship-sensitivity of different investors' type. The findings reveal that shareholders who are more focused on close business relations with the invested firms are negatively associated with investment efficiency. However, when I disaggregate the equity ownership by business corporations and relation-oriented financial institutions, the evidence holds only for corporate type stable shareholders. In contrast, the ownership type that is independent of commercial ties, such as arms-length foreign institutional investors, positively affects investment efficiency. This finding posits that foreign institutional investors significantly increases the investment efficiency of Japanese firms by curbing the managerial incentives to engage in value destroying projects through increased and efficient monitoring.

This dissertation finds that large relationship-oriented domestic shareholders with longer investment horizon negatively affect corporate governance quality while no significant evidence was found for stable foreign institutional block-holders, depicting that in terms of investors who are independent of close business relations with the invested firms, the proportion of ownership is a significant determinant of governance improvements. Overall, results suggest that foreign equity ownership promotes better corporate governance practices in Japanese firms by effectively playing a disciplinary role.

Keywords: Corporate governance; Foreign institutional ownership; Stable ownership; Investment horizon; Cash holdings; Performance; Investment efficiency

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Chapter 1

Introduction

1.1. Background

The postwar Japanese corporate governance, often referred to as the insider-dominated or relationship-based governance model, was conventionally characterized by its distinctive characteristics such as main bank system and the existence of cross-shareholding or inter-corporate shareholding. In contrast to the Anglo-American governance system where managerial discipline is enforced by an outsider, known as the capital market, most firms in Japan were organized into corporate networks in which members were responsible for scrutinizing the management through an internal capital market (Gilson and Roe, 1993). This corporate network, called *keiretsu*, where firms collectively held large equity positions in each other through extensive cross-shareholdings, typically had a main bank at the center (Flath, 1993; Berglof and Perotti, 1993). Main banks and cross-shareholdings are well argued in the previous literature to have performed a major governance role (Prowse, 1992; Aoki et al. 1994; Kaplan and Minton, 1994; Kang and Shivdasani, 1995; Hoshi et al. 1990)[1].

Such distinguishing features played a significant role in providing the uniqueness for the ownership structure of Japanese firms since they encouraged patterns of stable shareholdings by corporate insiders (Miyajima and Kuroki, 2007). These insiders[2], usually comprised of keiretsu member firms, primarily held equity stakes with an incentive to strengthen and grow transactional relationships with the invested firms rather than earning financial returns on their investments (Charkham, 1994; Morck and Nakamura, 1999; Miyajima et al. 2015). For example, main banks not only provided a major portion of capital in the form of bank financing but also held substantial blocks of shares in the client firms (Sheard, 1989; Aoki, 1990) in order to ensure credit collections (Morck and Nakamura, 1999; Miyajima and Hoda, 2015). In addition to banks, insurance companies and

[1] Please see Hoshi et al. (1990), Weinstein and Yafeh (1998), Morck and Nakamura (1999), Morck et al. (2000), Hiraki et al. (2003), Okabe (2009) for more detail on the merits and de-merits of the traditional bank-centered corporate governance.

[2] Insider ownership generally refers to equity ownership by firm's management. However, in line with Franks et al. 2014 and Miyajima et al. 2015, in this dissertation, the definition of insiders include shareholders who mainly pursue private benefits such as long-term business relationships through their ownership.

non-financial corporations owned large blocks of stocks mainly to cement long-term business relationships with the invested firms. Insurance companies held ownership stakes in their client firms to obtain new insurance contracts and acquire pension fund management business (Yoshikawa and Gedajlovic, 2002; Miyajima and Hoda, 2015). Similarly, non-financial corporations did not regard equity ownership in other firms as financial investments but rather as a trade stabilizing mechanism (Yoshikawa and Gedajlovic, 2002). Consequently, banks, insurance companies, and non-financial corporations derived private benefits like long-term business relationships from their equity investments and did not adjust their ownership ratio in response to variation in the economic performance of firms (Kang and Shivdasani, 1997; Morck and Nakamura, 1999; Morck et al. 2000). These shareholders are often called as stable shareholders (*antei kabunushi*).

During the latter half of the 20th century, Japanese corporate ownership structure was mostly dominated by stable shareholding by insiders, especially from the early 1970s to early 1990s. Based on data from *survey of share ownership* that includes all the domestic stock exchanges, Table 1.1 shows the long term trend of shareholding ratio by both individual category of stable shareholders as well as their aggregate ownership. Stable shareholding ratio was more than 50% in the early 1970s, rising above 60% in the mid-1970s, and continuing on an upward trend until 1990. On the other hand, that equity ownership by outsiders such as foreign investors, individuals, investment trusts, and securities companies whose primary interests are more focused around maximizing financial returns on their equity investments rather than sustaining long-term relationships, remained low at around 30-40% during the same period. The data appears to be in line with previous research (Yoshikawa and Gedajlovic, 2002; Miyajima and Kruki, 2007; Okabe 2009; Baba, 2009; Miyajima et al. 2015; Miyajima and Hoda, 2015) and provide convincing evidence of an insider-dominated ownership structure of Japanese firms due to the prominent presence of stable shareholders.

In the context of governance, although the growth of Japanese firms until 1990s is often attributed to the presence of stable shareholders (Economic Survey of Japan, 1996), there is overwhelming evidence that these shareholdings posed a serious problem for corporate governance. This is because stable shareholdings were supported by non-interference contracts where shareholders

implicitly agreed not to intervene in the managerial affairs of the firms in which they held equity stakes. Consequently, stable shareholders forgo their right to exercise controlling power over the invested firms, providing consistent support to the management in the form of less outside pressure and abundance of discretion in making business decisions (Morck and Nakamura, 1999; Scher, 2001; Okabe, 2009; Miyajima et al. 2015). In addition, stable shareholding was used as an entrenchment mechanism by the management to effectively protect firms against any market threat of hostile takeovers (Sheard, 1991; Aoki and Sheard, 1992; Morck and Nakamura, 1999). As a result, these shareholdings substantially decreased the outside disciplining pressure on management and were more likely to allow managerial inefficiencies to build up yielding a lower return on equity (ROE) (Okabe, 2009).

Furthermore, while shareholders' rights under Japanese law are among the strongest in the world and are "legally" well protected (Spamann, 2010; Goto, 2014), the corporate governance structure has not been "shareholder-friendly" due to the traditional insider-dominated corporate ownership structure. Goto (2014) argues that "too strong" shareholders' legal rights induced managers to engage in cross-shareholding relationships, which in turn, weakens the rights of other shareholders in practice. There is overwhelming evidence corroborating the notion that interests of large relationship-oriented shareholders were more dominant than outside shareholders (Fukao, 1999; Scher, 2001; Aguilera and Jackson, 2003), which further propounds the view that the strategic stable shareholdings operated as mutual contracts to insulate or limit outside shareholder governance. This suggests that the insider-dominated model of Japanese corporate governance was not in accordance with a structure that is intended to promote the interests of outside shareholders whose objective is to maximize financial returns on their investments (Yoshikawa and Phan, 2001). The insider-dominated ownership structure thus limited the efficacy of the traditional Japanese corporate governance which is currently regarded as a basis of inefficiency.

However, the insider-dominated Japanese corporate ownership significantly changed after the banking crisis in the late 1990s, where the equity ownership ratio of previously known stable insiders, particularly banks and insurance companies, dramatically declined, from 61% in 1990 to

48% by the late 1990s (Table 1.1). The main reason behind the decrease in stable shareholdings was the unwinding of cross-shareholdings between financial institutions and non-financial corporations, where the non-financial corporations started to sell their bank shares in the midst of bank failures in 1997 (Miyajima et al. 2015). On the other hand, share ownership by outsiders such as foreign institutional investors, domestic institutional investors, and individual investors sharply increased. It can be seen in Table 1.1 that among outsiders, equity ownership by foreign investors climbed dramatically. Their shareholding which was only around 4% during the bubble economy period in the late 1980s, consistently increased during the 1990s and amounted 18.6% by the year 1999.

Furthermore, ownership ratio of foreign investors dramatically increased and reached 27.8% in 2006 in the aftermath of the deregulation of financial markets in the early 2000s that further resulted in weakening of main bank influence. For instance, the Act on "Limitation on Shareholding by Banks and Other Financial Institutions" was issued in 2001, which stipulates that each bank's shareholdings should be less than the amount of its Tier 1 core capital. Coupled with the reduction in barriers for foreign investors to enter the Japanese market, the decreased stable financial ownership has led to a substantial increase in foreign ownership during this period. Foreign investors became one of the major shareholders of Japanese firms, as their ownership increased and stabilized with 28% shareholding, in contrast to 31.2% aggregate stable ownership (Table 1.1), by the year 2012. As a result, the Japanese corporate ownership structure that was once dominated by insiders with mutual strategic alliances, begin to move towards an outsider-dominated structure in the beginning of 21st century, and is currently characterized by the coexistence of arms-length foreign investors and stable shareholders, as illustrated in Figure 1.1.

This shift from a previously insider-based to a more outsider-oriented corporate ownership structure poses a question: Does increase in the equity ownership by foreign investors has an impact on the quality of corporate governance in Japan? If so, are foreign investors effective in putting disciplining pressure on firms' management to enhance firm value by adopting shareholder-oriented practices?

Table 1.1 Long-term Trend of Corporate Ownership Structure in Japan

This table shows the long-term trend of shareholding ratio of banks, insurance firms, non-financial corporations, and foreign institutional investors for Japanese listed firms. Stable shareholding represents the aggregate ownership by banks, insurance firms, and non-financial corporations. Shareholding ratio for each investor category is measured at market value basis.

Year	Banks	Insurance Firms	Business Corps	Foreign Investors	Individual Investors	Financial Institutions	Investment Trusts	Insider Investors	Outsider Investors
1971	16.50	13.90	26.20	5.20	34.10	1.80	1.90	56.60	43.00
1972	17.40	15.00	29.50	4.50	29.60	2.00	1.50	61.90	37.60
1973	17.70	14.60	29.90	4.00	30.20	1.80	1.40	62.20	37.40
1974	18.50	14.80	28.40	3.20	31.70	1.80	1.90	61.70	38.60
1975	19.00	14.60	27.00	3.60	32.10	2.00	2.20	60.60	39.90
1976	19.50	14.70	27.00	3.70	31.40	1.90	2.30	61.20	39.30
1977	20.30	15.30	25.90	3.00	31.30	2.10	2.80	61.50	39.20
1978	20.40	15.50	26.50	2.70	30.70	2.10	2.80	62.40	38.30
1979	20.20	16.10	26.60	3.00	29.50	2.20	2.30	62.90	37.00
1980	19.90	16.10	26.20	5.80	27.90	2.30	1.90	62.20	37.90
1981	19.50	16.40	26.60	6.40	26.90	2.30	1.60	62.50	37.20
1982	20.00	16.40	25.40	7.60	26.30	2.30	1.60	61.80	37.80
1983	19.20	15.90	27.60	8.80	24.20	2.20	1.50	62.70	36.70
1984	19.40	16.20	29.50	7.40	23.00	2.40	1.50	65.10	34.30
1985	20.90	16.40	28.80	7.00	22.30	2.40	1.70	66.10	33.40
1986	14.90	16.80	30.10	5.30	20.10	2.50	1.90	61.80	29.80
1987	14.90	16.40	30.30	4.10	20.40	2.60	2.60	61.60	29.70
1988	15.70	16.70	29.00	4.30	19.90	2.00	3.10	61.40	29.30
1989	15.70	15.70	29.50	4.20	20.50	1.90	3.70	60.90	30.30
1990	15.70	15.90	30.10	4.70	20.40	1.60	3.70	61.70	30.40
1991	15.60	16.10	29.00	6.00	20.30	1.40	3.40	60.70	31.10
1992	15.60	16.20	28.50	6.30	20.70	1.20	3.20	60.30	31.40
1993	15.40	15.80	28.30	7.70	20.00	1.10	2.90	59.50	31.70
1994	15.40	15.70	27.70	8.10	19.90	1.10	2.60	58.80	31.70
1995	15.10	14.70	27.20	10.50	19.50	1.00	2.20	57.00	33.20
1996	15.10	14.70	25.60	11.90	19.40	0.90	2.00	55.40	34.20
1997	14.80	14.10	24.60	13.40	19.00	0.90	1.60	53.50	34.90
1998	13.70	13.10	25.20	14.10	18.90	0.80	1.40	52.00	35.20
1999	11.30	10.70	26.00	18.60	18.00	0.90	2.20	48.00	39.70
2000	10.10	10.90	21.80	18.80	19.40	0.70	2.80	42.80	41.70
2001	8.70	10.20	21.80	18.30	19.70	0.70	3.30	40.70	42.00
2002	7.70	9.30	21.50	17.70	20.60	0.70	4.00	38.50	43.00
2003	5.90	8.10	21.80	21.80	20.50	0.90	3.70	35.80	46.90
2004	5.20	7.40	22.10	23.30	21.30	1.00	3.80	34.70	49.40
2005	4.70	7.20	21.30	26.30	19.90	1.00	4.30	33.20	51.50
2006	4.60	7.50	20.80	27.80	18.70	1.00	4.60	32.90	52.10
2007	4.70	7.60	21.40	27.40	18.70	0.90	4.80	33.70	51.80
2008	4.80	7.40	22.60	23.50	20.50	0.90	5.00	34.80	49.90
2009	4.30	7.00	21.30	26.00	20.10	0.90	4.70	32.60	51.70
2010	4.10	6.40	21.20	26.70	20.30	1.00	4.40	31.70	52.40
2011	3.91	6.07	21.61	26.28	20.38	0.84	4.50	31.59	52.01
2012	3.80	5.70	21.70	28.00	20.20	0.80	4.50	31.20	53.50

Source: Tokyo Stock Exchange Website

Note: Made by Author on the basis of data extracted from Tokyo Stock Exchange share-ownership survey.

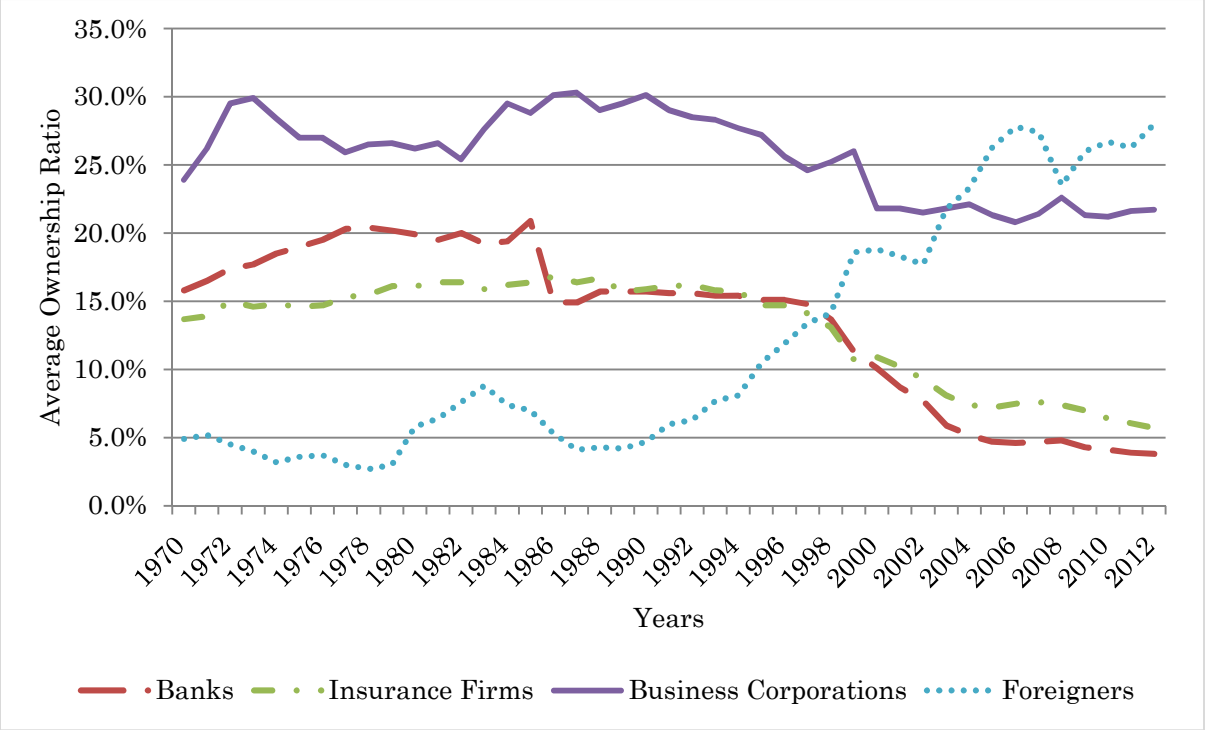

Figure 1.1 Japanese Corporate Ownership Structure

This figure indicates the average percentage ownership by stable shareholders and foreign institutional shareholders for Japanese listed firms over the period 1991-2012.

Note: Made by Author on the basis of data extracted from Tokyo Stock Exchange share-ownership survey.

The rise in foreign equity ownership may have brought improvements in the quality of corporate governance in Japan, because, unlike the affiliated stable shareholders, foreign investors are more performance-oriented, and since they only have arms-length relationships with the invested firms, they have the potential to effectively discipline firm's management (Ferreira and Matos, 2008). There has been a substantial body of literature on the increase in equity ownership by foreign investors and their disciplining role on firms' management. For example, Miyajima et al. (2015) provide evidence that the increasing presence of foreign investors in Japanese capital markets is positively associated with the economic performance of firms. Miyajima and Hoda (2015) confirm the effectiveness of foreign investors' monitoring by showing that they enhance firm value and earnings whereas stable shareholders have a significantly negative impact. Somewhat similar findings are reported in Yoshikawa and Gedajlovic (2002), Sasaki and Yonezawa (2000), Horiuchi and Hanasaki (2004), Nagaoka (2006), Sueyoshi and Goto (2010). While investigating a more direct effect of foreign investors on the quality of corporate governance, Shinozaki et al. (2014) show that compared

to the relationship-oriented stable shareholders, firms are more likely to adopt governance improvements when arms-length shareholders, such as foreign and domestic institutional investors, own a higher stake. With respect to the impact of foreign institutional investors on board structure of Japanese firms, Miyajima (2009) shows that firms with high equity ownership by foreign investors are more likely to implement governance reforms such as reduction in board size, appointment of outside directors, and adopting an executive officer system.

In addition, many studies investigate the role played by foreign investors from the context of shifting to more shareholder-oriented strategic decisions by Japanese corporations. Baba (2009) and Hamao, Kutsuna & Matos (2011) find that foreign investor force target firm managers to increase their payouts relative to peer firms. Nguyen (2012) finds that foreign investors positively affect the risk taking behavior and performance of firms. Miyajima et al. (2002) report that while stable shareholders has no significant impact, foreign ownership leads to an improvement in the Total Factor Productivity. Using data from a relatively smaller sample of manufacturing firms, David et al. (2006) indicate that foreign equity ownership appropriate corporate investment by enhancing capital expenditures and R&D expenditures when firms have growth opportunities. Similarly, Miyajima and Hoda (2015) show a positive association between foreign ownership and capital expenditures. In the context of firm's liquid assets, Hamao et al. (2011) posit that ownership by foreign activist investors is associated with a significant decline in cash holdings due to their pressure on management to put cash reserves in productive use, thereby addressing agency issues.

From an international perspective as well, the effect of foreign institutional investors on corporate governance has attracted much attention in the recent literature. Gillan and Starks (2003) indicate that foreign institutional investors promote improvements in governance structures through external monitoring. Using international data on equity holdings, Ferreira and Matos (2008) document that firms with high foreign and independent institutions have higher firm value and better operating performance due to the arms-length monitoring ability of these investors. Aggarwal, Erel, Ferreira, and Matos (2011) find a more direct evidence that equity ownership by foreign institutional investors is related to enhancement in the quality of corporate governance in countries with weaker investor

protection. In a similar vein, using a sample of Korean firms, Garner and Kim (2013) show that foreign investors encourage better corporate governance practices in firms from emerging markets. Furthermore, in the context of performance maximizing policies, Ferriera and Matos (2008) find that foreign investors curtail the managerial tendency to overinvest. Similar results are reported in Chen et al. (2014) where foreign equity ownership is associated with efficient investment decisions.

Although prior literature provides ample evidence regarding the effect of foreign ownership on corporate governance quality and governance outcomes, there still remains a number of unexplored matters that must be addressed. First, from an international perspective, while a number of studies indicate that foreign investors play a significant role in promoting governance improvements in countries where shareholder protection is weaker than the investors' home country, less is known about their impact in countries like Japan, where shareholder rights are legally strong. Second, there is a need to consider the effect of foreign investors according to the length and size of ownership period. As pointed out in Miyajima and Hoda (2015), even if the collective foreign shareholding is high, if the ownership ratio of individual investor is low, investors may have less expertise, information, and incentives to be involved in monitoring firms' management. In addition, even if that is not the case, it would be interesting to explore whether foreign investors with longer investment horizon efficiently carry out post-investment monitoring. Furthermore, how foreign investors with stable investment lengths affect corporate governance and governance outcomes is also likely to be especially a fascinating question in the Japanese setting, given the presence of traditional stable domestic shareholders. Third, unlike before, the Japanese corporate ownership in the 21st century is rather more diverse, reflected by the coexistence of stable shareholders and arms-length foreign shareholders. Most recent studies, however, are focused around investigating the individual effect of each ownership type on corporate governance. Providing an insight into whether increased presence of foreign investors change the way how relation-oriented shareholders impact corporate governance and governance outcomes, is another area that needs to be explored.

Fourth, there is almost no evidence regarding the association between foreign ownership and the level, market valuation, and performance effect of corporate cash holdings. The agency view of

liquid assets has received great attention in the recent literature where the quality of corporate governance is associated with the level, valuation, and use of corporate cash holdings. The Japanese setting provides a promising opportunity to investigate the implications of agency theories since firms in Japan not only held considerably higher levels of cash than firms in other countries, but also demonstrated a greater persistence from 1970s to early 1990s (Rajan and Zingales, 1995; Pinkowitz and Williamson, 2001). The excess amounts of cash is considered to be the outcome of an insider-dominated corporate governance structure where banks forced firms to hold higher cash reserves (Pinkowitz and Williamson, 2001; Datta and Jia, 2012). However, despite of increased availability of capital, firms with main bank ties substantially invested less than other firms (Kang and Stulz, 2000) and therefore adversely affected performance and value. Lower performance and decreased value indicate that corporations in Japan held cash in excess of that needed for operations and investments. From early 1990s through 2008 however, as illustrated in Figure 1.2, the previously high cash to total assets experienced a substantial decline, which may have been an outcome of changes in the Japanese corporate ownership structure.

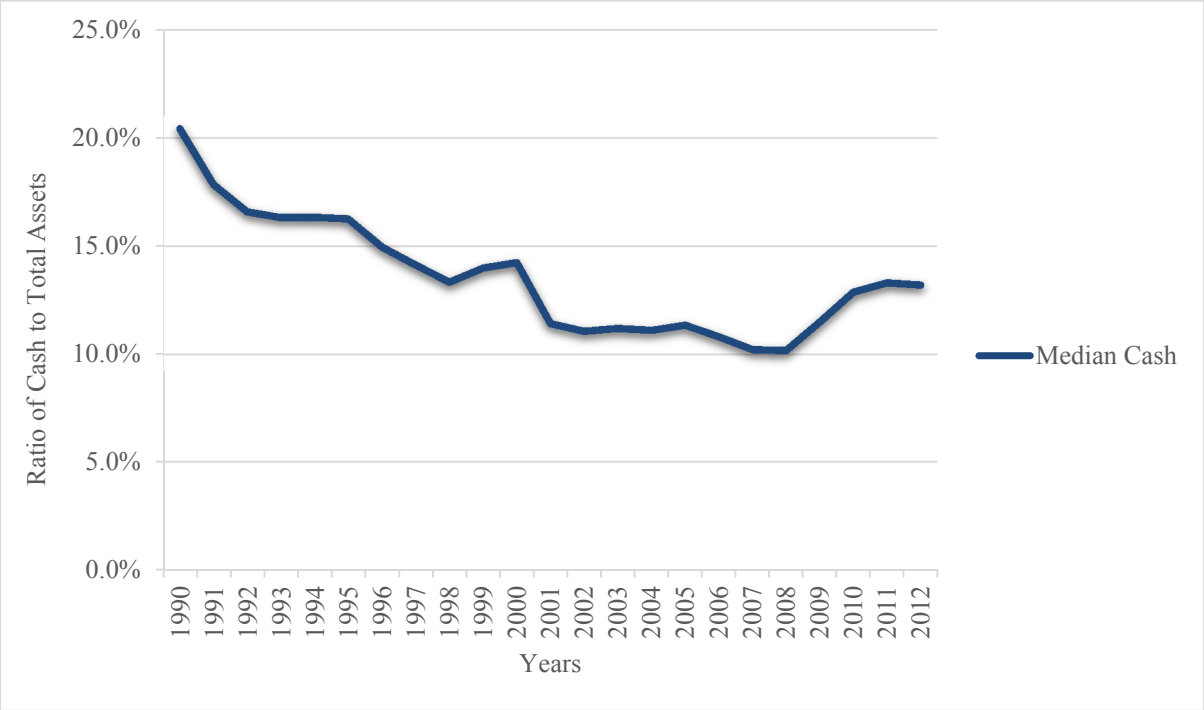

Figure 1.2. Japanese Corporate Cash Holdings

This figure shows the median cash holding trend for Japanese listed firms over the period 1990-2012. Cash is defined as the ratio of sum of cash and marketable securities to total assets.

Lastly, previous studies that stress on the costs of insider-dominated governance model in Japan shed light on the agency problems arising as a result of pressure from stable shareholders that leads to inefficient investment behavior of firms (see Weinstein and Yafeh, 1998; Kang and Stulz, 2000; Yoshikawa and Gedajlovic, 2002). However, it is still not clear if the shift in corporate ownership structure from an insider-based relationship oriented to a more outsider-oriented structure has any impact on the investment efficiency. Even beyond Japan, the available evidence regarding the association between independent outside shareholders, such as foreign investors, and efficient investment decisions seems to be limited.

1.2. Purpose of Dissertation

The overall purpose of this dissertation is to explore the effect of the shift from a previously insider-based to a more shareholder-oriented ownership structure on corporate governance by focusing on the role of increased equity ownership by foreign investors in Japanese firms. In an attempt to uncover the governance role played by foreign investors after the surge in their equity ownership in the 21st century, as a first step, this study examines whether foreign investors influence firms to adopt better corporate governance practices. In order to further assess the governance effect of changes in the corporate ownership structure, this dissertation investigates whether foreign investors are effective in putting disciplining pressure on firms' management to adopt shareholder-oriented practices.

Toward the purposes, by employing a composite index that emphasizes on the quality of firm′s internal controls and includes various corporate governance attributes from multiple dimensions, the study presented in the second chapter intends to find if foreign investors have had a significant impact on corporate governance of firms in Japan where shareholder rights are legally strong. Coupled with examining the governance impact of stable shareholders, this chapter also intends to investigate if the increased presence of foreign investors affects the way how relationship-oriented stable shareholders impact the quality of corporate governance.

In accordance with the overall purpose of this dissertation, the study described in the third chapter explores the association between foreign ownership and Japanese corporate cash holdings.

Empirical literature regarding corporate governance suggests that agency problems significantly impact the level, valuation, and use of corporate cash holdings (Dittmar et al. 2003; Pinkowitz et al. 2006; Kalcheva and Lins, 2007; Dittmar and Smith, 2007; Harford et al. 2008). In a similar vein, as in Pinkowitz and Williamson (2001), the previously higher cash holdings of Japanese firms can be considered as an outcome of main bank power until the early 1990s. Therefore, to further assess whether corporate governance improves with changes in the Japanese corporate ownership structure, the third chapter of this dissertation examines the effect of foreign investors on the level, valuation, and use of corporate cash holdings. This chapter also investigates the effect of stable investors on cash management practices.

The study presented in the fourth chapter is based on the notion that good governance practices lead to efficient investment decisions (Biddle et al. 2009; Ferreira and Matos, 2008; Chen et al. 2014). The aim of this study is to examine whether foreign ownership is associated with investment efficiency.

1.3. Structure of the Dissertation

The first part, Chapter 1 of this dissertation presented a brief introduction to the historical background of Japanese corporate ownership structure and how it affected the corporate governance. The recent developments in corporate ownership structure and the theoretical background of the studies that comprise this dissertation were addressed in this part. Limitations in the previous literature were also discussed in this part. The remainder of this dissertation is as follows. Chapter 2 investigates the impact of foreign investors on the quality of corporate governance. Chapter 3 further assess whether increase in equity ownership by foreign investors is associated with improvements in corporate governance via examining their effect on the cash management practices of Japanese firms. Chapter 4 explores the association between foreign ownership and investment efficiency. Chapter 6 includes the conclusion of this research. This part also presents the contributions of this dissertation, implications of the findings, research limitations, and possible directions for future research.

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Chapter 2

Do Foreign Institutional Investors Promote Governance Improvements in Japan?

2.1. Introduction

The effect of foreign institutional investors on corporate governance has attracted much attention in the recent literature. Gillan and Starks (2003) indicate that foreign institutional investors promote improvements in governance structures through external monitoring. Using international data on equity holdings, Ferreira and Matos (2008) document that firms with high foreign and independent institutions have higher firm value and better operating performance due to the arms-length monitoring ability of these investors. Aggarwal et al. (2011) find a more direct evidence that equity ownership by foreign institutional investors is related to enhancement in the quality of corporate governance in countries with weaker investor protection. In a similar vein, Garner and Kim (2013) show that foreign investors encourage better corporate governance practices using a sample of Korean firms. While a number of studies indicate that foreign institutions play a significant role in promoting governance improvements in countries where investor protection is weaker than the institutions' home country, less is known about their impact in countries like Japan, where shareholder rights are legally strong.

This chapter examines the impact of foreign institutional investors on corporate governance of Japanese firms. Japanese data provides a unique environment for this study in several points. First, shareholders' rights under Japanese law are among the strongest in the world and are "legally" better protected than the United States, the home of major institutional investors (Goto, 2014). Shareholders are granted power to alter a corporate charter without the consent of the board, majority voting for board elections, power to control dividend payments, power to replace the board of directors, and shareholders access to corporate ballots[3]. In Spamann (2010), Japan scored the highest for shareholder protection in 1996 and the fourth highest in 2005. Nevertheless, in fact, the corporate governance has not really been "shareholder-friendly" due to the traditional ownership structure in Japan, which has

[3] Kaisha-ho [Companies Act], Law No. 86 of 2005 (Japan) [hereinafter JCA], available at http://www.cas.go.jp/jp/seisaku/hourei/data/CA1_4_2.pdf and http://www.cas.go.jp/jp/seisaku/hourei/data/CA5_8.pdf (English translation of JCA as of Dec. 15, 2006).

been mostly dominated by stable cross-shareholders[4]. Goto (2014) argues that "too strong" shareholders' legal rights induce managers to engage in cross-shareholding relationships, which in turn, weakens the rights of other shareholders in practice. Therefore, in Japan, even though shareholders' legal rights are quite strong, it is more likely that foreign institutional investors have a significant effect on corporate governance. Second, recent changes in corporate ownership structure along with the reforms in regulatory environment offers an interesting setting for our study. As briefly discussed above, the corporate ownership structure was mostly dominated by banks and stable cross-shareholders, and main banks used to have close business relationships with client firms within *keiretsu* and acted as the provider of capital and governance (Prowse, 1992; Aoki et al. 1994; Morck and Nakamura, 1999; Kaplan and Minton, 1994; Kang and Shivdasani, 1995; Hoshi et al. 1990). In 1991, Japanese banks owned 16.3% of the shares listed on the Tokyo Stock Exchange (TSE). However, the deregulation of financial markets in the early 2000s resulted in weakening of main bank influence. For instance, due to the Act on "Limitation on Shareholding by Banks and Other Financial Institutions" issued in 2001, banks drastically reduce their shareholdings. Coupled with the reduction in barriers for foreign investors to enter the Japanese market during this period, the decreased bank ownership has led to a substantial increase in foreign equity ownership during this period. According to Tokyo Stock Exchange (TSE), while the bank share ownership fell from 16.3% (1991) to 2.7% (2011), equity ownership by foreign institutional investors dramatically increased from 5.4% to 22.8% and became one of the major shareholders of Japanese firms. Since large institutional investors have incentives and potential abilities to monitor and confront firm's management (Shleifer and Vishny, 1986; Kang and Stulz, 1997; Gillan and Starks, 2003; Hamao et al. 2011), increase in foreign ownership, especially with the legally strong shareholders' rights, could be a constructive addition to the transition of Japanese corporate governance to a more market oriented structure.

In testing the impact of foreign institutional ownership, this study uses multiple measures to capture their monitoring incentives. First one is the fraction of the firm's total shares outstanding owned by foreign institutional investors, which is common in the literature. In addition, I use several

[4] For detailed discussion about cross-shareholdings, see for example, Prowse (1992).

alternative measures of investment horizon (ownership stability) of foreign block-holders, since the incentive and ability of investors to engage in improving governance practices are more likely to increase with their investment horizon. Bushee (1998) shows that compared to transient owners, institutions with long-term investments more actively monitor the firms. Stable owners have greater incentives to engage in monitoring for longer and ongoing basis, and therefore they may be able to bring about improvements in the quality of corporate governance (Elyasiani and Jia, 2010; Attig et al. 2010). In addition, whether the long-term (stable) foreign institutional investors have a more significant effect on governance is likely to be especially an interesting question in the Japanese setting, given the presence of traditional "stable" investors. Using Japanese data, Shinozaki et al. (forthcoming) find that stable shareholders who receive benefits from long-term business relations have a negative effect on governance, whereas firms mainly owned by arms-lengths investors including foreign institutions adopt good governance practices. Coupled with identifying their incremental impact on the governance of firms from strong shareholder protection market, this study adds new evidence to the literature by investigating how foreign shareholders with longer investment horizons affect corporate governance. This study also offers an insight into whether the negative effect of domestic shareholders with long-term business relations on governance can be mitigated by the increased presence of foreign institutional shareholders.

Consistent with prior evidence, the results show that the fraction of firm's total shares outstanding owned by foreign investors is positively associated with corporate governance of Japanese firms, whereas I do not find evidence that foreign block-holders with stable investment horizons play a larger role in improving corporate governance. Similar results were found for large independent domestic institutional investors; their equity ownership has positive effect on governance but their investment horizon does not have additional effect. In contrast, both the equity ownership and investment horizon of large domestic investors such as banks and insurance companies, who have potential business relationships with invested firms, negatively impact corporate governance. Interestingly, however, the negative effect of relationship-oriented ownership is mitigated when foreign institutional investors hold large stakes in the firms, suggesting that foreign block-holders

have the ability to confront the traditional relationship-oriented shareholders. Overall, the results of this study suggest that foreign equity ownership promotes improvements in corporate governance of Japanese firms.

This paper is organized as follows: Section 2.2 provides an overview of the previous literature and develops the hypothesis. Section 2.3 describes the sample, variables employed, and their calculations. Section 2.4 presents the empirical results. Summary and conclusion are presented in section 2.5.

2.2. Hypothesis Development

Gillan and Starks (2003) indicate that foreign institutional investors have the ability to enforce changes in governance through direct or in-direct interventions, and therefore, can improve the quality of corporate governance in place. Using international data, Ferreira and Matos (2008) show that because foreign institutional investors have fewer business relations with the invested firms, they are effective monitors and are able to exert pressure on firm's management which in turn results in enhanced shareholder value and increased firm performance. Aggarwal et al. (2011) also use an international dataset and find a more direct evidence that equity ownership by foreign institutional investors is related to enhancements in the quality of corporate governance in countries with weaker investor protection.

In terms of shareholders' protection, Japan is among the strongest in the world (Spamann, 2010; Goto, 2014). However, the interests of large relationship-oriented shareholders were more dominant than minority shareholders (Aguilera and Jackson, 2003). Main banks have been the primary monitors and disciplinarians of Japanese firms, where ownership was mostly concentrated among main banks and stable cross shareholders (Prowse, 1992). As discussed in extant literature, such traditional system is more likely to prioritize business relationships over shareholder returns. For example, Weinstein and Yafeh (1998) find suboptimal performance for firms with close main bank relationships. Similar findings are reported in Kang and Stulz (2000), Kang and Shivdasani (1999), and Wu and Wu (2005). In recent years however, the Japanese firms' ownership structure witnessed considerable changes due to a series of reforms in the regulation of financial markets (Miyajima and Kuroki, 2007; Hoshi and Kashyap, 2010). For example, the Act on "Limitation on Shareholding by

Banks and Other Financial Institutions" was issued in 2001, which stipulates that each bank's shareholdings should be less than the amount of its Tier 1 core capital. As a result of decrease in their equity holdings, the influence of main bank weakened. The financial deregulation also led to a substantial increase in foreign institutional ownership in the early 2000s, making them one of the major shareholders in Japan. The increase in foreign institutional ownership brought significant changes in the ownership structure of firms and resulted in a shift in the balance of power between corporate insiders and outside shareholders (Hamao et al. 2011). Therefore, increase in foreign ownership may be a constructive addition to the transition of Japanese corporate governance from the previously bank dominated to a market oriented corporate governance structure. Based on the above discussion, this study hypothesizes that firms in Japan adopt good governance practices after the increase shareholdings by foreign institutional investors. More formally:

Hypothesis 2.1a: Equity ownership by foreign institutional ownership leads to improvements in corporate governance practices.

My expectations for the positive impact of foreign institutional investors on the quality of corporate governance is based on the assumption that foreign investors are independent and have no close business relationship with the firms in which they hold equity stakes. In a similar manner, domestic institutional investors that are not bound by commercial ties may potentially facilitate better governance practices as reported in Aggarwal et al. (2011). In contrast, investors who have business ties with the invested firms are reluctant to challenge managerial decisions because they are unwilling to lose their business relationships (Brickley et al. 1988). Based on their potential business ties, previous research classifies institutional shareholders as relationship-oriented (potentially passive monitors) and independent (active monitors) investors (Brickley et al. 1988; Almazan et al. 2005; Cornette et al. 2007; Chen et al. 2007; Elyasiani and Jia, 2010).

Similarly, in the case of Japan, domestic investors can be grouped into "*antei kabunushi*" or "*seisaku toshika*" meaning stable shareholders (such as banks and insurance companies), and market investors (Gedajlovic et al. 2005). In addition to their equity stakes, stable investors usually have

commercial ties with the invested firms such as lending, insurance sales, and other financial transactions. In contrast, since market investors mainly seek to maximize their financial returns on equity investments, they are independent from business relationships with the firms in which they hold shares. Shinozaki et al. (forthcoming) posit that compared to the relationship-oriented stable shareholders, firms mainly owned by foreign and independent institutional investors tend to adopt good governance practices. Hence, there could be a large variation in the effectiveness of monitoring performed by investors with and without having close business relations with the firms. Although our primary focus is on the role of foreign institutional investors, it would be interesting to further investigate how the relationship-oriented and independent domestic investors impact the quality of governance. As discussed above, this study proposes that the former have a positive effect on corporate governance.

Hypothesis 2.1b: Domestic investors' type that is less likely to keep business relations with the invested firms (independent domestic institutions) is positively related to corporate governance.

The increase in foreign institutional shareholdings discussed above may not necessarily mean that all the foreign institutional investors in Japan actively and efficiently perform a monitoring role that leads to improvement in governance practices. While some investors could have more expertise, information, and incentives to be involved in monitoring firms' management, there could also exist short-term foreign investors who are less committed to intervene in corporate governance of individual firms since they may hold or sell equity stakes based on their investment portfolio rebalancing needs. Davis and Steil (2001) argue that foreign shareholders generally hold diversified portfolios of small stakes in many firms, thereby characterizing them as investors who actively engage in frequent trading based on information. Such short-term investors are less likely to influence management, and therefore are not expected to have a significant impact on corporate governance. In contrast, Bushee (1998) shows that institutions with long-term investments in firms more actively monitor than the transient owners. In a similar vein, Elyasiani and Jia (2010) argue that institutional investors with stable investment horizons have sufficient opportunities to learn about the invested firm in addition to greater incentives to effectively and frequently monitor the firm. Also, Attig et al.

(2010) document that institutional investors with longer investment horizons have expertise and incentives to monitor the management, which in turn mitigate the agency problems and information asymmetry. Similar arguments are also presented in Chen et al. (2007). According to these arguments, foreign institutional investors with longer investment horizons have efficiencies and ample monitoring incentives, enabling them to bring about governance improvements.

Hypothesis 2.2: Foreign institutional investors with longer investment horizons are positively associated with corporate governance.

2.3. Data and Variables

2.3.1. Sample

The sample consists of all Japanese publicly traded firms[5] with complete data. The data is taken from a number of sources. I obtain firm-specific financial information and shareholdings' proportion data for both foreign and domestic investors from Nikkei Economic Electronic Database System Financial Quest (NEEDS FQ). Individual data for foreign institutional investors, domestic institutional investors, and other financial institutions such as banks and insurance companies, is obtained from the Top 30 Major Shareholders Database in NEEDS FQ. The Top 30 Major Shareholders Database contains individual data for the 30 largest shareholders' common stock holdings of Japanese securities. In this database, shareholders are classified into individual investors, non-financial companies, banks, insurance companies, securities, financial holdings, credit and leasing, funds and trusts, and foreigners. Corporate governance data is taken from NEEDS Corporate Governance Evaluation System database (NEEDS CGES). To address the endogeneity of foreign institutional ownership, I obtain data for the constituents of Morgan Stanley Capital All Country World Index (MSCI) from Thomson Financial. Data for American Depository Receipt (ADR) listings is taken from www.adr.com. The sample period of this study extends from 2008 to 2011. Since the individual data for foreign and domestic individual investors was made available only after 2003[6] and it requires a 5 year time span to

[5]Firms listed on Tokyo Stock Exchange, Osaka Stock Exchange, Nagoya Stock Exchange, Fukuoka Stock Exchange, Sapporo Stock Exchange, and Hercules.

[6] In the Top 30 Major Shareholders Database, flags representing the stock holdings each investor type are available after 2003.

calculate the investment horizon of foreign institutional investors, I begin in 2008. Financial firms, utility firms, and firms with unavailable data were dropped. This restricts the overall sample to 10,009 firm-years from 2,831 non-financial firms. In order to control for the effect of outliers, I winsorize firm level ratios at 1% and 99% levels.

2.3.2. Corporate Governance Measurement

My measure of corporate governance, governance score (Gov-Score), emphasizes on the quality of firm′s internal controls and includes 19 attributes from three major dimensions: board structure, ownership concentration and compensation, and disclosure. Each governance attribute consists of a score between 1 and 5, where a high score indicates improvements in the quality of corporate governance. The scores are provided by NEEDS-CGES and are formed based on the underlying value of individual governance attributes. I explain the items comprising each sub-index below.

2.3.2.1. Board Structure

Empirical evidence points to the significance of board structure in directly monitoring the management and imposing effective internal controls that lead to reduction in agency costs and improved firm performance. In terms of size, previous literature points to a negative relation between board size and firm performance, depicting that smaller boards are associated with the increased ability to efficiently coordinate and control the firm's management (Yermack, 1996; Eisenberg et al. 1998). Furthermore, the effectiveness of board's monitoring increases when it is composed of independent directors. Boards with outside directors are considered to be more independent and have greater control over managerial decisions (Fama and Jensen, 1983; John and Senbet, 1998). In the case of Japan, before 1997, the governance structure was traditionally characterized by larger boards that mainly comprised of promoted employees within the firm and directors from firms' main banks or parent company (Miyajima, 2007). Japanese corporate boards primarily engaged in managing, rather than monitoring the management. Moreover, the conventional board system included board of directors and the statutory auditors who were responsible for monitoring the board. Yet, the effectiveness of statutory auditors in monitoring the board was not guaranteed as they were often chosen from firm's employees (Chernobai and Yasuda, 2013; Shishido, 2007).

However, since the financial crisis in the late 1990s, firms in Japan began to implement changes in their board structure by appointing outside directors, introducing the executive officer system, and decreasing the number of board members[7] . In addition to the firms' own attempt to implement governance reforms, country level legal reforms were also introduced. To clearly separate the monitoring and execution functions of the board, the Commercial Law was revised in April 2003 which enabled Japanese firms to choose between the statutory auditor system and a committee style system similar to that adopted by U.S. listed firms. In addition, the board of directors of committee style companies is mandated to have to three committees, namely, the nominating committee, audit committee, and the compensation committee. Each committee comprises of at least three directors with majority being outsiders (Chernobai and Yasuda, 2013). Similarly, the compulsory requirement set forth by the Tokyo Stock Exchange in December 2009 to have at least one outside director or auditor further intends to facilitate the independence of corporate boards[8]. With respect to the impact of foreign institutional investors on board structure of Japanese firms, Miyajima (2009) shows that firms with high equity ownership by foreign investors are more likely to implement governance reforms such as reduction in board size, appointment of outside directors, and adopting an executive officer system.

Based on preceding discussion, this research includes several variables related to board structure. The board structure sub-index covers several attributes that incorporate significant aspects of board of directors such as board size, independence, and composition. The board structure attributes include number of board of directors (BRD_NUM), number of insider directors (J_NUM), proportion of outside directors (IDRTO), proportion of non-executive outside directors (NEIDRTO), proportion of auditors among board members (ADTRTO)[9], proportion of interlocking directors

[7] The first notable example of firms' own attempt to reform the board of directors was commenced by Sony in 1997. For instance, Sony added outsiders to the board along with reducing the board size by adopting executive officer system (Chernobai and Yasuda, 2013)

[8] Since 2010, the Tokyo Stock Exchange requires its listed companies to secure at least one "independent director/auditor" (Dokuritsu Yakuin), which means a director or statutory auditor who is unlikely to have conflicts of interest with general investors (Tokyo Stock Exchange Securities Listing Regulations, Rule 436-2) (Goto, 2014).

[9] The presence of auditors provides the board with the means to perform the monitoring role efficiently (Aman & Nguyen, 2008).

(EXERTO)[10], committee style system (FLG_COMM), and frequency of board renewal (TNEED)[11]. NEEDS-CGES uses reverse scoring criterion for three board structure attributes: number of board of directors, number of insider directors, and proportion of interlocking directors. High scores are assigned to smaller boards, lower proportion of insider executives, higher proportion of outside directors, higher proportion of non-executive outside directors, committee style system, lower proportion of directors who hold executive positions in other firms, proportion of auditors among board members, and frequent board renewals.

2.3.2.2. Ownership and Compensation

Attributes from ownership and compensation deal with the level and effectiveness of monitoring. Jensen and Meckling (1976) posit that managerial ownership can help align the interests of managers with that of shareholders and therefore positively affects the firm value. Similarly, McConnel and Servaes (1990) show that managerial ownership leads to an increase in the value of firm. In the case of Japanese firms, Okabe (2004) argues that equity ownership by directors leads to an increase in their incentives and positively impacts the performance. In terms of incentive schemes for top managers such as stock options that were first introduced in 1997 in Japan, Shinozaki et al. (forthcoming) argue that only one third of the listed firms adopt such compensation plans. They find that firms in Japan are more likely to adopt stock option plans when arms-length shareholders such as foreign and domestic institutional investors own a higher stake. The ownership and compensation sub-index therefore focuses on the shareholding ratio of outside directors (IDIR), CEO stock ownership (CEOOWN), and stock option plans (SO).

2.3.2.3. Disclosure

In the last sub-index of our governance measure, this study focuses on governance attributes that deal with the firms' disclosure quality. I include several attributes to capture the quality of firms' disclosures. I use the number of audit opinions (AOP3), changes in accounting policies (APCHG3), earnings announcement timing (ATRM), shareholders meeting concentration ratio (AGMC),

[10] Firms may appoint employees from affiliated firms as outside directors (Yoshikawa & McGuire, 2008).
[11] In case of persistent evidence of low firm performance, board renewals may lead to improved firm performance.

disclosure of executive remuneration (DSC_CMPS_D), disclosure of total audit fee (DSC_CMPS_A), usability of firm's information (WEBEVL2), and sufficiency of firm's information on its website (WEBEVL3). Firms scoring high on disclosure have less audit opinions, less changes in accounting policies, timeliness of earnings announcement, high shareholder meeting concentration ratio, active disclosure of executive remuneration and audit fee, and ample information available on firm's website.

The governance attributes selected in this paper are similar to Aman and Nguyen (2008), and Chernobai and Yasuda (2013). Figure 2 shows average scores of the firm level governance attributes[12] across the sample period 2008-2011. Respective scores of all governance attributes from each sub-index are aggregated to arrive at corporate governance measure, the governance score denoted as percentage (Gompers et al. 2003; Aggarwal et al. 2011).

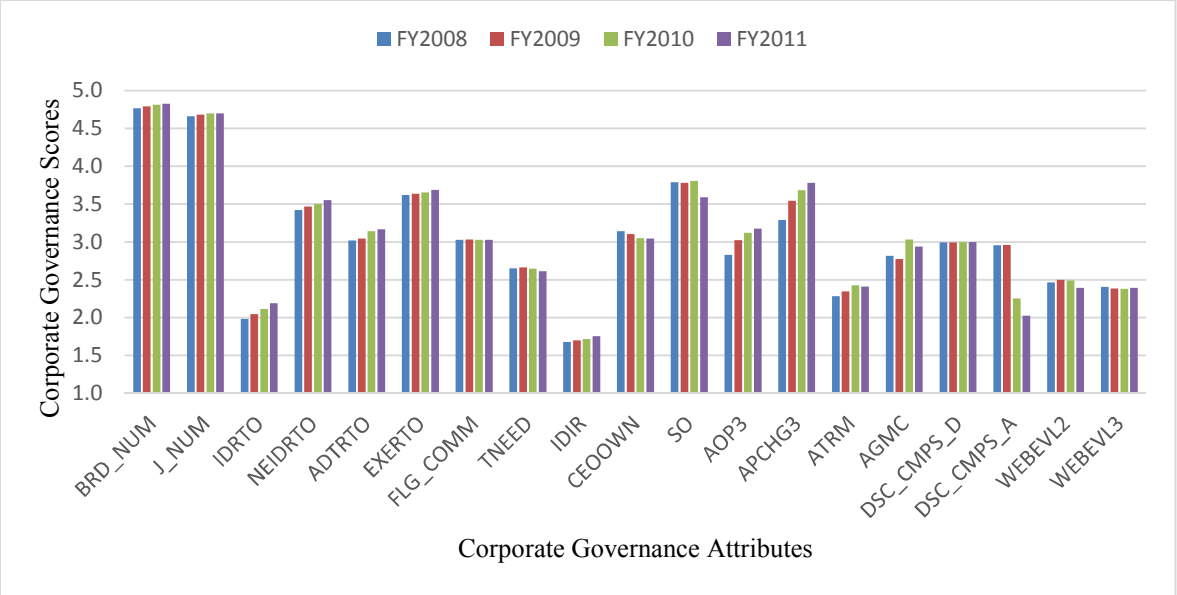

Figure 2.1 Individual Governance Attributes

2.3.3. Ownership Proportion

This research uses ownership proportion for the period 2007 to 2011 since I investigate the impact of ownership on the future level of corporate governance from 2008 to 2011. The proportion of foreign institutional ownership is measured as the sum of the holdings of all foreign institutions in a firm's

[12] In order to appropriately treat individual attributes as independent governance characteristics, a number of highly correlated attributes were dropped from the measurement of governance score.

stock divided by the total number of shares outstanding at the end of each fiscal year. I also include the proportion of foreign institutional ownership in our analysis as an indicator variable by splitting the sample into quartiles: the highest quartile of foreign ownership, representing the largest stakes of foreign institutional investors, is coded as one whereas foreign ownership quartiles other than the highest are coded as zero.

The proportion of domestic ownership is measured as the ratio of sum of the holdings of domestic institutional investors and other financial institutions such as banks and insurance companies, to the number of shares outstanding at the end of each fiscal year. The domestic ownership therefore includes shareholdings by securities companies, financial holdings, credit and leasing, funds and trusts, banks, and insurance companies.

2.3.4. Ownership Investment Horizon

I use multiple measures to distinguish between investors with short-term and long-term investment horizons. The first measure is the institutional ownership persistence (IOP). Following Elyasiani and Jia (2010), IOP for an institutional investor (including banks and insurance companies) in a firm is defined as the ratio of the average ownership proportion to the standard deviation of the ownership proportion over a 5 year period including the sample year. I measure IOP by using interim data[13] for the individual institutional block-holders[14] in a specific firm. For instance, IOP for each institutional investor in 2008 is calculated using 10 interims, from the first fiscal interim of 2004 to the second interim of 2008. The value of IOP is high if an investor's shareholding is stable across a 5 year period. IOP for a firm is then calculated as the average IOP across all the institutional and financial block-holders in the firm.

For the second measure of investment horizon, this study follows Bohren et al. (2005) and Elyasian and Jia (2010), and use the maintain-stake-points duration method. The maintain-stake-points duration measure is the number of interims in which an investor is among the largest shareholders of a specific firm out of 10 interims. If an investor holds a high proportion of shares for many interims during a 5 year period including the sample year, the maintain-stake-points

[13] Quarterly data for individual institutional investors is not available in the Major Shareholders Database.
[14] Investors among the top 30 largest shareholders.

duration measure will be high. Maintain-stake-points duration for a firm is calculated as the average maintain-stake-point durations across all the institutional and financial block-holders. Furthermore, for the third measure of investment horizon, I also use the stable investment duration variable. I define the investment duration to be stable if an individual institutional or financial investor stays as the largest shareholder of a firm for 3 consecutive years (six interims). Unlike the maintain-stake-points duration, this measure accounts for the number of investors instead of the number of interims. The higher the number of investors with consecutive presence in a firm's largest shareholders category, the higher the value (stable) on investment duration variable will be and vice versa.

2.3.5. Control Variables

Following Ferreira and Matos (2008) and Aggarwal et al. (2011), I control the effect of several firm specific variables in our regressions. These variables include natural log of total assets (Firm Size), one year annual sales growth (Sales Growth), ratio of total liabilities to total assets (Leverage), ratio of sum of cash, deposits, and marketable securities to total assets (Cash Holdings), ratio of annual change in fixed assets plus depreciation to total assets (Capital Expenditure), ratio of market value of total assets to book value of total assets (Market-to-Book), operating income to total assets (ROA), research and development expenses to total assets (R&D expenses), plant, property, and equipment to total assets (PPE), foreign sales to net sales (Foreign Sales), and the ratio of number of shares held by special few shareholders to the total number of shares outstanding (Close). Similar to institutional ownership proportion, I use control variables for the period 2007 to 2011.

Table 2.1 shows the summary statistics of governance score, equity ownership of foreign and domestic investors, investment horizon variable, and firm characteristics over the period of 2008 to 2011. In addition, Table 2.2 reports Pearson correlations. In general, the variables are not highly correlated. The largest correlation is between foreign institutional ownership and firm size, and between domestic ownership and firm size (ρ=0.644).

Table 2.1 Summary Statistics

This table shows the summary statistics of governance score and firm characteristics for the period 2008-2011. Governance score that increases with increase in the quality of corporate governance. Refer to Appendix A2 for governance attributes. Foreign institutional ownership is the ratio of number of shares held by foreign shareholders to the number of shares outstanding. Domestic ownership is the ratio of sum of shareholding by securities companies, financial holdings, credit and leasing, funds and trusts, banks, and insurance companies. IOP foreign ownership is the measure of investment horizon of foreign institutional block-holders. Cash holdings is the ratio of sum of cash, deposits, and marketable securities to total assets. Capital expenditure equals the ratio of annual change in fixed assets plus depreciation charges to total assets. R&D expense is the ratio of research and development expenses to total assets. Dividends are the ratio of dividends paid on common stock to total assets. ROA equals operating income to totals assets. Firm size is the natural logarithm of total assets. Sales growth is one year annual growth rate in net sales. Leverage is the ratio of total debt to total assets. Market-to-book ratio is the ratio of market value of total assets to book value of total assets. ROA equals operating income to totals assets. PPE is the ratio of plant, property, and equipment to total assets. Foreign sales is the ratio of international annual net sales to net sales. Close is the number of shares held by special few shareholders.

	N	Mean	Std. Dev	25th Percentile	Median	75th Percentile
Governance Score	9,451	0.4226	0.1622	0.3000	0.4047	0.5250
Foreign Institutional Ownership	10,009	0.0883	0.1107	0.0079	0.0430	0.1321
Domestic Ownership	10,009	0.1813	0.1280	0.0769	0.1591	0.2670
IOP Foreign Ownership	9,451	0.1307	0.1327	0.0000	0.1348	0.2386
Cash Holdings	10,009	0.1509	0.1346	0.0555	0.1142	0.2018
Capital Expenditure	10,009	0.0169	0.1564	-0.0068	0.0162	0.0471
R&D Expenses	10,009	0.0148	0.0265	0.0000	0.0035	0.0194
Dividends	10,009	0.0110	0.0118	0.0044	0.0084	0.0143
ROA	10,009	0.0705	0.0763	0.0370	0.0644	0.1005
Firm Size	10,009	10.4309	1.5185	9.4116	10.2777	11.2766
Sales Growth	10,009	0.0283	1.4572	-0.1022	-0.0106	0.0595
Leverage	10,009	0.4692	0.2202	0.2974	0.4684	0.6375
Market-to-Book	10,009	1.0279	0.5434	0.7679	0.9222	1.1343
PPE	10,009	0.2566	0.1818	0.1174	0.2313	0.3636
Foreign Sales	10,009	2.2006	9.5701	0.0000	0.0000	0.0000
Close	10,009	0.5388	0.1544	0.4220	0.5320	0.6550

2.4. Empirical Results

2.4.1. Foreign Institutional Ownership and Corporate Governance

Similar to Aggarwal et al. (2011), this section contains results from panel regressions that examine whether foreign institutional ownership leads to corporate governance in a country like Japan. For the panel regression analysis I use the firm level corporate governance score (*Gov-Score*) as the dependent variable. The main independent variable is the proportion of foreign institutional ownership. To capture the effect of foreign institutional ownership on future governance, all independent variables are lagged by one year. I use year and industry fixed effects in order to account for the macroeconomic and industry effects. For the industry fixed effects, I employ industry dummies based on the 2-digit Nikkei Medium Classification industry code. Following Petersen (2008), t-statistics are computed using standard errors corrected for clustering at the firm level. Results are presented in Table 2.3. In column (1), regression results are reported for the effect of foreign

institutional ownership on corporate governance using the composite governance score (*Gov-Score*). The results in column (1) suggest that governance score is positively associated with foreign ownership, significant at 99% confidence level. The results are in accordance with the predictions of this study and suggest that foreign institutional investors play a significant role in improving corporate governance even in markets where the shareholders are well protected by law. Control variables have their expected signs. In line with Aggarwal et al. (2011), I also examine the relation between foreign institutional ownership and a number of individual governance attributes[15]. I examine three individual governance attributes from board structure and ownership and compensation. I focus on board size, stock option plans, and CEO ownership. Results are reported in column (2) though column (4). For stock options I estimate probit regressions since it is a binary variable that takes the value one if firms have stock option plans and zero otherwise. It was found that foreign ownership is positively and significantly associated with board size and stock option plans. The results in column (2) show that foreign institutional ownership increases the efficiency of decision making and internal control through smaller boards. The findings in column (3) suggest that firms in Japan are more likely to adopt stock option plans when foreign institutional investors own a higher stake. However, I do not find any relationship between foreign institutional ownership and CEO ownership in column (4). Overall, the results so far, provide evidence that firms are more likely to improve corporate governance when they have a higher proportion of foreign ownership.

2.4.2. Control for Endogeneity

So far, the initial findings of this study depict that foreign institutional ownership leads to better corporate governance in Japan. However, there are reasons to doubt that the estimates could be subjected to a significant bias because of the endogeneity of foreign institutional investors. I am concerned that foreign institutional ownership and corporate governance may be jointly determined.

The possibility that the positive relationship between foreign institutional investors and corporate governance could be the outcome of reverse causality cannot be ruled out. As in Leuz et al. (2010), foreign institutional investors may have strong preferences for firms with improved corporate governance and therefore, may lead to a positive association without a causal effect stemming from

[15] Aggarwal et al. (2011) argue that governance indices and ratings have received numerous criticisms over its methodological shortcomings.

foreign institutional investors. Although, this research uses lagged measures of foreign institutional ownership to mitigate the simultaneity issues, the possibility that foreign investors may also be attracted to firms. To address the endogeneity problem, I run the two-stage least squares (2SLS) regressions where I use instrumental variables for foreign institutional ownership.

To select the appropriate instrumental variable, I follow the previous literature and consider variables that are associated with the foreign institutional ownership, but are uncorrelated with corporate governance. As the first instrument for foreign institutional ownership, I use membership of sampled firms in the Morgan Stanley Capital International All Country World Index (*MSCI*). I use indicator variable that takes the value of one if a firm is a constituent of the MSCI in the previous year and zero otherwise. Ferreira and Matos (2008) and Leuz et al. (2010) show that foreign investors are more likely to invest in firms with MSCI membership. This also holds for our sample as firms with MSCI membership have an average proportion of foreign institutional ownership of 23.8%, while non-members have an average ownership of 7.1%. In terms of governance, MSCI members have an average governance score of 50.7% while non-members have an average governance score of 41.3%. The instrument appears to be valid. For the second instrument of foreign institutional ownership, this study uses firms' listing on the American Depository Receipt (*ADR*). I use a dummy variable that takes the value of one if a firm has an active ADR in the previous year and zero otherwise. Kang and Stulz (1997) show that ADR increases the probability of investment by foreign investors. Firms with ADRs have an average governance score of 56% while firms without ADRs exhibit an average governance score of 41.5%. Regarding the proportion of foreign institutional investors, firms having ADRs have an average proportion of foreign institutional ownership of 27% while non-members have an average ownership of 8%. Thus, MSCI and ADR do not seem to be correlated with our dependent variable. Similar instruments are used in Nguyen (2012).

Table 2.2 Correlation Matrix

Foreign institutional ownership is the ratio of number of shares held by foreign shareholders to the number of shares outstanding. Domestic ownership is the ratio of sum of shareholding by securities companies, financial holdings, credit and leasing, funds and trusts, banks, and insurance companies. Cash holdings is the ratio of sum of cash, deposits, and marketable securities to total assets. Capital expenditure equals the ratio of annual change in fixed assets plus depreciation charges to total assets. R&D expense is the ratio of research and development expenses to total assets. Dividends are the ratio of dividends paid on common stock to total assets. ROA equals operating income to totals assets. Firm size is the natural logarithm of total assets. Sales growth is one year annual growth rate in net sales. Leverage is the ratio of total debt to total assets. Market-to-book ratio is the ratio of market value of total assets to book value of total assets. ROA equals operating income to totals assets. PPE is the ratio of plant, property, and equipment to total assets. Foreign sales is the ratio of international annual net sales to net sales. Close is the number of shares held by special few shareholders.

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Foreign Ownership	1.000												
2. Domestic Ownership	0.380	1.000											
3. Firm Size	0.581	0.644	1.000										
4. Sales Growth	0.020	-0.006	0.009	1.000									
5. Leverage	-0.162	0.050	0.144	0.007	1.000								
6. Cash	0.008	-0.253	-0.303	0.009	-0.422	1.000							
7. Capital Expenditures	0.026	0.040	0.081	0.018	-0.024	-0.035	1.000						
8. Market-to-Book	0.333	0.102	0.154	0.045	0.061	0.087	0.000	1.000					
9. ROA	0.164	0.045	0.065	0.055	-0.178	0.105	0.275	0.299	1.000				
10. R&D	0.201	0.145	0.143	-0.001	-0.141	0.047	-0.022	0.119	-0.009	1.000			
11. PPE	-0.177	-0.001	0.001	-0.029	0.162	-0.333	0.089	-0.121	0.096	-0.116	1.000		
12. Foreign Sales	0.141	0.112	0.130	0.003	-0.015	-0.021	0.014	0.077	0.048	0.185	-0.031	1.000	
12. Close	-0.145	-0.505	-0.328	0.012	-0.111	0.182	0.051	-0.022	0.163	-0.088	0.004	-0.098	1.000

Table 2.3 Foreign Institutional Ownership and Corporate Governance

This table shows estimates of regressions of proportion of foreign institutional investors on corporate governance. The dependent variables include governance score along with individual governance attributes (board size, stock option plans, and CEO ownership) at time t. The main independent variable is one year lagged foreign ownership. I estimate probit regression for the dependent variable "stock options" since it is a binary variable that takes the value one if firms have stock option plans. Control variables are lagged by one period. Cash holdings is the ratio of sum of cash, deposits, and marketable securities to total assets. Capital expenditure equals the ratio of annual change in fixed assets plus depreciation charges to total assets. R&D expense is the ratio of research and development expenses to total assets. Dividends are the ratio of dividends paid on common stock to total assets. ROA equals operating income to totals assets. Firm size is the natural logarithm of total assets. Sales growth is one year annual growth rate in net sales. Leverage is the ratio of total debt to total assets. Market-to-book ratio is the ratio of market value of total assets to book value of total assets. ROA equals operating income to totals assets. PPE is the ratio of plant, property, and equipment to total assets. Foreign sales is the ratio of international annual net sales to net sales. Close is the number of shares held by special few shareholders. All ratios are winsorized at the 1% and 99% levels. Standard errors are estimated with clustered errors at the firm level. t-statistics (z-statistics in the case of stock options in column 3) are presented in brackets.

	Dependent Variables			
	Gov-Score	Board Size	Stock Options	CEO Ownership
Foreign Ownership (t-1)	0.200***	0.0604**	1.246***	-0.00998
	(5.475)	(2.059)	(4.289)	(-0.121)
Firm Size (t-1)	0.00672***	-0.0387***	-0.0340	0.0134**
	(2.683)	(-15.77)	(-1.463)	(2.250)
Sales Growth (t-1)	-0.0226**	-0.00342	-0.0873	0.0497**
	(-2.377)	(-0.547)	(-0.954)	(2.184)
Leverage (t-1)	-0.0770***	0.00486	-0.384***	-0.226***
	(-5.273)	(0.446)	(-2.777)	(-6.481)
Cash Holdings (t-1)	-0.0313	0.0105	-0.402*	0.423***
	(-1.260)	(0.618)	(-1.717)	(6.822)
Capital Expenditures (t-1)	0.0700***	-0.0281	0.129	0.301***
	(2.846)	(-1.591)	(0.539)	(4.897)
Market-to-Book (t-1)	0.0604***	-0.0110**	0.319***	0.0878***
	(8.717)	(-1.967)	(5.524)	(5.831)
ROA (t-1)	0.276***	-0.00943	-0.282	0.565***
	(6.123)	(-0.300)	(-0.668)	(4.833)
R&D Expenses (t-1)	0.776***	-0.257**	5.095***	-0.394
	(5.488)	(-1.985)	(3.965)	(-1.219)
PPE (t-1)	-0.122***	-0.0173	-0.805***	0.0236
	(-7.164)	(-1.382)	(-4.858)	(0.545)
Foreign Sales (t-1)	-0.000388*	-0.000229	-0.00291	-0.000766
	(-1.690)	(-1.012)	(-1.412)	(-1.518)
Close (t-1)	0.0349*	-0.0152	-0.0211	0.0148
	(1.885)	(-1.109)	(-0.118)	(0.316)
Observations	9,451	9,451	9,451	9,451
R-squared/Pseudo R-squared	0.247	0.211	0.094	0.164
Year	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes

*, **, ***: Significant at the 10%, 5%, and 1% levels, respectively

Table 2.4 presents the two-stage least squares regressions. Column (1) and (2) present the results of the first stage regressions that use the foreign institutional ownership as the dependent variable. MSCI is explanatory variable of interest in column (1) while ADR in column (2).

Table 2.4 Foreign Institutional Ownership and Corporate Governance: Two-Stage Least Squares

This table shows estimates of two-stage least squares (2SLS) regressions. Column (3) through (4) report results of the second-stage regressions where the dependent variable is the governance score (*Gov-Score*). The main independent variable is the foreign institutional ownership at year t instrumented by one year lagged Morgan Stanley Capital International (*MSCI*) dummy in column (1) and American Depository Receipts (*ADR*) dummy in column (2). In column (3), the proportion of foreign institutional investors is instrumented using both MSCI and ADR dummies. Control variables are lagged by one period. Cash holdings is the ratio of sum of cash, deposits, and marketable securities to total assets. Capital expenditure equals the ratio of annual change in fixed assets plus depreciation charges to total assets. R&D expense is the ratio of research and development expenses to total assets. Dividends are the ratio of dividends paid on common stock to total assets. ROA equals operating income to totals assets. Firm size is the natural logarithm of total assets. Sales growth is one year annual growth rate in net sales. Leverage is the ratio of total debt to total assets. Market-to-book ratio is the ratio of market value of total assets to book value of total assets. ROA equals operating income to totals assets. PPE is the ratio of plant, property, and equipment to total assets. Foreign sales is the ratio of international annual net sales to net sales. Close is the number of shares held by special few shareholders. All models report estimates of industry fixed-effects regressions with year dummies. All ratios are winsorized at the 1% and 99% levels. Standard errors are estimated with clustered errors at the firm level. t-statistics are presented in brackets. Superscripts *, **, and *** indicate significance at 10%, 5%, and 1% confidence levels, respectively.

	1st Stage	1st Stage	1st Stage	2nd Stage	2nd Stage	2nd Stage
	Foreign Ownership	Foreign Ownership	Foreign Ownership	Gov-Score	Gov-Score	Gov-Score
Predicted Foreign (MSCI)				0.643**		
				(2.094)		
Predicted Foreign (ADR)					1.394***	
					(4.875)	
Predicted Foreign (Combined)						1.029***
						(4.309)
MSCI (t-1)	0.0396***		0.0302***			
	(5.478)		(3.957)			
ADR (t-1)		0.0526***	0.0407***			
		(6.030)	(4.368)			
Firm Size (t-1)	0.0388***	0.0397***	0.0371***	-0.0125	-0.0449***	-0.0291***
	(26.34)	(26.22)	(24.42)	(-0.941)	(-3.645)	(-2.840)
Sales Growth (t-1)	-0.0161**	-0.0147**	-0.0139**	-0.0146	-0.000869	-0.00753
	(-2.507)	(-2.332)	(-2.197)	(-1.343)	(-0.0815)	(-0.735)
Leverage (t-1)	-0.107***	-0.110***	-0.107***	-0.0291	0.0536	0.0133
	(-11.37)	(-11.64)	(-11.42)	(-0.802)	(1.580)	(0.454)
Cash Holdings (t-1)	0.0354**	0.0346**	0.0334*	-0.0494*	-0.0779***	-0.0640**
	(2.060)	(2.002)	(1.947)	(-1.833)	(-2.946)	(-2.477)
Capital Expenditures (t-1)	-0.000848	-0.00391	-0.00145	0.0722***	0.0753***	0.0738***
	(-0.0492)	(-0.228)	(-0.0846)	(2.893)	(3.030)	(2.963)
Market-to-Book (t-1)	0.0551***	0.0580***	0.0542***	0.0332*	-0.0126	0.00969
	(12.56)	(12.62)	(12.29)	(1.711)	(-0.702)	(0.630)
ROA (t-1)	0.0637*	0.0631*	0.0666*	0.248***	0.205***	0.226***
	(1.784)	(1.771)	(1.870)	(5.165)	(4.321)	(4.855)

R&D Expenses (t-1)	-0.0153	-0.0437	-0.0530	0.774***	0.764***	0.769***
	(-0.181)	(-0.513)	(-0.626)	(5.438)	(5.348)	(5.423)
PPE (t-1)	-0.0551***	-0.0537***	-0.0534***	-0.0979***	-0.0558**	-0.0763***
	(-5.553)	(-5.457)	(-5.437)	(-3.986)	(-2.346)	(-3.461)
Foreign Sales (t-1)	0.000131	0.000183	0.000156	-0.000437*	-0.000557**	-0.000499**
	(0.896)	(1.242)	(1.065)	(-1.874)	(-2.364)	(-2.144)
Close (t-1)	0.00506	0.00804	0.00682	0.0317*	0.0271	0.0293
	(0.446)	(0.704)	(0.603)	(1.695)	(1.455)	(1.578)
Observations	9,451	9,451	9,451	9,451	9,451	9,451
R-squared	0.506	0.506	0.510	0.239	0.245	0.244
F-test of Instruments	30.010***	36.361***	27.250***			
Hansen Over-identification						3.821**
p-value						0.050
Year	Yes	Yes	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes	Yes	Yes

*, **, ***: Significant at the 10%, 5%, and 1% levels, respectively.

The independent variables are lagged by one year. The first stage results in column (1) and (2) indicates that both MSCI and ADR are positively and significantly associated with foreign ownership. Moreover, the F-tests indicate that MSCI and ADR are significant instruments with robust F-values greater than 30 (MSCI) and 36 (ADR). The second stage results, reported in column (4) and (5), show that the predicted foreign institutional ownership is significant in explaining the improvements in governance. The results reported in Table 2.4 support our initial findings that foreign institutional ownership leads to better governance in Japan and suggest that endogeneity is unlikely to explain this relationship. In addition, I also examine the joint effect of the instruments where the results from first and second stage regressions are presented in column (3) and (6). Even though the results remain unchanged, MSCI and ADR appear to be endogenous. The Hansen over-identification test indicates that the hypothesis of absence of correlation between the instruments and the error term in the second stage is rejected, and therefore, it is inappropriate to simultaneously instrument foreign institutional ownership with MSCI and ADR.

2.4.3. Foreign Institutional Ownership, Domestic Ownership and Corporate Governance

Next, I analyze the impact of domestic investors on the quality of corporate governance as well as examine whether the positive relation between corporate governance and foreign institutional ownership is affected after considering the impact of domestic ownership. According to the results reported in column (1) of Table 2.5, domestic ownership negatively affects corporate governance, the coefficient is significant at 99% confidence level. In column (2), the proportion of both foreign ownership and domestic ownership in the same regression was used. I find that, even after controlling the effect of domestic ownership, the results do not change and show a strong positive relation between foreign institutional ownership and corporate governance. In terms of Japanese governance structure, the negative effect of domestic investors on the governance score can be associated with the potential business relations between such investors and the invested firms. Since, only independent investors have the ability to efficiently monitor a firm's management (Brickley et al. 1988; Almazan et al. 2005), commercial ties with the invested firms may compromise the active monitoring role of domestic investors. Consequently, investigating the governance role of domestic investors in

aggregate may lead to significantly biased results, the reason being, not all the domestic investors have close business relations with the firms in which they invest.

I next classify the domestic investors into two groups according to the degree of their business relationships with the firms. These groups include: domestic investors that are likely to have business ties with the invested firms (relationship-oriented), and investors that are independent from close business relationships (independent). Relationship-oriented domestic investors include banks and insurance companies, whereas securities companies, financial holdings, credit and leasing, funds and trusts are treated as independent type of institutional investors[16] (Brickley et al. 1988; Chen et al. 2007; Almazan et al. 2005; Shinozaki et al. forthcoming). I am interested to investigate whether the impact of domestic investors on governance is different for the two categories of investors. According to column (3) of Table 2.5, the coefficient of relationship-oriented domestic ownership is negative and significant at 99% level, suggesting that such investors negatively impact the quality of corporate governance. In contrast, the results in column (4) depict that independent domestic institutional ownership is positively associated with corporate governance. This indicates that investors improve the quality of governance when they are independent of close relationships with the firms in which they hold equity stakes.

Moreover, in column (4) of Table 2.5, I report results for the relation between foreign ownership and corporate governance after controlling the effect of relationship-oriented investors and independent domestic institutional investors. The results remain unchanged. However, I find that the negative impact of relationship-oriented domestic investors is reversed if firms have a higher ratio of foreign ownership, as shown by their interaction term in column (4). The results on the interaction term suggest that increased foreign ownership mitigates the negative influence of relationship-oriented domestic investors. Since large foreign investors have the ability to import corporate governance mechanisms in the invested firms (Aggarwal et al. 2011; Hamao et al. 2011), they may influence the association between relationship-oriented domestic investors and corporate governance by using voting power or pressurizing management to make amendments in the event of

[16] I use Top 30 Major Shareholders database for the classification of domestic investors based on their relationship sensitivity, because it offers a straightforward segmentation of overall domestic investors into relationship-oriented and independent institutional ownership.

decisions that negatively affect shareholder value. Overall, the findings suggest that foreign institutional investors are effective in improving governance even when the shareholder protection is stronger in the portfolio firm′s country.

2.4.4. Investment Horizon of Foreign Institutional Investors and Corporate Governance

In this section, this study investigates the impact of foreign institutional block-holders' investment horizon on corporate governance. I include our first investment horizon measure (IOP) in the analysis as an indicator variable that equals one if firms have above-median IOP and zero otherwise. Column (1) of Table 2.6 provides the results on the relation between investment horizon of foreign block-holders and corporate governance. Regression estimates shown in column (1) suggest that corporate governance is positively and significantly related to investment horizon of large foreign institutional investors. The results imply that corporate governance improves with the investment horizons by foreign institutional investors. The results are consistent with the previous literature (Elyasiani & Jia, 2010; Attig et al. 2010; Chen et al. 2007) and indicate the active monitoring role played by large long term foreign institutional investors.

I next use two additional measures for the investment horizon of foreign institutional block-holders. Column (2) of Table 2.6 shows the estimates for maintain-stake-points duration method where the variable enters as an indicator that equals one if firms have above-median values on maintain-stake-points and zero otherwise. According to the results, the coefficient on the explanatory variable of interest is positive and significant. Based on the widely used measures of investment horizon, IOP and maintain-stakes-points duration, it was found that foreign block-holders with longer horizons improve governance, but insignificant results with the third measure of investment horizon, the stable investment duration in column (3).

Next, I investigate whether foreign block-holders′ investment horizon has significant impact on governance improvements even after controlling for the equity ownership by foreign investors. The results are reported in column (4) through (6) of Table 2.6.

Table 2.5 Foreign Institutional Ownership, Domestic Ownership and Corporate Governance

This table shows estimates of regressions of impact of domestic ownership on corporate governance. The dependent variable is governance score at time t. The main independent variables in column (1) and (2) are domestic ownership and foreign ownership. In column (3), the independent variables are relationship-oriented investors and independent domestic institutional investors. I use indicator variable for the highest quartile of one year lagged foreign ownership as independent variable in column (4). Control variables are lagged by one period. Cash holdings is the ratio of sum of cash, deposits, and marketable securities to total assets. Capital expenditure equals the ratio of annual change in fixed assets plus depreciation charges to total assets. R&D expense is the ratio of research and development expenses to total assets. Dividends are the ratio of dividends paid on common stock to total assets. ROA equals operating income to totals assets. Firm size is the natural logarithm of total assets. Sales growth is one year annual growth rate in net sales. Leverage is the ratio of total debt to total assets. Market-to-book ratio is the ratio of market value of total assets to book value of total assets. ROA equals operating income to totals assets. PPE is the ratio of plant, property, and equipment to total assets. Foreign sales is the ratio of international annual net sales to net sales. Close is the number of shares held by special few shareholders. All models report estimates of industry fixed-effects regressions with year dummies. All ratios are winsorized at the 1% and 99% levels. Standard errors are estimated with clustered errors at the firm level. t-statistics are presented in brackets. Superscripts *, **, and *** indicate significance at 10%, 5%, and 1% confidence levels, respectively.

Dependent Variable (Gov-Score)	[1]	[2]	[3]	[4]
Foreign Ownership (t-1)		0.200***		
		(5.443)		
Domestic Ownership (t-1)	-0.109***	-0.109***		
	(-3.670)	(-3.720)		
Relationship-oriented (t-1)			-0.187***	-0.196***
			(-5.708)	(-5.333)
Independent (t-1)			0.106***	0.0506*
			(4.409)	(1.885)
High Foreign (t-1)				0.0254**
				(2.499)
High Foreign (t-1) × Relationship-oriented (t-1)				0.134**
				(2.132)
Firm Size (t-1)	0.0201***	0.0114***	0.0152***	0.0116***
	(7.847)	(4.064)	(5.291)	(4.008)
Sales Growth (t-1)	-0.0274***	-0.0237**	-0.0317***	-0.0288***
	(-2.846)	(-2.489)	(-2.859)	(-2.616)
Leverage (t-1)	-0.104***	-0.0808***	-0.0968***	-0.0908***
	(-7.240)	(-5.503)	(-5.819)	(-5.462)
Cash Holdings (t-1)	-0.0337	-0.0400	-0.0309	-0.0338
	(-1.368)	(-1.605)	(-1.030)	(-1.137)
Capital Expenditures (t-1)	0.0673***	0.0678***	0.0423	0.0423
	(2.706)	(2.755)	(1.464)	(1.478)
Market-to-Book (t-1)	0.0732***	0.0612***	0.0626***	0.0575***
	(10.86)	(8.727)	(7.999)	(7.303)
ROA (t-1)	0.306***	0.296***	0.340***	0.352***
	(6.812)	(6.566)	(6.337)	(6.568)
R&D Expenses (t-1)	0.789***	0.782***	0.803***	0.776***
	(5.508)	(5.533)	(4.889)	(4.753)
PPE (t-1)	-0.137***	-0.125***	-0.145***	-0.142***
	(-7.908)	(-7.300)	(-7.355)	(-7.274)
Foreign Sales (t-1)	-0.000345	-0.000398*	-0.000425*	-0.000477**
	(-1.519)	(-1.732)	(-1.808)	(-2.008)
Close (t-1)	0.00640	0.00579	0.00815	0.0110
	(0.326)	(0.299)	(0.364)	(0.489)
Observations	9,451	9,451	7,634	7,634
R-squared	0.241	0.250	0.274	0.280
Years	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes

*, **, ***: Significant at the 10%, 5%, and 1% levels, respectively.

Consistent with the previous findings of this study, the figures in column (4-6) depict that foreign ownership is positively and significantly associated with corporate governance. In contrast,

the coefficients on all three investment horizon measures IOP, maintain-stake-points, and stable investment duration are found to be insignificant.

Although not tabulated here, I also perform additional tests to further confirm the findings. First, I divide the overall sample into long and short investment horizon quartiles and conduct regressions for each subsample using the foreign institutional ownership as the main explanatory variable. I find that foreign ownership positively and significantly impacts corporate governance in firms with longer investment horizons. Interestingly, similar results are found for firms with shorter investment horizon; the coefficient on foreign institutional ownership is positive and significant. Second, I estimate regressions by adding an interaction term between foreign institutional ownership and the indicator variable for long investment horizon. The coefficient on the interaction term is found to be insignificant. These results indicate that foreign institutional ownership is associated with governance improvements irrespective of their investment horizon in the portfolio firms. I predicted that stable (long-term) foreign investors have greater impact on governance because investors with long investment horizons are more likely to have expertise and incentives to monitor the management, which in turn mitigate the agency problems. However, the evidence suggests that equity ownership by foreign investors is a main driver of governance improvements in Japanese firms. It is possible that these results may have been affected by the data limitations of this study. Since the data of all the individual foreign institutional shareholders is not readily available, this study measures the investment horizon of foreign institutional investors by using only the top largest shareholders. Although, the objective of using investment horizon is to account for both the length and size of foreign shareholding, this limitation, to some extent, may affect the results of investment horizon of foreign institutional investors.

I next examine the relation between investment horizon of domestic block-holders and corporate governance. Column (1) of Table 2.7 shows the results on the association between investment horizon of large relationship-oriented domestic investors and corporate governance. Based on the reported results, I find a negative association between the investment horizon of large relationship-oriented investors and corporate governance.

Table 2.6 Investment Horizon of Foreign Institutional Investors and Corporate Governance

This table shows estimates of regressions of impact of investment horizon of foreign institutional investors on corporate governance. The dependent variable in all models is the governance score at time t. The main independent variable in column (1) is the indicator variable for investment horizon of foreign institutional investors. In column (2) and (3), I use additional measures of foreign institutional investors' horizon; maintain-stake-points and stable investment duration. Column (4) through (6) include both the proportion and investment horizon of foreign institutional investors. Control variables are lagged by one period. Cash holdings is the ratio of sum of cash, deposits, and marketable securities to total assets. Capital expenditure equals the ratio of annual change in fixed assets plus depreciation charges to total assets. R&D expense is the ratio of research and development expenses to total assets. Dividends are the ratio of dividends paid on common stock to total assets. ROA equals operating income to totals assets. Firm size is the natural logarithm of total assets. Sales growth is one year annual growth rate in net sales. Leverage is the ratio of total debt to total assets. Market-to-book ratio is the ratio of market value of total assets to book value of total assets. ROA equals operating income to totals assets. PPE is the ratio of plant, property, and equipment to total assets. Foreign sales is the ratio of international annual net sales to net sales. Close is the number of shares held by special few shareholders. All models report estimates of industry fixed-effects regressions with year dummies. All ratios are winsorized at the 1% and 99% levels. Standard errors are estimated with clustered errors at the firm level. t-statistics are presented in brackets. Superscripts *, **, and *** indicate significance at 10%, 5%, and 1% confidence levels, respectively.

Dependent Variable (Gov-Score)	[1]	[2]	[3]	[4]	[5]	[6]
IOP (t)	0.0103**			0.00292		
	(2.038)			(0.577)		
Maintain-Stake-Points (t)		0.0110**			0.00325	
		(2.190)			(0.643)	
Stable Duration (t)			0.00270			-0.00143
			(1.444)			(-0.755)
Foreign Ownership (t-1)				0.196***	0.196***	0.00695***
				(5.301)	(5.278)	(2.743)
Firm Size (t-1)	0.0139***	0.0138***	0.0141***	0.00646**	0.00644**	-0.0228**
	(6.043)	(6.000)	(6.228)	(2.515)	(2.507)	(-2.388)
Sales Growth (t-1)	-0.0263***	-0.0261***	-0.0257***	-0.0227**	-0.0227**	-0.0780***
	(-2.728)	(-2.711)	(-2.672)	(-2.383)	(-2.378)	(-5.342)
Leverage (t-1)	-0.0954***	-0.0950***	-0.0961***	-0.0760***	-0.0759***	-0.0318
	(-6.652)	(-6.627)	(-6.688)	(-5.199)	(-5.193)	(-1.280)
Cash Holdings (t-1)	-0.0231	-0.0228	-0.0246	-0.0306	-0.0305	0.0696***
	(-0.943)	(-0.930)	(-1.003)	(-1.238)	(-1.233)	(2.830)
Capital Expenditures (t-1)	0.0687***	0.0688***	0.0703***	0.0698***	0.0698***	0.0605***
	(2.768)	(2.771)	(2.828)	(2.837)	(2.837)	(8.745)
Market-to-Book (t-1)	0.0717***	0.0716***	0.0711***	0.0604***	0.0604***	0.276***
	(10.75)	(10.74)	(10.64)	(8.712)	(8.713)	(6.125)
ROA (t-1)	0.282***	0.281***	0.284***	0.275***	0.275***	0.778***
	(6.307)	(6.290)	(6.348)	(6.108)	(6.103)	(5.501)
R&D Expenses (t-1)	0.784***	0.783***	0.780***	0.776***	0.776***	-0.122***
	(5.468)	(5.467)	(5.437)	(5.489)	(5.489)	(-7.164)
PPE (t-1)	-0.132***	-0.132***	-0.133***	-0.121***	-0.121***	-0.000380*
	(-7.691)	(-7.673)	(-7.734)	(-7.150)	(-7.145)	(-1.657)
Foreign Sales (t-1)	-0.000335	-0.000335	-0.000355	-0.000387*	-0.000387*	0.0362*

	(-1.481)	(-1.479)	(-1.558)	(-1.687)	(-1.686)	(1.952)
Close (t-1)	0.0357*	0.0356*	0.0330*	0.0349*	0.0349*	0.00695***
	(1.910)	(1.908)	(1.762)	(1.887)	(1.887)	(2.743)
Observations	9,451	9,451	9,451	9,451	9,451	9,451
R-squared	0.239	0.239	0.238	0.247	0.247	0.247
Year	Yes	Yes	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes	Yes	Yes

*, **, ***: Significant at the 10%, 5%, and 1% levels, respectively.

Table 2.7 Investment Horizon of Domestic Investors and Corporate Governance

This table shows estimates of regressions of impact of investment horizon of domestic institutional investors on corporate governance. The dependent variable in all models is the governance score at time t. The main independent variable in column (1) is the indicator variable for investment horizon of relationship-oriented domestic investors. The main independent variable in column (2) is the indicator variable for investment horizon of independent domestic investors. Column (3) and (4) include both the proportion and investment horizon of relationship-oriented and independent investors. Control variables are lagged by one period. Cash holdings is the ratio of sum of cash, deposits, and marketable securities to total assets. Capital expenditure equals the ratio of annual change in fixed assets plus depreciation charges to total assets. R&D expense is the ratio of research and development expenses to total assets. Dividends are the ratio of dividends paid on common stock to total assets. ROA equals operating income to totals assets. Firm size is the natural logarithm of total assets. Sales growth is one year annual growth rate in net sales. Leverage is the ratio of total debt to total assets. Market-to-book ratio is the ratio of market value of total assets to book value of total assets. ROA equals operating income to totals assets. PPE is the ratio of plant, property, and equipment to total assets. Foreign sales is the ratio of international annual net sales to net sales. Close is the number of shares held by special few shareholders. All models report estimates of industry fixed-effects regressions with year dummies. All ratios are winsorized at the 1% and 99% levels. Standard errors are estimated with clustered errors at the firm level. t-statistics are presented in brackets. Superscripts *, **, and *** indicate significance at 10%, 5%, and 1% confidence levels, respectively.

Dependent Variable (Gov-Score)	[1]	[2]	[3]	[4]
Relationship-oriented IOP(t)	-0.0242***		-0.0181***	
	(-4.818)		(-3.561)	
Independent IOP(t)		-0.00285		-0.00604
		(-0.530)		(-1.119)
Relationship-oriented (t-1)			-0.138***	
			(-4.250)	
Independent (t-1)				0.0819***
				(3.440)
Firm Size (t-1)	0.0195***	0.0191***	0.0208***	0.0144***
	(7.954)	(7.727)	(8.336)	(4.953)
Sales Growth (t-1)	-0.0339***	-0.0341***	-0.0346***	-0.0316***
	(-3.061)	(-3.062)	(-3.123)	(-2.836)
Leverage (t-1)	-0.112***	-0.112***	-0.110***	-0.101***
	(-6.822)	(-6.797)	(-6.713)	(-6.017)
Cash Holdings (t-1)	-0.0287	-0.0241	-0.0369	-0.0187
	(-0.954)	(-0.797)	(-1.221)	(-0.627)
Capital Expenditures (t-1)	0.0462	0.0554*	0.0390	0.0553*
	(1.585)	(1.888)	(1.343)	(1.895)
Market-to-Book (t-1)	0.0698***	0.0720***	0.0679***	0.0676***
	(9.263)	(9.556)	(8.994)	(8.735)
ROA (t-1)	0.354***	0.358***	0.355***	0.342***
	(6.626)	(6.641)	(6.632)	(6.353)
R&D Expenses (t-1)	0.833***	0.823***	0.804***	0.834***
	(5.061)	(4.995)	(4.909)	(5.041)
PPE (t-1)	-0.149***	-0.156***	-0.149***	-0.150***
	(-7.521)	(-7.893)	(-7.463)	(-7.627)
Foreign Sales (t-1)	-0.000430*	-0.000441*	-0.000399*	-0.000463*
	(-1.822)	(-1.870)	(-1.719)	(-1.929)
Close (t-1)	0.0244	0.0366*	0.00283	0.0405*
	(1.123)	(1.689)	(0.126)	(1.877)
Observations	7,634	7,634	7,634	7,634
R-squared	0.266	0.261	0.271	0.265
Year	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes

*, **, ***: Significant at the 10%, 5%, and 1% levels, respectively.

Furthermore, as reported in column (2), I find no evidence for the effect of large and stable independent domestic investors on governance. Moreover, in column (3), I control the effect of the relationship-oriented domestic ownership and find that both their ownership proportion and investment horizon negatively affect corporate governance. For the large independent domestic institutional investors, the findings are similar to foreign institutional investors. This suggests that the equity ownership is a significant determinant of governance improvements for investors who are independent of close relations with the firms in which they hold equity stakes. In an untabulated analysis, I also examine the investment horizon of both relationship-oriented and independent domestic investors using maintain-stake-points and stable investment duration variables and obtain similar results.

2.5. Summary and Conclusion

This chapter investigates whether foreign institutional ownership affects quality of corporate governance by analyzing equity ownership and investment horizon of foreign investors. While a number of studies indicate that foreign institutional investors play a significant role in promoting governance improvements in countries with weaker shareholder protection, there is little evidence about their impact in countries with strong shareholder rights. In line with extant evidence, the results show that foreign ownership is positively associated with corporate governance in Japan, where shareholder rights are "legally" better protected than those in other countries like the United States, the home of the major institutional investors, but in fact the corporate governance has been "shareholder-unfriendly" due to the presence of "management-friendly" cross-shareholders. On the other hand, I do not find evidence that foreign block-holders with longer investment horizons play a larger role in improving governance although literature suggests that such stable owners have greater incentives to actively monitor the firms. In contrast, both the equity ownership and investment horizon of large domestic investors such as banks and insurance companies, who have potential business relationships with the invested firms, negatively impact corporate governance. Interestingly, such negative effect of relationship-oriented ownership is more likely to be mitigated when foreign institutional investors hold large stakes in the firms. Overall, the results suggest that foreign equity

ownership promotes improvements in corporate governance of Japanese firms irrespective of their investment horizons.

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Appendix 2

Table A2 Corporate Governance Attributes

This table presents the 19 corporate governance attributes used in the measurement of governance score. The attributes are divided in three sub-indices: board structure, ownership and compensation, and disclosure.

	Panel A: Board Structure
1	Number of board of directors
2	Number of insider directors
3	Proportion of outsider directors
4	Proportion of non-executive outside directors
5	Percentage of auditors among board members
6	Percentage of interlocking directors
7	Flag committees
8	Frequency of board renewal
	Panel B: Ownership & Compensation
9	Shares held by CEO
10	Shareholdings ratio of outside directors
11	Stock option scheme
	Panel C: Disclosure
12	Audit opinions
13	Changes in accounting policies
14	Earnings announcement timing
15	Shareholders meeting concentration ratio
16	Disclosure of executive remuneration
17	Disclosure of total audit fee
18	Usability of firm's information
19	Sufficiency of firm’s information on its website

Chapter 3

Foreign Institutional Ownership and Corporate Cash Holdings in Japan

3.1. Introduction

Previous literature on the association between corporate governance and the level of cash holdings postulates that quality of corporate governance plays a vital role in explaining firm′s cash holdings. Cross country evidence by Dittmar et al. (2003) shows a negative association between corporate governance and cash holdings. Using country level investor protection as an indicator of the quality of corporate governance, Dittmar et al. (2003) find that firms hold higher cash reserves in countries with weaker investor protection. In addition, Pinkowitz et al. (2006) report that firms in countries with poor protection of shareholder rights hold more cash. They find that value of cash is lower for firms in countries with poor governance. Including governance indicators at both country and firm level, Kalcheva and Lins (2007) report similar results. In a similar vein, Dittmar and Smith (2007) examine corporate governance mechanisms that measure investor oversight by large institutional shareholders and managerial entrenchment resulting from antitakeover provisions and show that both of these aspects of governance improve the value and use of cash. Thus, consistent with Jensen (1986) agency costs of free cash flow, it is proposed that in the presence of agency conflicts between managers and the minority shareholders, self-interested-managers accumulate more cash. In addition, using data from the U.S., Harford et al. (2008) report a positive association and show that firms with strong corporate governance hold high cash reserves. They show that empowered shareholders allows managers to hold high cash reserves in order to avoid the costs associated with underinvestment. The evidence presented in these studies is in line with the assumption that firm′s cash level is a result of, or a mean to deal with, agency conflicts.

In this chapter, I further examine whether increase in foreign equity ownership is indeed related with improvements in the quality of corporate governance by revisiting the agency explanation of cash holdings for a sample of Japanese firms. I predict that if increase in the equity ownership by foreign institutional investors is indeed related to improvements in the quality of corporate

governance, they should impact the cash holdings behavior (cash management practices) in such a way that firms are able to respond to its capital needs in a timely and value maximizing manner.

The traditional Japanese corporate governance, characterized by its unique relationship-oriented corporate ownership structure, have distinctive features that played a significant role in the cash holding decisions of firms. Japanese firms are often described as cash rich and it is evident from the literature that compared to other countries, firms in Japan not only held considerably higher levels of cash but also demonstrated a greater persistence in the cash holdings (Rajan and Zingales, 1995; Pinkowitz and Williamson, 2001; Dittmar et al. 2003; Pinkowitz et al. 2012). The higher cash balances of Japanese firms are considered as an outcome of the conventional corporate governance where the main bank provided capital and governance to firms. Pinkowitz and Williamson (2001) provide evidence that firms in Japan hold high cash reserves due to high main-bank power. In addition, Kang and Stulz (2000) find that despite of increased availability of capital, firms with main bank ties substantially invest less than other firms. Weinstein and Yafeh (1998) argue that even though firms with main bank ties have easy access to capital, the performance and growth of those firms were suboptimal as compared to firms with no close relations with the main bank. Similarly, Hiraki et al. (2003) find that main bank borrowing negatively impacts the firm value. Low firm performance and decreased value suggest that firms in Japan held cash in excess of their capital needs. It therefore important to examine whether the transition in governance structure resulted in changes in cash holding behavior of firms.

However, the amount of cash held by Japanese firms has considerably decreased in recent years (as seen in Figure 1.2). One possible reason is that the increased involvement of foreign institutional investors prompts a decrease in the subsequent level of cash holdings. As suggested by recent literature on the role of institutional investors (for example, see Ferreira and Matos, 2008; Aggarwal et al., 2011), foreign investors may play a special role in improving corporate governance and thus increased equity acquisition by foreign investors may have led to mitigate free cash flow problems by forcing managers to disgorge excessive cash.

The empirical analyses result in several significant findings. I find that foreign institutional investors cause a decline in cash balances of firms only in the presence of higher propensity of wasteful behavior. With respect to the value of cash, the findings of this chapter show that marginal value of cash is greater in firms with high foreign ownership, this is suggestive of increased and effective monitoring by foreign investors. I use further analysis to obtain stronger evidence on whether foreign ownership is associated with efficient usage of excess cash. Firms with a decline in their cash reserves negatively impact the operating performance of firms which is suggestive of inefficient ways of cash usage. However, the results show that this negative impact on operating performance is reversed if firms have larger presence of foreign institutional investors. I find no significant evidence on the impact of investment horizon of foreign institutional block-holders and stable shareholders on cash holdings.

This chapter proceeds as follows. Section 3.1 presents the literature review. Section 3.2 describes the research design and variables. Section 3.3 describes sample, data, and empirical results. Section 3.4 presents the summary of this chapter.

3.2. Hypothesis Development

Previous literature on the relation between agency problems and cash shows that corporate governance is a significant determinant of cash holdings where improved corporate governance is related to either lower or higher cash reserves. Dittmar et al. (2003) provide evidence of a negative relation between corporate governance and cash holdings. They show that in countries with weaker investor protection, firms hold more cash as compared to firms in countries with less agency problems. Similarly, using indicators for country and firm level agency problems, Kalcheva and Lins (2007) show that strong corporate governance is associated with lower cash holdings. The rationale for negative association between agency problems and cash is based on the prediction that poorly monitored managers accumulate cash and have the propensity to waste free cash flows through inefficient and value decreasing investment decisions (Jensen, 1986). Harford et al. (1999) provide evidence of such managerial tendency in the presence of cash stockpiles and report that managers in firms with greater likelihood of agency conflicts spend cash on unnecessary acquisitions that

adversely affects the value. Furthermore, with strong corporate governance, shareholders can put pressure on corporate managers to disgorge excessive cash that can enable either, overinvestment in negative NPV projects, or used by entrenched managers for their private benefits (Jensen, 1986; LLSV, 2000). Pinkowitz et al. (2006) find that because of the ability of entrenched managers to inefficiently use cash resources, value of cash is lower for firms in countries with poor governance. In addition, they also present evidence that shareholders value dividends more in such firms. In a similar vein, using data for U.S. firms, Dittmar and Smith (2007) report that value of cash is lower for firms with weaker governance structure. This is because managers in firms with poor governance waste cash on less profitable projects and negatively impact the firm value. In contrast, Harford et al. (2008) report a positive association and show that firms with strong corporate governance hold high cash reserves. They show that empowered shareholders allow managers to hold high cash reserves in order to avoid the costs associated with underinvestment. Although, they present a positive association between governance and cash holdings, the value implications presented in their study are in line with that reported in other studies, that is, poor governance and higher cash reserves destroy firm value.

Based on the preceding arguments, the higher levels and greater persistence of cash holdings in Japan can be considered as an outcome of the relationship-based conventional Japanese governance structure where the main-bank was the primary monitor and disciplinarian of firms. Main banks along with stable cross-shareholdings, between firms and banks or among non-financial firms, play a central role in the corporate governance mechanisms of firms in Japan (Prowse, 1992; Aoki et al. 1994; Morck and Nakamura, 1999). Rajan and Zingales (1995) show that compared to other countries, Japanese firms considerably held higher levels of cash. Pinkowitz and Williamson (2001) find that Japanese firms hold excessive amounts of cash due to high main bank power as well as absence of other monitoring forces. Their justification for the higher cash holdings is linked to rent appropriation by the main-banks through interest payments where firms were persuaded to use large amount of bank-financed capital. Furthermore, results presented in previous research are coherent with the view that in relationship-based governance structure, firms with main bank ties held large cash reserves in

excess of that needed for operations and investments, suggesting that cash levels were above the optimal level and as a consequence, the value of firm was negatively affected. Consistent with the main bank rent extraction view, Weinstein and Yafeh (1998) argues that even though firms with main bank ties have easy access to capital, the performance and growth of those firms were suboptimal as compared to firms with no close relations with the main bank. Similarly, Hiraki et al. (2003) find that main bank borrowing negatively impacts the firm value. Low firm performance and decreased value suggest that firms in Japan held cash in excess of their capital needs. This can be also be supported with the evidence presented in Kang and Stulz (2000). They find that despite of increased availability of capital, firms with main bank ties substantially invest and perform less than firms with no main bank relations. This raises concerns regarding the efficacy of the traditional relationship-based corporate governance structure in Japan. Since firms with higher excess cash reserves have better performance and improved value if the quality of corporate governance in place is good (Dittmar and Smith, 2007).

However in the late 1990s, with a sharp increase in the ownership by foreign investors and weakening of main bank power, Japanese governance structure changed considerably. Since, foreign investors can actively drive changes in corporate governance practices through direct or in-direct interventions (Gillan and Starks, 2003), increased foreign ownership led to a change in the previously relationship-based governance to a more shareholder based governance structure. With fewer business relations with the firms they invest, foreign investors that are typically large institutional investors, could be critical of managerial decisions and have incentives to be involved in monitoring. Foreign investors play a special role in improving corporate governance (Ferreira and Matos, 2008; Aggarwal et al. 2011) and thus have the potential to mitigate agency conflicts associated with cash reserves through increased monitoring and control.

With the transition from relationship-based governance to a shareholder based governance structure, foreign investors may have impacted the cash holdings behavior of Japanese firms. I hypothesize a negative relation and expect that firms with increased foreign ownership will experience a decline in their cash ratio. In addition, this study directly tests for the agency explanation

for the decrease in cash holdings. First, I target the cash reserves that are more prone to generate agency conflicts between shareholders and managers, and expect that cash significantly declines for firms with cash balances that are more likely to be opportunistically used by the managers. That is, if increased foreign ownership is indeed related to any improvement in the quality of corporate governance, it will lessen the agency conflicts associated with liquid assets in excess of their capital needs and therefore, prevents the misappropriation of cash. Second, I further examine the notion that change in cash is associated with agency problems and investigate the value of cash holdings. Since managers in firms with poor governance have the propensity to waste liquid assets, the value of cash holdings is lower for firms with weaker corporate governance (Pinkowitz et al. 2006; Dittmar and Smith). Unlike before, where firms had close relations with main bank along with coordinated cross-holdings and held significantly higher amounts of cash, I expect that increase in foreign ownership enhances the value of cash holdings.

Hypothesis 3.1: Firms whose cash reserves significantly exceed their needs in the foreseeable future increased foreign institutional ownership provides discipline in terms of efficient monitoring and causes a decline in the cash levels and therefore, enhances the value and usage of cash.

3.3. Research Design

3.3.1. Main Regression Model

To measure the impact of foreign institutional ownership and investment horizon of foreign institutional block-holders on cash holdings, I build on Opler et al. (1999) and Bates et al. (2012) and investigate the agency explanations for the changes in cash holdings. I examine whether the shareholder based governance, expressed by substantial changes in Japanese corporate ownership structure, drives changes in the previously higher levels of cash holdings. Specifically, this research examines whether increased presence of foreign institutional investors, their investment horizon, and stable shareholders are related to the change in a firm's cash position. To do this, I employ panel regressions with change in cash holdings as the dependent variable. Change in cash is measured from year t-1 to year t. The following equation describes the regression:

$$\Delta CASH_{i,t} = \alpha_0 + \beta_1 Ownership_{i,t-1}(InvestHorizon_{i,t}) + \beta_2 SIZE_{i,t} + \beta_3 MTOB_{i,t} + \beta_4 CFLOW_{i,t} + \beta_5 NWC_{i,t} + \beta_6 RD_{i,t} + \beta_7 DIV_{i,t} + \beta_8 CAPEX_{i,t} + \beta_9 LVRGE_{i,t} + \beta_{10} CVOLAT_{i,t} + YearDum + FirmFixedEffects + \varepsilon_{i,t}$$

Following previous literature, we measure cash holdings as the ratio of year-end cash and marketable securities to year-end net assets, where net assets are calculated as total assets less cash and marketable securities. The dependent variable Δ*CASH* thus represents the ratio of cash to net assets from year t-1 to t. The independent variable, ownership, is categorized into ownership by foreign institutional investors (*FOWN*) and stable shareholders (*STABLEOWN*). Foreign ownership is measured as the percentage of shares held by foreign institutional investors while stable shareholder ownership is estimated as the percentage of shares held by banks, insurance companies, and non-financial corporate block-holders.

I also compare and analyze the impact of foreign institutional block-holders with longer investment horizons on cash holdings. I use two measures to distinguish between large foreign institutional shareholders with short-term and long-term investment horizons. The first measure is the institutional ownership persistence (*IOP*). Following Elyasiani and Jia (2010), this study defines IOP for foreign institutional block-holders (*FOWNIOP*) in a firm as the ratio of their average ownership proportion to the standard deviation of the ownership proportion over a 5 year period including the sample year. I measure IOP by using interim data[17] for the individual foreign institutional block-holders[18] in a specific firm. For instance, IOP for each foreign institutional investor in 2008 is calculated using 10 interims, from the first fiscal interim of 2004 to the second interim of 2008. The value of IOP is high if an investor's shareholding is stable across a 5 year period. IOP for a firm is then calculated as the average IOP across all the foreign institutional block-holders in the firm. For the second measure of investment horizon, the author follows Bohren et al. (2005) and Elyasian and Jia (2010), and use the maintain-stake-points duration method. The maintain-stake-points duration measure (*FOWNSTAKES*) is the number of interims in which a foreign institutional investor is among the largest shareholders of a specific firm out of 10 interims. If foreign institutional investor holds a

[17] Quarterly data for individual institutional investors is not available in the Major Shareholders Database.
[18] Investors among the top 30 largest shareholders.

high proportion of shares for many interims during a 5 year period including the sample year, the *FOWNSTAKES* measure will be high. Maintain-stake-points duration for a firm is calculated as the average maintain-stake-point durations across all the foreign institutional block-holders.

This study also controls the effect of firm characteristics that are previously found to be associated with corporate cash holdings. Consistent with Opler et al. (1999) I include several firm-level control variables that are motivated by precautionary and transaction costs motives of cash holdings. The control variables include firm size (*SIZE*), market to book ratio (*MTOB*), the ratio of cash flow from operations to net assets (*CFLOW*), net working capital deflated by net assets (*NWC*), ratio of research and development expenditures to net sales (*RD*), dividend dummy that takes the value of one if firm pays dividends (*DIV*), capital expenditures to net assets (*CAPEX*), firm leverage (*LVRGE*), and firm's cash flow volatility over a period of five years (*CVOLAT*). To provide strong evidence of causality and better control for unobserved firm characteristics and year-specific effects, I estimate the cash holdings equation using firms and year fixed effects.

3.4. Empirical Results

3.4.1. Sample and Descriptive Statistics

This research uses a sample that consists of firms listed on Tokyo Stock Exchange. I obtain firm-specific financial information and shareholdings data for both stable domestic shareholders and foreign institutional shareholders from Nikkei Economic Electronic Database System Financial Quest (NEEDS FQ). In accordance with Chapter 2, individual data for large stable domestic shareholders and foreign institutional block-holders is obtained from the Top 30 Major Shareholders Database in NEEDS FQ. For the impact of ownership type on cash holdings, regressions were estimated using data from 2004 through 2012. However, this study reports results for the investor horizon of foreign institutional block-holders for the period 2008 to 2012. The reason for not incorporating the first 4 years is discussed in Chapter 2. Financial firms, utility firms, and firms with unavailable data were dropped from the sample. This restricts the sample of this study to 16,898 firm-years from 2,177 non-financial firms. In order to control for the effect of outliers, firm level ratios were winsorized at 1% and 99% levels. Table 3.1 presents summary statistics for cash holdings, ownership variables,

investment horizon of foreign block-holders, and controls variables for the period 2004-2012. The correlation among the variables employed is presented in Table 3.2. In general, the variables are not highly correlated. The largest correlation is between foreign institutional shareholders (*FOWN*) and firm size (*SIZE*) (ρ=0.556). However, the results remain unchanged after removing firm size and using the size-adjusted foreign institutional ownership.

3.4.2. Foreign Institutional Ownership, Stable Ownership, and Changes in Cash Holdings

In column (1) of Table 3.3, regression results for the impact of foreign institutional ownership on change in level of cash holdings are reported. The estimated coefficient on foreign ownership (*FOWN*) is in accordance with the predicted sign and suggests that there is a negative relation between foreign ownership and subsequent changes in cash holdings, Japanese corporate cash reserves significantly declined in the period characterized by increased foreign ownership. In other words, firm′s cash management practices may have changed due to the transition in the governance structure. Control variables have their expected signs. In contrast, stable shareholders (STABLEOWN) have no effect on the level of cash reserves, as shown in column (2). This association can be attributed to the decline in the previously high monopoly power exercised by banks that affected the cash holding behavior of Japanese firms in the 1970s and 1980s.

Table 3.1 Descriptive Statistics

This table presents the summary statistics for cash holdings, ownership variables, and determinants of cash holdings in the sample. Net asset in denominator of variables is calculated as total assets minus cash and marketable securities. Cash is defined as the sum of cash, deposits, and marketable securities to net assets. Foreign ownership is measured as ratio of shares owned by foreign investors to number of shares issued at the end of period. Stable domestic block-holders is the ratio of sum of shareholding by banks, insurance companies, and corporations. Foreign IOP and foreign stakes are the measures of investment horizon of foreign institutional block-holders. Firm size is the natural logarithm of total assets. Market-to-book ratio is the ratio of market value of total assets to book value of total assets. Cash flow from operations is defined as the ratio of earnings before interests and taxes plus depreciation and amortization less interests, taxes, and common dividends to net assets. Net working capital is the ratio of current assets minus current liabilities calculated without cash, deposits, and marketable securities to net assets. R&D is the ratio of research and development expenses to sales. Dividend dummy is an indicator variable if firms pay dividends in the current fiscal year. Capital expenditure equals to annual change in fixed assets plus depreciation charges to net assets. Leverage is measured as the ratio of total debt to total assets. Cash flow volatility is the five years standard deviation of firm's cash flow. ROA equals operating income to totals assets. PPE is the ratio of plant, property, and equipment to net assets.

	N	Mean	Std. Dev	25th Percentile	Median	75th Percentile
Cash Holdings	16,898	0.192	0.362	0.051	0.112	0.220
Foreign Institutional Shareholders	16,898	0.098	0.112	0.014	0.057	0.150
Stable Domestic Block-Holders	16,898	0.310	0.173	0.179	0.290	0.427
Foreign IOP (Investment Horizon)	10,012	0.158	0.133	0.000	0.189	0.259
Foreign Stakes (Investment Horizon)	10,012	2.378	2.427	0.000	2.000	4.000
Firm Size	16,898	10.812	1.415	9.873	10.672	11.655
Market-to-Book	16,898	1.158	0.514	0.854	1.022	1.293
Cash Flow from Operations	16,898	0.061	0.057	0.030	0.054	0.085
Net Working Capital	16,898	0.031	0.187	-0.088	0.039	0.156
R&D Expenditures	16,898	0.018	0.033	0.000	0.003	0.024
Dividend Dummy	16,898	0.466	0.499	0.000	0.000	1.000
Capital Expenditures	16,898	0.034	0.080	0.000	0.028	0.067
Leverage	16,898	0.479	0.209	0.318	0.480	0.641
Cash Flow Volatility	16,898	0.025	0.030	0.009	0.016	0.029
ROA	16,613	0.048	0.090	0.022	0.041	0.072
PPE	16,613	0.294	0.185	0.158	0.273	0.406

Table 3.2 Correlation Matrix

Net asset in denominator of variables is calculated as total assets minus cash and marketable securities. Cash is defined as the sum of cash, deposits, and marketable securities to net assets. Foreign ownership is measured as ratio of shares owned by foreign investors to number of shares issued at the end of period. Stable domestic block-holders is the ratio of sum of shareholding by banks, insurance companies, and corporations. Firm size is the natural logarithm of total assets. Market-to-book ratio is the ratio of market value of total assets to book value of total assets. Cash flow from operations is defined as the ratio of earnings before interests and taxes plus depreciation and amortization less interests, taxes, and common dividends to net assets. Net working capital is the ratio of current assets minus current liabilities calculated without cash, deposits, and marketable securities to net assets. R&D is the ratio of research and development expenses to sales. Dividend dummy is an indicator variable if firms pay dividends in the current fiscal year. Capital expenditure equals to annual change in fixed assets plus depreciation charges to net assets. Leverage is measured as the ratio of total debt to total assets. Cash flow volatility is the five years standard deviation of firm's cash flow. ROA equals operating income to totals assets. PPE is the ratio of plant, property, and equipment to net assets.

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
1. Cash Holdings	1											
2. Foreign Institutional Shareholders	0.038	1										
3. Stable Domestic Block-Holders	-0.119	-0.351	1									
4. Firm Size	-0.194	0.556	-0.111	1								
5. Market-to-Book	0.152	0.325	-0.170	0.125	1							
6. Cash Flow from Operations	0.234	0.156	-0.033	-0.017	0.343	1						
7. Net Working Capital	-0.016	0.085	-0.006	-0.046	-0.115	-0.005	1					
8. R&D Expenditures	0.113	0.225	-0.094	0.143	0.111	0.016	0.197	1				
9. Dividend Dummy	-0.085	0.034	-0.013	0.115	0.203	0.007	0.084	-0.075	1			
10. Capital Expenditures	-0.005	0.069	-0.015	0.067	0.176	0.294	-0.040	0.018	0.132	1		
11. Leverage	-0.273	-0.200	0.108	0.143	-0.038	-0.272	-0.495	-0.206	-0.050	-0.098	1	
12. Cash Flow Volatility	0.388	-0.007	-0.132	-0.305	0.230	0.102	-0.035	0.110	-0.181	-0.001	-0.103	1

While the investment horizon of foreign institutional block-holders significantly improves the quality of corporate governance, the results shown in column (3) and column (4) suggest that it has no significant impact on changes in cash holdings. The coefficients on both measures of investment horizon are statistically insignificant. This is suggestive of the argument that the level and length of commitment by foreign block-holders have no impact on how firms manage their liquid assets. To further explore the agency view of changes in cash holdings, I introduce two variables that capture the effectiveness of firm′s monitoring. To do this, for each year I divide the sample into quintiles on the basis of foreign institutional ownership and stable ownership. The first variable *MONITORED*, which proxies for the increased monitoring by independent foreign institutional investors is then measured as the combination of the highest quintile of foreign ownership (high foreign ownership) and lowest quintile of stable ownership (low presence of stable investors). The second variable *ENTRNECHED*, representing managerial entrenchment as an outcome of lack of effective monitoring, is measured by combining the lowest quintile of foreign investors (low foreign ownership) with the extreme high quintile of stable shareholders (high stable ownership). Column (5) of Table 3.3 reports results for well monitored firms. In line with the previous findings, the finding posit that increased monitoring causes a subsequent decline in the level of cash reserves, as evidenced by negative and significant coefficient on *MONITORED*. On the other hand, I find no evidence of firms with a higher likelihood entrenched managers to have any significant impact on cash holdings behavior, the coefficient on *ENTRENCHED* is statistically insignificant.

3.4.3. Free Cash Flow Problems and Changes in Cash Holdings

Next, I investigate whether foreign equity ownership leads to a reduction in the level of liquid assets that can be easily appropriated by the self-interested managers. Jensen (1986) proposes that firms with agency problems have larger free cash flows, that is, they hold cash in excess of profitable investment opportunities. To explore the wasteful managerial tendency, I build on Jensen (1986) and attempt to target the setting where cash reserves are more prone to generate agency conflicts. I directly investigate the agency explanation for the change in cash holdings by targeting the cash that is more prone to generate agency problems between managers and shareholders.

Table 3.3 Foreign Institutional Ownership, Stable Ownership, and Changes in Cash Holdings

This table shows estimates of the impact of foreign ownership, stable ownership, and investment horizon of foreign block-holders on changes in corporate cash holdings. Change in cash holdings from period t-1 to t is the dependent variable across all models. Cash is defined as the sum of cash, deposits, and marketable securities to net assets. Independent variables include foreign ownership (FOWN) is measured as ratio of shares owned by foreign investors to number of shares issued at the end of period. Stable domestic block-holders (STABLEOWN) is the ratio of sum of shareholding by banks, insurance companies, and corporations. Foreign IOP (FOWNIOP) and foreign stakes (FOWNSTAKES) are the measures of investment horizon of foreign institutional block-holders. Monitored (MONITORED) equals one if firm is mainly owned by foreign institutional investors. Entrenched (ENTRENCHED) equals one if firm is mainly owned by stable domestic block-holders. Firm size (SIZE) is the natural logarithm of total assets. Market-to-book ratio (MTOB) is the ratio of market value of total assets to book value of total assets. Cash flow (CFLOW) from operations is defined as the ratio of earnings before interests and taxes plus depreciation and amortization less interests, taxes, and common dividends to net assets. Net working capital (NWC) is the ratio of current assets minus current liabilities calculated without cash, deposits, and marketable securities to net assets. R&D (RD) is the ratio of research and development expenses to sales. Dividend dummy (DIV) is an indicator variable if firms pay dividends in the current fiscal year. Capital expenditure (CAPEX) equals to annual change in fixed assets plus depreciation charges to net assets. Leverage (LVRGE) is measured as the ratio of total debt to total assets. Cash flow volatility (CVOLAT) is the five years standard deviation of firm's cash flow. All models report estimates of firm fixed-effects regressions with year dummies. All ratios are winsorized at the 1% and 99% levels. t-statistics are presented in brackets.

Dependent Variable ($\Delta Cash$)	(1)	(2)	(3)	(4)	(5)	(6)
$FOWN_{(t-1)}$	-0.0465***					
	(-3.500)					
$STABLEOWN_{(t-1)}$		-0.0121				
		(-1.402)				
$FOWNIOP_{(t)}$			-0.00334			
			(-0.323)			
$FOWNSTAKES_{(t)}$				-0.0001		
				(-0.152)		
$MONITORED_{(t-1)}$					-0.00522*	
					(-1.692)	
$ENTRENCHED_{(t-1)}$						-0.00162
						(-0.520)
$SIZE_{(t)}$	0.0554***	0.0536***	0.110***	0.110***	0.0538***	0.0535***
	(15.17)	(14.82)	(15.56)	(15.56)	(14.86)	(14.79)
$MTOB_{(t)}$	0.00699***	0.00645***	0.0120***	0.0120***	0.00671***	0.00650***
	(3.230)	(2.986)	(3.057)	(3.055)	(3.101)	(3.011)
$CFLOW_{(t)}$	0.403***	0.404***	0.404***	0.404***	0.404***	0.404***
	(24.42)	(24.49)	(17.98)	(17.99)	(24.49)	(24.47)
$NWC_{(t)}$	-0.225***	-0.225***	-0.323***	-0.323***	-0.225***	-0.225***
	(-28.90)	(-28.88)	(-27.67)	(-27.67)	(-28.88)	(-28.88)
$RD_{(t)}$	-0.0248	-0.0245	0.0672	0.0670	-0.0249	-0.0243
	(-0.645)	(-0.638)	(0.732)	(0.730)	(-0.646)	(-0.631)
$DIV_{(t)}$	0.0139***	0.0138***	0.0122**	0.0122**	0.0140***	0.0140***
	(4.480)	(4.447)	(2.010)	(2.010)	(4.521)	(4.491)
$CAPEX_{(t)}$	-0.251***	-0.250***	-0.300***	-0.300***	-0.251***	-0.250***
	(-31.66)	(-31.58)	(-27.37)	(-27.37)	(-31.60)	(-31.59)
$LVRGE_{(t)}$	-0.0625***	-0.0583***	-0.103***	-0.103***	-0.0593***	-0.0584***
	(-6.274)	(-5.892)	(-6.013)	(-6.007)	(-5.984)	(-5.899)
$CVOLAT_{(t)}$	0.0272	0.0252	0.0168	0.0166	0.0256	0.0253
	(0.714)	(0.662)	(0.290)	(0.286)	(0.671)	(0.664)
Observations	16,898	16,898	10,012	10,012	16,898	16,898
R-squared	0.146	0.146	0.197	0.197	0.146	0.145
Year-Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes

*, **, ***: Significant at the 10%, 5%, and 1% levels, respectively.

To identify firms with cash reserves that can be opportunistically used by managers, this study follows Demirguc and Maksimovic (1998) and Leuz et al. (2008) to introduce the "free cash flow problem[19]" variable. Free cash flow problem is calculated as the maximum internally financed growth rate less the median growth rate in the industry and shows higher values for firms whose internally generated amounts of cash flows are in excess of investment opportunities and thus are more likely to generate agency conflicts. I include free cash flow problem in my analysis by splitting the sample into firms with low free cash flow problems and high free cash flow problems. Low free cash flow problem (LOW FCF PROB) is the lowest quintile whereas high free cash flow problem (HIGH FCF PROB) represents the highest quintile of one year lagged free cash flow problem variable. Firms in the highest quintile are those that have higher amounts of cash in excess of investment opportunities. I investigate whether increased foreign ownership mitigate free cash flow problems by forcing managers to disgorge cash holdings in excess of their capital needs. I report the results in Table 3.4.

In column (1) of Table 3.4, regression results for firms that are in the lowest quintile of free cash flow problem (LOW FCF PROB) are presented. The coefficient on foreign institutional ownership is negative but insignificant, depicting that they have no effect on change in cash holdings for firms with low free cash flow problems. However based on the results reported in column (2), I find that, as predicted, foreign institutional ownership prompts a decline in cash holdings for firms with high free cash flow problems (HIGH FCF PROB). The coefficient on foreign institutional ownership is negative and significant. This shows that foreign investors cause a decline in cash reserves that are more prone to generate agency conflicts. On the contrary, evidence shown in column (3) suggests that stable shareholders negatively and significantly impact change in cash holdings in firms with low free cash flow problems. In addition, in high free cash flow problem firms, stable shareholders have no significant effect. The results so far are consistent with the predictions of this study and support the agency motive for the decrease in cash holdings. For the investment horizon of

[19] In line with Demirguc and Maksimovic (1998) and Leuz et al. (2008), we measure the maximum growth rate that can be backed by internally generated funds, as ROA/ (1-ROA) minus median industry growth rate.

foreign institutional block-holders, as shown in Table 3.5, I find no evidence of a significant impact of both measures on changes in cash holdings in low and high free cash flow problem firms.

Table 3.4 Foreign Institutional Ownership, Stable Ownership, and Free Cash Flow Problems

This table shows estimates of the impact of foreign ownership, stable ownership, and investment horizon of foreign block-holders on changes in corporate cash holdings based on firms' free cash flow problems. Change in cash holdings from period t-1 to t is dependent variable across all models. Cash is defined as the sum of cash, deposits, and marketable securities to net assets. Independent variables include foreign ownership (FOWN) is measured as ratio of shares owned by foreign investors to number of shares issued at the end of period. Stable domestic block-holders (STABLEOWN) is the ratio of sum of shareholding by banks, insurance companies, and corporations. Firm size (SIZE) is the natural logarithm of total assets. Market-to-book ratio (MTOB) is the ratio of market value of total assets to book value of total assets. Cash flow (CFLOW) from operations is defined as the ratio of earnings before interests and taxes plus depreciation and amortization less interests, taxes, and common dividends to net assets. Net working capital (NWC) is the ratio of current assets minus current liabilities calculated without cash, deposits, and marketable securities to net assets. R&D (RD) is the ratio of research and development expenses to sales. Dividend dummy (DIV) is an indicator variable if firms pay dividends in the current fiscal year. Capital expenditure (CAPEX) equals to annual change in fixed assets plus depreciation charges to net assets. Leverage (LVRGE) is measured as the ratio of total debt to total assets. Cash flow volatility (CVOLAT) is the five years standard deviation of firm's cash flow. All models report estimates of firm fixed-effects regressions with year dummies. All ratios are winsorized at the 1% and 99% levels. t-statistics are presented in brackets.

Dependent Variable($\Delta Cash$)	(LOW FCF PROB)	(HIGH FCF PROB)	(LOW FCF PROB)	(HIGH FCF PROB)
$FOWN_{(t-1)}$	-0.0315	-0.0904***		
	(-1.159)	(-2.623)		
$STABLEOWN_{(t-1)}$			-0.0366**	-0.0177
			(-1.964)	(-0.733)
$SIZE_{(t)}$	0.0667***	0.0928***	0.0665***	0.0877***
	(8.839)	(8.215)	(8.827)	(7.866)
$MTOB_{(t)}$	0.0246***	0.00255	0.0242***	0.00173
	(4.636)	(0.614)	(4.555)	(0.418)
$CFLOW_{(t)}$	0.229***	0.521***	0.231***	0.522***
	(6.919)	(12.79)	(6.999)	(12.81)
$NWC_{(t)}$	-0.161***	-0.393***	-0.162***	-0.392***
	(-10.49)	(-17.64)	(-10.58)	(-17.56)
$RD_{(t)}$	0.143	-0.0366	0.147	-0.0395
	(1.577)	(-0.436)	(1.627)	(-0.470)
$DIV_{(t)}$	0.00518	0.0330*	0.00509	0.0324*
	(0.964)	(1.805)	(0.947)	(1.773)
$CAPEX_{(t)}$	-0.197***	-0.447***	-0.197***	-0.447***
	(-12.94)	(-21.39)	(-12.91)	(-21.36)
$LVRGE_{(t)}$	-0.0755***	-0.0376	-0.0759***	-0.0274
	(-3.722)	(-1.314)	(-3.742)	(-0.960)
$CVOLAT_{(t)}$	0.0507	0.0614	0.0486	0.0671
	(0.698)	(0.602)	(0.670)	(0.657)
Observations	4,226	4,221	4,226	4,221
R-squared	0.111	0.253	0.111	0.252
Year-Fixed Effects	Yes	Yes	Yes	Yes
Firm-Fixed Effects	Yes	Yes	Yes	Yes

*, **, ***: Significant at the 10%, 5%, and 1% levels, respectively.

3.4.4. The Impact of Foreign Institutional Ownership on the Value of Cash Using Excess Returns

To further explore the agency explanation of changes in the level of cash, this study examines whether a change in cash holdings leads to a change in the firm value and how foreign institutional ownership impacts this value. To do this, this research employs the cash valuation model of Faulkender and Wang (2006). I estimate the following regression:

$$r_{i,t} - RB_{i,t} = \beta_0 + \beta_1 \frac{\Delta Cash_{i,t}}{MV_{i,t-1}} + \beta_2 \frac{\Delta Earnings_{i,t}}{MV_{i,t-1}} + \beta_3 \frac{\Delta NetAssets_{i,t}}{MV_{i,t-1}} + \beta_4 \frac{\Delta RD_{i,t}}{MV_{i,t-1}}$$
$$+ \beta_5 \frac{\Delta Interest_{i,t}}{MV_{i,t-1}} + \beta_6 \frac{\Delta Dividends_{i,t}}{MV_{i,t-1}} + \beta_7 L_{i,t} + \beta_8 \frac{Cash_{i,t-1}}{MV_{i,t-1}} + \beta_9 \frac{Cash_{i,t-1}}{MV_{i,t-1}}$$
$$\times \frac{\Delta Cash_{i,t}}{MV_{i,t-1}} + \beta_{10} LVRGE_{i,t} \times \frac{\Delta Cash_{i,t}}{MV_{i,t-1}} + + \varepsilon_{i,t}$$

Where $\Delta X_{i,t}$ represents change in X from t-1 to t. The dependent variable excess return, $r_{i,t} - RB_{i,t}$, is the difference between firm's return $r_{i,t}$ during fiscal year t and return of firm's benchmark portfolio $RB_{i,t}$ during fiscal year t. Benchmark portfolios are Fama and French (1993) size and book to market portfolios. For the measurement of benchmark portfolios[20], we consider firms whose fiscal year ends in March each year. This is because more than 80% of the firms listed on Tokyo Stock Exchange have their fiscal year ending in March. For robustness, I also use returns of Tokyo Stock Price Index (TOPIX) as benchmark to estimate the excess return. The independent variable is cash holdings (*Cash*) at time t. In line with Faulkender and Wang (2006) we control other variables that represent changes in firm's financial policy, profitability, and investment. The control variables include earnings before extraordinary items (*Earnings*), net assets (*Net Assets*), research and development expenditures (*RD*), interest expenses (*Interest*), common dividends (*Dividends*), and market leverage (*LVRGE*). Except leverage, all variables are deflated by the one year lagged market value of equity. Since both dependent and independent variables are deflated by the one year lagged

[20] Fama and French (1993) 25 size and book-to-market portfolios are formed at the end of June each year. However, in the case of Japan, the portfolios are created from September in year t till August in year t+1.

market value, the coefficient on change in cash therefore measures the dollar change in shareholder value resulting from one dollar change in firm's cash reserves (Faulkender and Wang, 2006; Dittmar and Smith, 2007).

Moving on, I follow the methodology used in Pinkowitz et al. (2006) where the authors split the firms based on the quality of corporate governance in place analyzed the cash valuation individually for each segment. In the case of this study however, I divide the sample based on the level of foreign institutional ownership, firms with high foreign ownership represented by highest quintile, and low foreign ownership represented by the lowest quintile. Similar methodology is followed in the case of stable ownership, and investment horizon of foreign institutional block-holders. The results obtained from the estimation of cross-sectional regressions are presented in Table 3.6. Column (1) and (2) present the first set of estimation results for the marginal value of cash model by looking at the sample with low ratio foreign institutional shareholding (*LOW FOWN*) and higher foreign shareholding (*HIGH FOWN*). The results indicate that foreign institutional investors play a significant role in increasing the marginal value of cash. The coefficient estimates corresponding to change in cash in firms with low foreign ownership is -0.0536 which is less than the coefficient on the change in cash in firms with high foreign ownership, 1.102. This suggests that the marginal value of cash increases with an increase in the equity ownership by foreign investors. The findings are consistent with Pinkowitz et al. (2006) and Dittmar and Smith (2007), and posits that value of cash is lower for firms with weaker corporate governance, expressed by lower foreign ownership. Surprisingly in column (3) and (4), firms with low stable ownership (*LOW STABLE*) and high stable equity ownership (*HIGH STABLE*) have similar results. The coefficient estimate of change in cash in firms with high stable ownership is greater than that from change in cash in firms with low stable ownership. To further investigate this issue, in accordance with the previous analyses of this study, I divide the sample based on the monitoring effectiveness, well monitored firms (*MONITORED*) and firms with a likelihood of the presence of entrenched management due to decreased monitoring (*ENTRENCHED*). The evidence suggests that marginal value of cash is greater for firms with increased monitoring by foreign institutional investors than firms with a greater probability of managerial entrenchment. In Table 3.7, I measure the excess return using TOPIX and repeat the

analyses from Table 3.6. The results remain unchanged. Further, as shown in Table 3.8, I find no evidence of a significant impact of investment horizon of foreign institutional block-holders on the marginal value of cash.

3.4.5. The Impact of Use of Excess Cash on Operating Performance

Lastly, building on Dittmar and Smith (2007), this study investigates the performance effect of changes in excess cash holdings. Based on the findings of this study so far, increased presence of foreign institutional investors in Japan causes a subsequent decline in corporate cash holdings. I predict that if foreign equity ownership is indeed related to improvements in the quality of corporate governance, decrease in excess cash reserves should have a positive effect on firm's operating performance through its efficient deployment. It is thus hypothesized that firms experiencing declines in their excess cash reserves will have higher operating performance if they have high shareholding ratio by foreign institutional investors. Following Dittmar and Smith (2007), I investigate the effect of excess cash holdings on operating performance for a sample of firms that had positive excess cash in year t-1 which declined in the year t-1. My objective is to examine how the decline in excess cash reserves from the previous periods, coupled with foreign institutional ownership, impact firm performance. I estimate a regression of industry adjusted return on assets (ROA) on excess cash reserves foreign institutional ownership in year t-1, and an interaction of foreign ownership and excess cash reserves. The regression model is as follows:

$$INDROA_{i,t} = \alpha_0 + \beta_1 EXSCASH_{i,t-1} + \beta_2 Ownership_{i,t-1} + \beta_3 EXSCASH_{i,t-1} \times Ownership_{i,t-1} + \beta_4 PPE_{i,t} + \beta_5 SIZE_{i,t} + YearDum + FirmFixedEffects + \varepsilon_{i,t}$$

Where the dependent variable is the industry adjusted return on assets (*INDROA*). This study follows the standard empirical model of cash holdings by Opler et al. (1999) and estimates the independent variable, excess (EXSCASH), as the residual of cash levels regression after controlling for years and firm fixed effects. I first estimate cash regression to measure the predicted cash levels, excess cash is then calculated as the difference between actual and predicted cash levels.

Table 3.5 Investment Horizon of Foreign Block-Holders and Free Cash Flow Problems

This table shows estimates of the impact of investment horizon of foreign block-holders on changes in corporate cash holdings based on firms' free cash flow problems. Change in cash holdings from period t-1 to t is dependent variable across all models. Independent variables include foreign IOP (FOWNIOP) and foreign stakes (FOWNSTAKES) are the measures of investment horizon of foreign institutional block-holders. Firm size (SIZE) is the natural logarithm of total assets. Market-to-book ratio (MTOB) is the ratio of market value of total assets to book value of total assets. Cash flow (CFLOW) from operations is defined as the ratio of earnings before interests and taxes plus depreciation and amortization less interests, taxes, and common dividends to net assets. Net working capital (NWC) is the ratio of current assets minus current liabilities to net assets. R&D (RD) is the ratio of research and development expenses to sales. Dividend dummy (DIV) is an indicator variable if firms pay dividends in the current fiscal year. Capital expenditure (CAPEX) equals to annual change in fixed assets plus depreciation charges to net assets. Leverage (LVRGE) is measured as the ratio of total debt to total assets. Cash flow volatility (CVOLAT) is the five years standard deviation of firm's cash flow. All ratios are winsorized at the 1% and 99% levels. t-statistics are presented in brackets.

Dependent Variable($\Delta Cash$)	(LOW FCF PROB)	(HIGH FCF PROB)	(LOW FCF PROB)	(HIGH FCF PROB)
$FOWNIOP_{(t)}$	0.00615	0.0131		
	(0.251)	(0.445)		
$FOWNSTAKES_{(t)}$			-0.00002	0.000455
			(-0.0472)	(0.322)
$SIZE_{(t)}$	0.115***	0.167***	0.115***	0.167***
	(7.624)	(8.075)	(7.634)	(8.102)
$MTOB_{(t)}$	0.0322***	0.0179***	0.0322***	0.0180***
	(3.619)	(2.583)	(3.622)	(2.594)
$CFLOW_{(t)}$	0.303***	0.360***	0.303***	0.360***
	(6.279)	(6.559)	(6.281)	(6.569)
$NWC_{(t)}$	-0.189***	-0.603***	-0.189***	-0.602***
	(-7.966)	(-18.92)	(-7.969)	(-18.90)
$RD_{(t)}$	0.154	-0.0892	0.153	-0.0835
	(0.779)	(-0.338)	(0.778)	(-0.317)
$DIV_{(t)}$	0.0222**	-0.0416	0.0222**	-0.0415
	(2.138)	(-1.175)	(2.142)	(-1.170)
$CAPEX_{(t)}$	-0.231***	-0.502***	-0.231***	-0.501***
	(-10.59)	(-17.73)	(-10.59)	(-17.73)
$LVRGE_{(t)}$	-0.0931***	-0.140***	-0.0934***	-0.140***
	(-2.773)	(-2.819)	(-2.782)	(-2.823)
$CVOLAT_{(t)}$	0.0673	-0.174	0.0674	-0.173
	(0.571)	(-1.273)	(0.571)	(-1.272)
Observations	2,502	2,499	2,502	2,499
R-squared	0.142	0.345	0.142	0.345
Year-Fixed Effects	Yes	Yes	Yes	Yes
Firm-Fixed Effects	Yes	Yes	Yes	Yes

*, **, ***: Significant at the 10%, 5%, and 1% levels, respectively.

Table 3.6 Impact of Foreign Ownership on the Value of Cash Using Excess Returns

This table shows estimates of the impact of foreign ownership and stable ownership on the value of cash holdings. The dependent variable in all models is the annual excess return of the firm relative to Fama & French (1993) 25 size and book-to-market portfolios. △indicates the change from year t-1 to t. Independent variables include change in cash holdings (Cash) where cash is defined as the sum of cash, deposits, and marketable securities. Other independent variables include changes in earning (Earnings), net assets (Net Assets), R&D expenses (RD), interest expenses (Interest), common dividends (Dividends), leverage (Leverage) measured as long term plus current liabilities divided by the market value of equity plus total liabilities). All independent variables, except for foreign ownership, are normalized by one year lagged market value of equity. All ratios are winsorized at the 1% and 99% levels. t-statistics are presented in brackets. Superscripts *, **, and *** indicate significance at 10%, 5%, and 1% confidence levels, respectively.

Dependent Variable (*Excess Return*)	*(LOW FOWN)*	*(HIGH FOWN)*	*(LOW STABLE)*	*(HIGH STABLE)*	*(MONITORED)*	*(ENTRENCHED)*
$\Delta Cash_{(t)}$	-0.0536	1.102***	0.547**	1.062***	1.208***	0.302
	(-0.223)	(5.349)	(2.477)	(4.056)	(3.695)	(0.928)
$\Delta Earnings_{(t)}$	0.746***	1.280***	1.242***	0.880***	1.190***	0.817***
	(8.145)	(10.62)	(10.63)	(7.465)	(6.839)	(6.581)
$\Delta Net\ Assets_{(t)}$	0.0931***	0.262***	0.112***	0.0895***	0.151**	0.0780**
	(3.546)	(6.537)	(3.136)	(2.701)	(2.451)	(2.257)
$\Delta RD_{(t)}$	-0.957	-6.106***	-5.448***	-3.587***	-8.383***	-0.0536
	(-1.239)	(-9.502)	(-6.649)	(-4.102)	(-8.265)	(-0.0538)
$\Delta Interest_{(t)}$	-12.20***	-22.62***	-24.62***	-7.930***	-21.46***	-8.257***
	(-5.812)	(-7.166)	(-8.437)	(-2.890)	(-4.706)	(-2.981)
$\Delta Dividends_{(t)}$	13.38***	22.10***	20.37***	16.37***	24.46***	12.75***
	(9.771)	(14.30)	(12.47)	(9.701)	(10.84)	(7.159)
$CASH_{(t-1)}$	0.286***	0.335***	0.304***	0.480***	0.317***	0.265***
	(9.406)	(8.407)	(8.372)	(12.73)	(5.258)	(6.212)
$LVRGE_{(t)}$	-0.355***	-0.187***	-0.274***	-0.394***	-0.184***	-0.263***
	(-7.547)	(-5.368)	(-6.984)	(-8.044)	(-3.655)	(-4.097)
$CASH_{(t-1)} \times \Delta Cash_{(t)}$	0.0989	-0.480*	-0.0666	1.292***	-0.938**	0.120
	(0.661)	(-1.848)	(-0.357)	(6.336)	(-2.557)	(0.574)
$LVRGE_{(t)} \times \Delta Cash_{(t)}$	0.392	-0.845**	-0.425	-2.438***	-0.750	-0.377
	(1.076)	(-2.219)	(-1.181)	(-5.515)	(-1.275)	(-0.730)
Observations	2,627	2,619	2,629	2,618	1,268	1,044
R-squared	0.157	0.262	0.222	0.175	0.273	0.181

*, **, ***: Significant at the 10%, 5%, and 1% levels, respectively.

Table 3.7 Impact of Foreign Ownership on the Value of Cash Using Excess Returns *(TOPIX)*

This table shows estimates of the impact of foreign ownership and stable ownership on the value of cash holdings. The dependent variable in all models is the annual excess return of the firm estimated as the difference between firm i stock return and return of Tokyo Stock Price Index (TOPIX). △indicates the change from year t-1 to t. Independent variables include change in cash holdings (Cash) where cash is defined as the sum of cash, deposits, and marketable securities. Other independent variables include changes in earning (Earnings), net assets (Net Assets), R&D expenses (RD), interest expenses (Interest), common dividends (Dividends), leverage (Leverage) measured as long term plus current liabilities divided by the market value of equity plus total liabilities). All independent variables, except for foreign ownership, are normalized by one year lagged market value of equity. All ratios are winsorized at the 1% and 99% levels. t-statistics are presented in brackets. Superscripts *, **, and *** indicate significance at 10%, 5%, and 1% confidence levels, respectively.

Dependent Variable (*Excess Return*)	*(LOW FOWN)*	*(HIGH FOWN)*	*(LOW STABLE)*	*(HIGH STABLE)*	*(MONITORED)*	*(ENTRENCHED)*
$\Delta Cash_{(t)}$	-0.0297	1.130***	0.446*	1.208***	1.108***	0.445
	(-0.124)	(4.903)	(1.908)	(4.617)	(3.037)	(1.417)
$\Delta Earnings_{(t)}$	0.788***	1.369***	1.296***	0.918***	1.241***	0.809***
	(8.673)	(10.15)	(10.49)	(7.795)	(6.397)	(6.752)
$\Delta Net\ Assets_{(t)}$	0.0261	0.103**	0.0419	0.0134	0.0226	0.0200
	(1.003)	(2.301)	(1.104)	(0.404)	(0.329)	(0.598)
$\Delta RD_{(t)}$	0.535	-2.039***	-2.363***	-1.887**	-4.187***	0.908
	(0.698)	(-2.834)	(-2.725)	(-2.160)	(-3.702)	(0.943)
$\Delta Interest_{(t)}$	-5.098**	-8.818**	-16.45***	1.606	-11.59**	-1.264
	(-2.447)	(-2.496)	(-5.326)	(0.586)	(-2.279)	(-0.473)
$\Delta Dividends_{(t)}$	15.12***	24.18***	21.75***	18.99***	26.96***	14.73***
	(11.12)	(13.98)	(12.58)	(11.26)	(10.71)	(8.571)
$CASH_{(t-1)}$	0.240***	0.235***	0.247***	0.386***	0.211***	0.194***
	(7.949)	(5.260)	(6.417)	(10.26)	(3.133)	(4.712)
$LVRGE_{(t)}$	-0.288***	-0.138***	-0.216***	-0.311***	-0.113**	-0.191***
	(-6.172)	(-3.532)	(-5.212)	(-6.357)	(-2.010)	(-3.087)
$CASH_{(t-1)} \times \Delta Cash_{(t)}$	0.00882	-0.337	-0.0941	1.223***	-0.875**	-0.110
	(0.0594)	(-1.158)	(-0.477)	(6.007)	(-2.139)	(-0.545)
$LVRGE_{(t)} \times \Delta Cash_{(t)}$	0.411	-1.192***	-0.442	-2.668***	-0.885	-0.394
	(1.136)	(-2.797)	(-1.161)	(-6.042)	(-1.350)	(-0.790)
Observations	2,627	2,619	2,629	2,618	1,268	1,044
R-squared	0.143	0.188	0.177	0.157	0.200	0.171

*, **, ***: Significant at the 10%, 5%, and 1% levels, respectively.

Table 3.8 Impact of Foreign Investment Horizon on the Value of Cash Using Excess Returns

This table shows estimates of the impact of investment horizon of foreign block-holders on the value of cash holdings. The dependent variable in all models is the annual excess return of the firm relative to Fama & French (1993) 25 size and book-to-market portfolios. △indicates the change from year t-1 to t. Independent variables include change in cash holdings (Cash) where cash is defined as the sum of cash, deposits, and marketable securities. Other independent variables include changes in earning (Earnings), net assets (Net Assets), R&D expenses (RD), interest expenses (Interest), common dividends (Dividends), leverage (Leverage) measured as long term plus current liabilities divided by the market value of equity plus total liabilities). All independent variables, except for foreign ownership, are normalized by one year lagged market value of equity. All ratios are winsorized at the 1% and 99% levels. t-statistics are presented in brackets. Superscripts *, **, and *** indicate significance at 10%, 5%, and 1% confidence levels, respectively.

Dependent Variable (*Excess Return*)	*(LOW FOWNIOP)*	*(HIGH FOWNIOP)*	*(LOW FOWNSTAKES)*	*(HIGH FOWNSTAKES)*
$\Delta Cash_{(t)}$	0.456**	0.372*	0.456**	0.233
	(2.249)	(1.784)	(2.250)	(1.051)
$\Delta Earnings_{(t)}$	0.524***	0.885***	0.524***	1.130***
	(7.128)	(9.569)	(7.140)	(11.41)
$\Delta Net\ Assets_{(t)}$	0.165***	0.155***	0.165***	0.120***
	(7.006)	(5.197)	(7.023)	(3.741)
$\Delta RD_{(t)}$	-2.609***	-5.854***	-2.614***	-5.643***
	(-4.178)	(-8.848)	(-4.189)	(-7.994)
$\Delta Interest_{(t)}$	-13.57***	-13.23***	-13.56***	-10.25***
	(-6.867)	(-5.186)	(-6.871)	(-3.590)
$\Delta Dividends_{(t)}$	8.519***	7.681***	8.529***	7.478***
	(7.500)	(6.394)	(7.517)	(5.743)
$CASH_{(t-1)}$	0.299***	0.229***	0.299***	0.260***
	(12.29)	(8.441)	(12.31)	(9.019)
$LVRGE_{(t)}$	-0.207***	-0.209***	-0.209***	-0.190***
	(-5.622)	(-6.338)	(-5.696)	(-5.375)
$CASH_{(t-1)} \times \Delta Cash_{(t)}$	0.135	-0.0957	0.136	0.122
	(1.073)	(-0.591)	(1.083)	(0.698)
$LVRGE_{(t)} \times \Delta Cash_{(t)}$	-0.197	-0.204	-0.197	-0.205
	(-0.648)	(-0.605)	(-0.650)	(-0.572)
Observations	1,808	1,413	1,813	1,359
R-squared	0.238	0.264	0.238	0.263

*, **, ***: Significant at the 10%, 5%, and 1% levels, respectively.

Ownership includes foreign institutional ownership and stable ownership. Other control variables are ratio of plant, property, and equipment to net assets (PPE) and firm size (SIZE). I report the results in Table 3.9. Based on the evidence presented in column (1), it was found that when firms use their cash reserves over the year t-1 to year t, the future operating performance is negatively affected. This is suggestive of an efficient usage of excess liquid resources. However, the results show that this negative impact on operating performance is reversed if firms have larger presence of foreign institutional investors, as evidenced by the interaction between excess cash and foreign ownership (*FOWN×EXCASH*). Similar, results are reported by Dittmar and Smith (2007) while using data from the U.S. For stable shareholders, the results are suggestive of an inefficient use of excess cash balances, the coefficient on the interaction is negative and significant. I find similar results after I employ the *MONITOR* and *ENTRENCHED* variables in column (3) and column (4). Well monitored firms enhance their operating performance by efficiently utilizing the excess cash reserves.

3.5. Summary

This research continues to examine the effect of foreign investors on corporate governance by focusing on the effectiveness of their monitoring role in forcing managers to implement strategic policies that enhance shareholder value. Accordingly, I investigate the association between foreign ownership and corporate cash holdings (Chapter 3). Since the hypothesis of this dissertation propounds the view that foreign investors have the expertise and incentives to mitigate agency conflicts between managers and shareholders, they may also impact firms' cash management decisions, especially after the recent surge in their equity ownership. Coupled with examining their impact on the level of cash balances, this study whether the recent shift in the corporate ownership structure improves the valuation and usage of liquid assets. Using a dataset over the period 2004-2012, I first examine the role of foreign institutional investors in explaining why Japanese firms have relatively decreased their cash holdings by exploring the effect of ratio of equity ownership and the investment horizon of foreign institutional block-holders. Consistent with the predictions of this study, it was found that increased foreign investors' involvement leads to a decline in the level of cash holdings in the subsequent periods.

Table 3.9 Impact of Use of Excess Cash on Operating Performance

This table shows how foreign ownership and stable ownership affect operating performance through use of cash. The dependent variable across all models is the industry adjusted return on assets (ROA). Independent variables include excess cash (EXCASH) defined as the difference between actual and the predicted level of cash. Predicted cash is calculated following Opler et al. (1999) after controlling for year and industry effect. Foreign ownership (FOWN) is measured as ratio of shares owned by foreign investors to number of shares issued at the end of period. Stable domestic block-holders (STABLEOWN) is the ratio of sum of shareholding by banks, insurance companies, and corporations. Monitored (MONITORED) equals one if firm is mainly owned by foreign institutional investors. Entrenched (ENTRENCHED) equals one if firm is mainly owned by stable domestic block-holders. Control variables include firm size (SIZE) is the natural logarithm of total assets. Ratio of plant, property, and equipment to net assets (PPE). All ratios are winsorized at the 1% and 99% levels. t-statistics are presented in brackets.All models report estimates of firm fixed-effects regressions with year dummies.

Dependent Variable (*Return on Assets*)	(1)	(2)	(3)	(4)
$EXSCASH_{(t-1)}$	-0.0253***	-0.00324	-0.0213***	-0.0162***
	(-3.416)	(-0.352)	(-3.485)	(-2.690)
$FOWN_{(t-1)}$	-0.00693			
	(-0.396)			
$FOWN_{(t-1)} \times EXCASH_{(t-1)}$	0.0831**			
	(2.068)			
$STABLEOWN_{(t-1)}$		0.00575		
		(0.431)		
$STABLEOWN_{(t-1)} \times EXCASH_{(t-1)}$		-0.0505*		
		(-1.803)		
$MONITORED_{(t-1)}$			0.00266	
			(0.533)	
$MONITORED_{(t-1)} \times EXCASH_{(t-1)}$			0.0326***	
			(2.920)	
$ENTRENCHED_{(t-1)}$				0.00468
				(1.022)
$ENTRENCHED_{(t-1)} \times EXCASH_{(t-1)}$				0.00422
				(0.253)
$PPE_{(t)}$	-0.0532***	-0.0535***	-0.0546***	-0.0532***
	(-4.004)	(-4.024)	(-4.117)	(-4.000)
$SIZE_{(t)}$	-0.00256	-0.00243	-0.00272	-0.00241
	(-0.747)	(-0.708)	(-0.796)	(-0.700)
Observations	3,490	3,490	3,490	3,490
R-squared	0.018	0.018	0.024	0.017
Year-Fixed Effects	Yes	Yes	Yes	Yes
Firm-Fixed Effects	Yes	Yes	Yes	Yes

*, **, ***: Significant at the 10%, 5%, and 1% levels, respectively.

Next, this study attempts to revisit the agency explanation of cash holdings and explores if outsider-investor dominance leads to a reduction in the level of liquid assets that can be easily appropriated by the self-interested managers. To investigate this, I build on previous studies and attempt to develop a methodology in order to target the setting where cash reserves are more prone to generate agency conflicts between managers and shareholders. In line with the hypothesis, it was found that foreign institutional investors cause a decline in cash balances of firms only in the presence of a higher propensity of wasteful managerial behavior. With respect to the value of cash, the findings

of this chapter show that marginal value of cash is greater in firms with high foreign ownership suggesting that foreign investors are effective in monitoring the firms in which they hold equity stakes. In terms of the usage of excess cash reserves, the findings show firms with a decline in their cash reserves negatively impact the operating performance of firms which is suggestive of inefficient ways of cash deployment. However, the negative impact of decline in excess cash on operating performance is reversed if firms have larger presence of foreign institutional investors. I find no significant evidence on the impact of investment horizon of foreign institutional block-holders and stable shareholders on cash holdings. Overall, the results presented in this study further supports the premise that Japanese corporate governance improved with the increased equity ownership by foreign institutional investors.

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Chapter 4

Japanese Corporate Ownership Structure, Relationship-Sensitivity, and Investment Efficiency

4.1. Introduction

Previous literature depicts that investor protection is associated with a higher sensitivity of firm-level investment expenditures to investment opportunities. For instance, Gompers et al. (2003) show that firms with strong investor protection exhibit efficient investment behavior and higher firm value. Consistent with this view, using a large sample from 44 countries, McLean et al. (2012) find evidence that firms in countries with stronger investor protection have greater investment efficiency as compared to firms from weaker protection markets. In addition to the legal protection of shareholders, a number of studies report a significant association between ownership structure and firm's tendency to either over or under-invest. For instance, Jiang et al. (2011) document that degree of agency conflicts and information asymmetry significantly determines the investment behavior of firms. They find a strong negative association between control-ownership wedge and efficient investment behavior. Similarly, employing international data on newly privatized firms, Chen et al. (2014) show that foreign ownership increases investment efficiency by strengthening the investment-q sensitivity. In accordance with McLean et al. (2012), they find that the positive association between foreign ownership and investment efficiency moderates in countries with strong legal environments. While the extant literature indicates that ownership structure significantly affects the firm's ability to make efficient investment decisions, especially in countries where the shareholders are well protected by law, there is little evidence regarding the degree of relationship-sensitivity of different ownership types on investment efficiency.

This chapter further explores whether foreign ownership improves governance by empirically examining the association between ownership structure and investment efficiency concentrating on the relationship-sensitivity of different investors' type. Following Brickley et al. (1988), this study defines relationship-sensitivity as the extent of either existing or potential business relationships that shareholders have with the firms in which they hold shares. Accordingly, I classify shareholders into relation-oriented and those who are independent of commercial ties with the firms in which they hold equity stakes. It is predicted that relationship-oriented and independent shareholders

differently impact investment and efficiency due to significant differences in the effectiveness of their monitoring. For instance, as discussed in the previous chapters, relationship-oriented shareholders might be less willing to challenge strategic managerial decisions related to investment because they may fear the curtailment of business ties, therefore they may compromise their role as active monitors. In contrast, since independent shareholders are free from close relations with the invested firms, they could efficiently perform their monitoring role and aggressively challenge managerial decisions thereby curbing managerial incentives to engage in value destroying projects. To analyze the impact of ownership type based on the degree of their relationship-sensitivity on investment efficiency, this study focuses on two types of shareholders, stable domestic shareholders and arms-length foreign institutional investors. Stable domestic shareholders are likely to keep long term business relations with the firms that include non-financial firms, banks, and insurance companies whereas foreign institutional investors are independent from such commercial ties. This research hypothesizes that ownership by stable domestic shareholders (foreign institutional investors) is negatively (positively) related to investment efficiency.

A number of considerations led to the choice of Japanese market as the sample of the study. First, due to significant changes in the Japanese corporate ownership structure (increase in equity holdings by foreign institutional investors and decrease in ownership by stable shareholders) after the banking crisis in the 1990s (Miyajima, 2015) stable shareholders and arms-length independent shareholders coexist in the Japanese capital market (Shinozaki et al. 2014). Second, shareholders' rights are well protected by law and are among the strongest in the world (Spamann, 2010; Goto, 2014). Therefore, Japan provides a unique environment for investigating the impact of both relation-oriented and independent shareholders on investment efficiency.

In testing the impact of foreign institutional ownership, this study uses multiple measures to capture their monitoring incentives. First one is the fraction of the firm's total shares outstanding owned by foreign institutional investors, which is common in the literature. In addition, several alternative measures of investment horizon (ownership stability) of foreign block-holders were employed, since the incentive and ability of investors to engage in enhancing investment efficiency are more likely to increase with their investment horizon. Bushee (1998) shows that compared to

transient owners, institutions with long-term investments more actively monitor the firms. Stable owners have greater incentives to engage in monitoring for longer and ongoing basis, and therefore they may be able to bring about improvements in the quality of corporate governance (Elyasiani and Jia, 2010; Attig et al. 2010). In addition, whether the long-term (stable) foreign institutional investors have a more significant effect on investment efficiency is likely to be especially an interesting question in the Japanese setting, given the presence of traditional "stable" institutional investors. Coupled with identifying the impact of relationship-driven and relationship-independent type ownership on the investment efficiency of firms from strong shareholder protection market, this study adds new evidence to the literature by investigating how independent shareholders with longer investment horizons affect investment efficiency.

The empirical results of this study are summarized as follows. The results are consistent with the hypotheses of this study and show that the relationship-oriented stable domestic ownership is negatively associated with investment efficiency. In contrast, it was found that arms-length foreign institutional ownership increases the investment efficiency of Japanese firms, indicating that the monitoring role performed by independent ownership type leads to a decline in the deviations from optimal investment decisions. Unlike previous studies, this research reports additional evidence on the association between foreign institutional ownership and investment efficiency by showing whether large foreign shareholders with longer investment horizons lead to efficient investment decisions. This study was unable to find consistent evidence whether large foreign institutional investors promote efficient investment decisions. Consistent with the findings from previous studies of this dissertation (Chapter 2 and Chapter 3), results suggest that the proportion of foreign ownership is a significant determinant of governance improvements. Overall, the results show that independent shareholders (foreign institutional investors) significantly increase the investment efficiency of firms by efficiently performing their monitoring role, thereby curbing managerial incentives to engage in value destroying projects.

This chapter is organized as follows: Section 4.2 provides an overview of the previous literature and develops the hypotheses. Section 4.3 describes the research design, the variables employed and

their calculations. Section 4.4 presents the empirical results. Summary of the chapter is presented in section 4.5.

4.2. Hypothesis Development

In countries with arm-length governance structure such as U.S. and U.K., shareholders mainly share a relationship with the firms in which they invest primarily through their equity stakes (Rajan and Zingales, 1998) with a principal goal of increasing the returns on their equity investments (Gedajlovic et al. 2005). In contrast, a majority of shareholders hold equity stakes with an objective to sustain stable commercial ties with the invested firms such as those found in Japan (Morck and Nakamura, 1999). In fact, stable shareholdings between firms and banks and among non-financial firms is a distinct feature of the traditional Japanese style corporate governance (Prowse, 1992; Aoki et al. 1994; Jiang and Kim, 2000). In Japan, equity stakes of a large number of firms are owned by stable shareholders whose primary interests differs from shareholders in countries with arm-length governance structure; focusing more on long term business relationships rather than financial returns.

Based on their potential business ties, previous research classifies corporate shareholders as relationship-oriented (potentially passive monitors) and independent (active monitors) investors (Brickley et al. 1988; Almazan et al. 2005; Cornette et al. 2007; Chen et al. 2007; Elyasiani and Jia, 2010). Similarly, in the case of Japan, shareholders can be grouped into "*antei kabunushi*" or "*seisaku toshika*" meaning stable shareholders (such as banks, insurance companies, and non-financial firms), and market investors (Gedajlovic et al. 2005). In addition to their equity stakes, stable shareholders usually have commercial ties with the invested firms such as lending, insurance sales, and other financial transactions. In contrast, since market investors mainly seek to maximize their financial returns on equity investments, they are independent from business relationships with the firms in which they hold shares. Shareholders that are not bound by commercial ties may actively monitor the firms and potentially facilitate better governance practices as reported in Aggarwal et al. (2011). In contrast, shareholders who have business ties with the invested firms are reluctant to challenge managerial decisions because they are unwilling to lose their business relationships (Brickley et al. 1988). Hence, there may be a large variation in the effectiveness of monitoring performed by

investors with and without having close business relations with the firms. The outcome of such relationship-sensitive monitoring could thus significantly impact strategic managerial decisions of the firms. For instance, a number of studies report decreased value and poor firm performance for firms with close bank ties. For example, Weinstein and Yafeh (1998) argue that banks discourage its client firms to take over risky and profitable projects. Kang and Stulz (2000) find that even though firms with close main bank ties have easy access to capital, they invest less as compared to firms without any close relations. This is suggestive of a lower level of risk taking by Japanese firms. Similarly, non-financial shareholders may benefit from firms aggressively investing, even in unwanted projects, because they may either be on the supplying or buying side of a trade relationship (Charkham, 1994). Based on these arguments, it is hypothesized that the shareholders with close relations distorts investment decisions and lead to investment inefficiency. More specifically:

Hypothesis 4.1: Equity ownership by relationship-oriented stable shareholders is negatively associated with investment efficiency.

As previously discussed, in addition to the presence of relationship-oriented stable shareholders, there also exist return-oriented investors whose equity stakes are not motivated by business relationships. Unlike the relationship-oriented shareholders, they may have greater incentives to monitor the invested firms. In the case of Japan, the ownership structure of firms, dominated by stable corporate shareholders such as banks and business corporations, changed significantly after the banking crisis in the late 1990s (Miyajima et al. 2015) with a substantial increase in the proportion of shares held by independent-type foreign institutional investors[21]. According to Tokyo Stock Exchange (TSE), equity ownership by foreign institutional investors dramatically increased from 5.4% in 1991 to 24.3% in 2012 and became one of the major shareholders of Japanese firms as seen in Figure 1.1. It is argued that foreign investors are active monitors and have the ability to influence strategic policies of the firm (Gillan and Starks. 2003; Ferreira and Matos, 2008; Aggarwal et al. 2011). They are active

[21] Although the ownership structure of Japanese firms substantially changed from the late 1990s, stable domestic shareholders such as banks, insurance companies, and non-financial corporations, still hold significantly larger stakes in the firms as shown in Figure 1.1. The significant decline is observed in the ownership by financial institutions. This is because the Act on "Limitation on Shareholding by Banks and Other Financial Institutions" was issued in 2001, which stipulates that each bank's shareholdings should be less than the amount of its Tier 1 core capital.

monitors since their monitoring role is not affected by close ties with the firms in which they hold equity stakes, and thus has the ability to aggressively challenge managerial decisions.

In the context of Japanese firms, Shinozaki et al. (2014) show that compared to the relationship-oriented stable shareholders, firms mainly owned by foreign and independent institutional investors tend to adopt good governance practices. In terms of their risk taking behavior, Nguyen (2012) finds that foreign institutional investors positively impact the risk taking behavior and performance of Japanese firms. Similarly, Ferreira and Matos (2008) show that foreign investors leads to efficient investment decisions and positively impact firm value. In addition, due to their investment expertise, foreign institutional investors are able to collect and process information and are therefore better informed than other investors (Kang and Stulz, 1997). Moreover, the evidence presented in Jiang and Kim (2004) depict that foreign institutional investors tend to invest more in Japanese firms with low information asymmetry. In a similar vein, prior research (Biddle et al. 2009; Chen et al. 2011; Cheng et al. 2013) provides significant support for the argument that the quality of a firm's informational setting leads to efficient investment decisions. This suggests that foreign institutional shareholders are independent from close relations with the invested firms and efficiently perform their monitoring role, thereby curbing managerial incentives to engage in value destroying projects. This leads to the second hypothesis of this chapter, foreign institutional ownership leads to efficient investment decisions. That is:

Hypothesis 4.2: Foreign institutional ownership is positively related to investment efficiency.

The increase in foreign institutional shareholdings discussed above may not necessarily mean that all the foreign institutional investors in Japan actively and efficiently perform a monitoring role that leads to improvement in governance practices. While some investors could have more expertise, information, and incentives to be involved in monitoring firms' management, there could also exist short-term foreign investors who are less committed to intervene in corporate governance of individual firms since they may hold or sell equity stakes based on their investment portfolio rebalancing needs. Davis and Steil (2001) argue that foreign shareholders generally hold diversified portfolios of small stakes in many firms, thereby characterizing them as investors who actively engage

in frequent trading based on information. Such short-term investors are less likely to influence management, and therefore are not expected to have a significant impact on investment efficiency. In contrast, Bushee (1998) shows that institutional investors with long-term investments, are more actively to monitor firms as compared to those with short horizons. In a similar vein, Elyasiani and Jia (2010) argue that institutional investors with stable investment horizons have sufficient opportunities to learn about the invested firm in addition to greater incentives to effectively and frequently monitor the firm. Also, Attig et al. (2010) document that institutional investors with longer investment horizons have expertise and incentives to monitor the management, which in turn mitigate the agency problems and information asymmetry. Similar arguments are also presented in Chen et al. (2007). According to these arguments, unlike the relationship-oriented stable investors, foreign institutional investors with longer investment horizons have efficiencies and ample monitoring incentives, enabling them to positively impact the investment efficiency of the in which they own equity stakes. Therefore, this study hypothesizes:

Hypothesis 4.3: Foreign institutional investors with longer investment horizons are positively associated with investment efficiency.

4.3. Research Design

4.3.1. Regression Model and Variables

To examine the effect of ownership type on investment efficiency, this research uses an investment model following Fazzari et al. (1988), Baker et al. (2003). In line with David et al. (2006), McLean et al. (2012), and Chen et al. (2014), I employ the sensitivity of firm-level investment to growth opportunities (Tobin's Q) as a proxy for investment efficiency and investigate the impact of ownership type and investment horizon of independent investors. Tobin's Q is an ex ante measure of desirability of additional investments based on future market expectations, and represents the external opportunities in the market as well as firms' ability to exploit these opportunities (David et al. 2006). The sensitivity of investment to investment opportunities thus represents a valid measure of investment efficiency. The following regression model was estimated:

$$INVEST_{i,t} = \alpha + \beta_1 TOBINSQ_{i,t-1} + \beta_2 Ownership_{i,t-1}(InvestHorizon_{i,t}) + \beta_3 Ownership_{i,t-1}(InvestHorizon_{i,t}) \times TOBINSQ_{i,t-1} + \beta_n Control\ Variables_{i,t-1} + \text{Year Dum} + \text{Firm Fixed Effects} + \varepsilon_{i,t}$$

Where the dependent variable INVEST is the firm-level investment expenditure in year t defined as the sum of yearly growth in property, plant, and equipment, plus growth in inventories, plus research and development expenditures (R&D), deflated by lagged total assets. The independent variables are Tobin's Q, ownership type, investment horizon of foreign institutional block-holders, and a set of control variables. Tobin's Q, that proxies the investment opportunities, is measured as the ratio of market value of total assets to book value of total assets. I expect β_1 to be positive as the Modigliani and Miller (1958) paradigm predicts a positive association between investment opportunities and firm-level investment. Since this study is examining whether the relationship-sensitivity of firm's shareholders affect the ex-post investment efficiency, I categorize the firm-level ownership variable into relationship-oriented shareholders and investors that are independent of business relationships with the firms in which they own equity stakes. The relationship-oriented ownership type (*STABLEOWN*) is proxied by stable domestic shareholders that are more focused on long term close commercial ties with the invested firms rather than financial returns such as banks, insurance companies, and non-financial corporate block-holders (Shinozaki et al. 2014). *STABLEOWN* is thus measured as the percentage of shares held by banks, insurance companies, and non-financial corporate block-holders. For independent shareholders, the percentage of shares held by foreign institutional investors (*FOWN*) was used.

Given that large stable domestic shareholders have relatively longer investment horizons, I also compare and analyze the impact of foreign institutional block-holders with longer investment horizons on investment efficiency. I use two measures to distinguish between large foreign institutional shareholders with short-term and long-term investment horizons. The first measure is the institutional ownership persistence (*IOP*). Following Elyasiani and Jia (2010), this study defines IOP for foreign institutional block-holders (*FOWNIOP*) in a firm as the ratio of their average ownership proportion to the standard deviation of the ownership proportion over a 5 year period including the

sample year. I measure IOP by using interim data[22] for the individual foreign institutional block-holders[23] in a specific firm. For instance, IOP for each foreign institutional investor in 2008 is calculated using 10 interims, from the first fiscal interim of 2004 to the second interim of 2008. The value of IOP is high if an investor's shareholding is stable across a 5 year period. IOP for a firm is then calculated as the average IOP across all the foreign institutional block-holders in the firm. For the second measure of investment horizon, the author follows Bohren et al. (2005) and Elyasian and Jia (2010), and use the maintain-stake-points duration method. The maintain-stake-points duration measure (*FOWNSTAKES*) is the number of interims in which a foreign institutional investor is among the largest shareholders of a specific firm out of 10 interims. If foreign institutional investor holds a high proportion of shares for many interims during a 5 year period including the sample year, the *FOWNSTAKES* measure will be high. Maintain-stake-points duration for a firm is calculated as the average maintain-stake-point durations across all the foreign institutional block-holders.

This research also controls the effect of firm characteristics that are previously found to be associated with firm level investment. In line with prior literature (Fazzari et al. 1988; Biddle and Hilary, 2006; Richardson, 2006; Biddle et al. 2009; McLean et al. 2012) on capital investment, I control for cash flow from operations (*CFLOW*), firm size (*SIZE*), asset tangibility (*TANG*), industry leverage (*INDLVRGE*), dividend payout (*DIV*), losses (*LOSS*), and firm age (AGE). To provide strong evidence of causality and better control for unobserved firm characteristics and year-specific effects, I estimate the investment euation using firms and year fixed effects.

Building on previous literature (Chen et al. 2014; Jiang et al. 2011; Chen et al. 2011), I test the hypotheses using the interaction term between ownership type including the investment horizon and Tobin's Q. *STABLEOWN×TOBINSQ* is the interaction between the relationship-dependent type stable domestic shareholders and Tobin's Q. It is argued that stable domestic ownership is associated with agency problems which result in less investment efficiency. Therefore, this study predict β_3 to be negative, that is, the association between investment opportunities and firm-level investment is weaker when relationship-oriented stable domestic ownership own a higher stake. *FOWN×TOBINSQ*

[22] Quarterly data for individual institutional investors is not available in the Major Shareholders Database.
[23] Investors among the top 30 largest shareholders.

is the interaction between foreign institutional ownership and Tobin's Q. I hypothesize that due to their increased monitoring coupled with lower relationship-sensitivity, foreign institutional ownership is associated with a decline in the agency problems and therefore leads to higher investment efficiency. Hence, I predict β_3 to be positive, that is, the relation between investment opportunities and investment is stronger when independent foreign institutional investors own a higher stake. *FOWNIOP×TOBINSQ* and *FOWNSTAKES×TOBINSQ* is the interaction between the investment horizon of large foreign institutional shareholders and Tobin's Q. This research conjecture that unlike relationship-oriented shareholders, large independent shareholders with longer investment horizons have greater incentives to effectively and frequently monitor the invested firms which in turn mitigate the agency problems and information asymmetry. The third hypothesis thus predicts that β_3 is positive, suggesting that the relation between Tobin's Q and investment is stronger when foreign institutional block-holders own stakes for longer horizons.

4.4. Empirical Results

4.4.1. Sample and Descriptive Statistics

This research uses a sample that consists of firms listed on Tokyo Stock Exchange. I obtain firm-specific financial information and shareholdings data for both stable domestic shareholders and foreign institutional shareholders from Nikkei Economic Electronic Database System Financial Quest (NEEDS FQ). Individual data for large stable domestic shareholders and foreign institutional block-holders is obtained from the Top 30 Major Shareholders Database in NEEDS FQ. The Top 30 Major Shareholders Database contains individual data for the 30 largest shareholders' common stock holdings of Japanese securities. In this database, shareholders are classified into individual investors, non-financial companies, banks, insurance companies, securities, financial holdings, credit and leasing, funds and trusts, and foreigners. For the impact of ownership type on investment efficiency, regressions were estimated using data from 2004 through 2012. However, this study reports results for the investor horizon of foreign institutional block-holders for the period 2008 to 2012. The reason for not incorporating the first 4 years is that the individual data for major individual investors was made

available only after 2003[24] and it requires a 5 year time-span to calculate the investment horizon of large foreign institutional investors. Financial firms, utility firms, and firms with unavailable data were dropped from the sample. This restricts the sample of this study to 14,952 firm-years from 1,965 non-financial firms. In order to control for the effect of outliers, firm level ratios were winsorized at 1% and 99% levels.

Table 4.1 presents the descriptive statistics for the variables described in the previous section. The mean (median) investment for the sampled firms is 2.1% (1.4%) of the previous year's total assets. The mean (median) ownership by relationship-oriented stable domestic investors is 30.7% (29.0%) depicting that Japanese firms' stockholdings is largely held by stable type investors that are more focused on long-term business relationships with the invested firms rather than financial returns. Stockholdings by foreign institutional investors is 10.3% (6.3%). The mean (median) investment horizon of foreign block-holders denoted by IOP is 0.162 (0.192). Elyasiani and Jia (2010) posit that IOP is a unit-less metric that may be termed as the volatility-adjusted ownership proportion. The second measure of investment horizon, maintain-stake-points duration (Foreign Stakes), has a mean (median) value of 2.4 (2.0) suggesting that on average foreign institutional investors hold a higher proportion of shares in a firm for about 2 fiscal interims. Table 4.2 presents correlations among the variables employed. In general, the variables are not highly correlated. The largest correlation is between foreign institutional shareholders (*FOWN*) and firm size (*SIZE*) (ρ=0.572). However, the results remain unchanged after I drop firm size from the regression model.

[24] In the Top 30 Major Shareholders Database, flags representing the stock holdings each investor type are made available after 2003.

Table 4.1 Descriptive Statistics

This table shows the summary statistics. Investment is the sum of yearly growth in property, plant, and equipment, plus growth in inventories, plus research and development expenditures (R&D), deflated by lagged total assets. Stable domestic block-holders is the ratio of sum of shareholding by banks, insurance companies, and corporations. Foreign ownership is measured as ratio of shares owned by foreign investors to number of shares issued at the end of period. Foreign IOP and foreign stakes are the measures of investment horizon of foreign institutional block-holders. Tobin'Q is the ratio of market value of total assets to book value of total assets. Cash flow from operations is defined as the ratio of earnings before interests and taxes plus depreciation and amortization less interests, taxes, and common dividends to total assets. Firm size is natural logarithm of total assets. Tangibility is the ratio of plant, property, and equipment to total assets. Industry leverage is the average industry leverage. Dividend is an indicator variable that equals one if firms paid dividends in the current fiscal year. Loss is an indicator variable that equals one if net income is negative. Age is the difference between firm's first listing year and current year. Excess cash is defined as the difference between actual and the predicted level of cash. Predicted cash is calculated following Opler et al. (1999) after controlling for year and industry effect.

	N	Mean	Std. Dev	25th Percentile	Median	75th Percentile
Investment	14,952	0.021	0.057	-0.009	0.014	0.047
Stable Domestic Block-Holders	14,952	0.307	0.170	0.181	0.290	0.422
Foreign Institutional Shareholders	14,952	0.103	0.112	0.016	0.063	0.159
Foreign IOP (Investment Horizon)	9,027	0.162	0.132	0.000	0.192	0.261
Foreign Stakes (Investment Horizon)	9,027	2.439	2.424	0.000	2.000	4.000
Tobin's Q	14,952	1.081	0.461	0.839	0.980	1.182
Cash Flow from Operations	14,952	0.057	0.042	0.033	0.056	0.081
Firm Size	14,952	11.125	1.441	10.130	10.953	11.975
Tangibility	14,952	0.308	0.170	0.187	0.293	0.407
Industry Leverage	14,952	0.521	0.071	0.470	0.502	0.562
Dividend	14,952	0.564	0.496	0.000	1.000	1.000
Loss	14,952	0.163	0.370	0.000	0.000	0.000
Age	14,952	32.122	19.314	13.750	34.000	49.000
Excess Cash	14,952	-0.013	0.795	-0.473	0.060	0.530

Table 4.2 Correlation Matrix

Investment is the sum of yearly growth in property, plant, and equipment, plus growth in inventories, plus research and development expenditures (R&D), deflated by lagged total assets. Stable domestic block-holders is the ratio of sum of shareholding by banks, insurance companies, and corporations. Foreign ownership is measured as ratio of shares owned by foreign investors to number of shares issued at the end of period. Tobin'Q is the ratio of market value of total assets to book value of total assets. Cash flow from operations is defined as the ratio of earnings before interests and taxes plus depreciation and amortization less interests, taxes, and common dividends to total assets. Firm size is natural logarithm of total assets. Tangibility is the ratio of plant, property, and equipment to total assets. Industry leverage is the average industry leverage. Dividend is an indicator variable that equals one if firms paid dividends in the current fiscal year. Loss is an indicator variable that equals one if net income is negative. Age is the difference between firm's first listing year and current year. Excess cash is defined as the difference between actual and the predicted level of cash. Predicted cash is calculated following Opler et al. (1999) after controlling for year and industry effect.

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
1. Investment	1										
2. Tobin's Q	0.250	1									
3. Stable Domestic Block-Holders	-0.065	-0.160	1								
4. Foreign Institutional Shareholders	0.186	0.289	-0.352	1							
5. Cash Flow from Operations	0.252	0.321	-0.036	0.264	1						
6. Firm Size	0.084	0.063	-0.131	0.572	0.153	1					
7. Tangibility	-0.076	-0.096	0.085	-0.106	0.155	0.096	1				
8. Industry Leverage	-0.168	-0.125	0.094	-0.113	-0.172	0.143	0.165	1			
9. Dividend	0.161	0.156	-0.013	0.082	0.089	0.109	-0.003	0.098	1		
10. Loss	-0.186	-0.112	-0.019	-0.118	-0.443	-0.128	0.008	-0.006	-0.270	1	
11. Age	-0.017	-0.097	0.083	0.109	-0.067	0.389	0.203	0.065	-0.040	0.018	1

4.4.2. The Impact of Stable Domestic Ownership on Investment Efficiency

Table 4.3 reports the results of regressing investment (*INVEST*) on investment opportunities (*TOBINSQ*), relationship-oriented stable domestic ownership (*STABLEOWN*), and the interaction between stable domestic ownership and investment opportunities (*STABLEOWN×TOBINSQ*). Column (1) uses the proportion of stable domestic ownership as the main explanatory variable. Consistent with previous research (e.g., Modigliani and Miller, 1958; McLean et al. 2012; Chen et al. 2014), investment opportunities (*TOBINSQ*) are significantly positively associated with investment. In accordance with the investor protection hypothesis presented in McLean et al. (2012), the positive relation between Tobin's Q and investment is not surprising in terms of the sample employed since shareholders in Japan enjoy strong legal protection. The coefficient on stable domestic ownership is positive and significant, suggesting that firms invest more as equity ownership by stable domestic shareholders increases. In contrast, consistent with the first hypothesis, the coefficient on the interaction between *STABLEOWN×TOBINSQ* is negative and statistically significant at 1% level, indicating that stable domestic ownership is negatively associated with investment efficiency.

For robustness, I use two indicator variables representing the presence of stable domestic ownership in column (2) and column (3). Column (2) uses dummy variable for the highest quartile of stable domestic ownership (*STABLEHIGH*). In column (3), I use dummy variable indicating if stable domestic investors are among the controlling shareholders of the firm (*STABLECONTROL*)[25]. The results continue to hold and show that the relationship-oriented ownership leads to deviations from optimal investment decisions. However, as previously discussed, since stable equity ownership is the aggregate shareholding by financial institutions, such banks and insurance companies, and non-financial corporations, their individual impact on investment could be very different. Generally, financial institutions are likely to oppose firm-level investment because it enhances the risk of firms' debts. On the other hand, non-financial corporations are likely to support firm's investment in general, because it will bring more businesses to these shareholders because of their close relations with the invested firms. Therefore, although the aggregate ownership by banks, insurance companies, and

[25] This variable takes the value of one if stable domestic ownership in a particular firm equals or exceeds 20 percent of the total shareholdings (Shinozaki et al. 2014).

non-financial corporations leads to inefficient investment decisions, their individual effect on investment efficiency could be significantly different.

Table 4.3 The Impact of Stable Domestic Ownership on Investment Efficiency

This table shows estimates of a relation between stable domestic ownership type and investment efficiency. Firm-level investment is the dependent variable across all columns. Tobin'Q is the ratio of market value of total assets to book value of total assets. Stable domestic block-holders (STABLEOWN) is the ratio of sum of shareholding by banks, insurance companies, and corporations. Corporate ownership (CORPTOWN) is ownership ratio of corporate block-holders. Financial ownership (FINCLOWN) is the sum of ownership ratio of banks and insurance companies. Control variables include cash flow from operations (CFLOW) is defined as the ratio of earnings before interests and taxes plus depreciation and amortization less interests, taxes, and common dividends to total assets. Firm size (SIZE) is natural logarithm of total assets. Tangibility (TANG) is the ratio of plant, property, and equipment to total assets. Industry leverage (INDLVRGE) is the average industry leverage. Dividend (DIV) is an indicator variable that equals one if firms paid dividends in the current fiscal year. Loss (LOSS) is an indicator variable that equals one if net income is negative. Age (AGE) is the difference between firm's first listing year and current year. All ratios are winsorized at the 1% and 99% levels. t-statistics are presented in brackets.All models report estimates of firm fixed-effects regressions with year dummies.

Dependent Variable (*Investment*)	(1)	(2)	(3)	(4)	(5)
$TOBINSQ_{(t-1)}$	0.0214***	0.0177***	0.0176***	0.0220***	0.0293***
	(9.276)	(10.26)	(8.537)	(10.34)	(6.580)
$STABLEOWN_{(t-1)}$	0.0343***				
	(3.570)				
$STABLEOWN \times TOBINSQ_{(t-1)}$	-0.0263***				
	(-4.269)				
$STABLEHIGH_{(t-1)}$		0.0179***			
		(5.115)			
$STABLEHIGH \times TOBINSQ_{(t-1)}$		-0.0133***			
		(-4.764)			
$STABLECONTROL_{(t-1)}$			0.00717**		
			(2.280)		
$STABLECONTROL \times TOBINSQ_{(t-1)}$			-0.00607**		
			(-2.569)		
$CORPTOWN_{(t-1)}$				0.0448***	
				(4.416)	
$CORPTOWN \times TOBINSQ_{(t-1)}$				-0.0328***	
				(-5.425)	
$FINCLOWN_{(t-1)}$					-0.00452
					(-0.0960)
$FINCLOWN \times TOBINSQ_{(t-1)}$					-0.00757
					(-0.193)
$CFLOW_{(t-1)}$	0.0968***	0.0964***	0.0975***	0.0956***	0.0907***
	(5.685)	(5.671)	(5.730)	(5.617)	(3.444)
$SIZE_{(t-1)}$	-0.0597***	-0.0597***	-0.0597***	-0.0597***	-0.0691***
	(-25.05)	(-25.06)	(-25.04)	(-25.05)	(-18.33)
$TANG_{(t-1)}$	-0.207***	-0.207***	-0.206***	-0.206***	-0.188***
	(-21.84)	(-21.91)	(-21.77)	(-21.82)	(-12.42)
$INDLVRGE_{(t-1)}$	0.0655**	0.0659**	0.0665**	0.0646**	0.0533
	(2.068)	(2.095)	(2.109)	(2.046)	(1.137)
$DIV_{(t-1)}$	0.0107***	0.0106***	0.0107***	0.0106***	0.0119***
	(5.183)	(5.152)	(5.195)	(5.113)	(4.439)
$LOSS_{(t-1)}$	-0.00557***	-0.00553***	-0.00556***	-0.00553***	-0.00608***
	(-4.038)	(-4.013)	(-4.028)	(-4.015)	(-3.209)
$AGE_{(t-1)}$	0.00286***	0.00284***	0.00287***	0.00277***	0.00218***
	(7.816)	(7.771)	(7.844)	(7.483)	(4.112)
Observations	14,952	14,952	14,952	14,952	7,476
R-squared	0.169	0.170	0.169	0.170	0.165
Year-Fixed Effects	Yes	Yes	Yes	Yes	Yes
Firm-Fixed Effects	Yes	Yes	Yes	Yes	Yes

*, **, ***: Significant at the 10%, 5%, and 1% levels, respectively.

In order to investigate the individual effect of stable shareholders type on investment efficiency, I divide the aggregate stable domestic ownership into corporate ownership (*CORPTOWN*) and equity ownership by financial institutions such as banks and insurance companies (*FINCLOWN*). Column (4) of Table 4.3 shows results on the association between corporate ownership and investment efficiency, whereas results for the impact of financial ownership are presented in column (5). In order to explore whether risk preferences impact the association between financial ownership and investment efficiency, this research takes the sample of firms that have financial block-holders as well as above median financial debt. It was found that the results remain unchanged for the effect of corporate ownership on investment efficiency, as indicated by the coefficient, negative and significant, on *CORPTOWN* × *TOBINSQ*. As predicted, corporate ownership is negatively associated with investment efficiency. On the other hand, based on the results shown in column (5), I find no significant evidence of the association between financial ownership and investment efficiency, the coefficient on *CORPTOWN*×*TOBINSQ* is insignificant. This depicts that among the stable domestic shareholders, only the equity ownership by business corporations negatively affect a firm's ability to make efficient investment decisions.

4.4.3. The Impact of Foreign Ownership and Investment Horizon on Investment Efficiency

Column (1) of Table 4.4 presents the results of regressing investment (*INVEST*) on investment opportunities (*TOBINSQ*), foreign institutional ownership (*FOWN*), and the interaction between foreign institutional ownership and investment opportunities (*FOWN*×*TOBINSQ*). In column (1), I use the percentage of shares held by foreign institutional investors (*FOWN*) as the main explanatory variable. The results are in accordance with the second hypothesis. The coefficient on *FOWN*×*TOBINSQ* is positive and statistically significant, indicating that foreign institutional ownership is related with higher investment efficiency. To further confirm the results, I use additional variables for foreign institutional ownership and report the results in column (2) and column (3). Column (2) uses dummy variable for the highest quartile of foreign institutional ownership as the main explanatory variable (*FOWNHIGH*). Column (3) uses an indicator variable which equals one if foreign institutional investors are among the controlling shareholders in a particular firm and zero

Table 4.4 Impact of Foreign Institutional Ownership and Investment Horizon on Investment Efficiency

This table shows estimates of a relation between foreign institutional ownership and investment horizon on investment efficiency. Firm-level investment is the dependent variable across all columns. Tobin'Q is the ratio of market value of total assets to book value of total assets. Stable domestic block-holders (STABLEOWN) is the ratio of sum of shareholding by banks, insurance companies, and corporations. Foreign ownership (FOWN) is measured as ratio of shares owned by foreign investors to number of shares issued at the end of period. Foreign IOP (FOWNIOP) and foreign stakes (FOWNSTAKES) are indicator variable that equals one for the highest quartile of IOP and foreign stakes respectively. Control variables include cash flow from operations (CFLOW) is defined as the ratio of earnings before interests and taxes plus depreciation and amortization less interests, taxes, and common dividends to total assets. Firm size (SIZE) is natural logarithm of total assets. Tangibility (TANG) is the ratio of plant, property, and equipment to total assets. Industry leverage (INDLVRGE) is the average industry leverage. Dividend (DIV) is an indicator variable that equals one if firms paid dividends in the current fiscal year. Loss (LOSS) is an indicator variable that equals one if net income is negative. Age (AGE) is the difference between firm's first listing year and current year. All ratios are winsorized at the 1% and 99% levels. t-statistics are presented in brackets. All models report estimates of firm fixed-effects regressions with year dummies.

Dependent Variable (*Investment*)	(1)	(2)	(3)	(4)	(5)
$TOBINSQ_{(t-1)}$	0.00896***	0.0122***	0.0121***	0.00533**	0.00499**
	(4.310)	(6.714)	(6.956)	(2.497)	(2.344)
$FOWN_{(t-1)}$	0.0127				
	(0.869)				
$FOWN \times TOBINSQ_{(t-1)}$	0.0282***				
	(3.077)				
$FOWNHIGH_{(t-1)}$		-0.00361			
		(-1.087)			
$FOWNHIGH \times TOBINSQ_{(t-1)}$		0.00454*			
		(1.885)			
$FOWNCONTROL_{(t-1)}$			0.00118		
			(0.327)		
$FOWNCONTROL \times TOBINSQ_{(t-1)}$			0.00484*		
			(1.934)		
$FOWNIOP_{(t)}$				-0.00609	
				(-1.532)	
$FOWNIOP \times TOBINSQ_{(t-1)}$				0.00689*	
				(1.880)	
$FOWNSTAKES_{(t)}$					-0.0103**
					(-2.480)
$FOWNSTAKES \times TOBINSQ_{(t-1)}$					0.0117***
					(3.019)
$CFLOW_{(t-1)}$	0.0920***	0.0964***	0.0955***	0.0781***	0.0780***
	(5.402)	(5.661)	(5.613)	(3.809)	(3.802)
$SIZE_{(t-1)}$	-0.0616***	-0.0598***	-0.0608***	-0.102***	-0.102***
	(-25.55)	(-25.05)	(-25.37)	(-23.53)	(-23.55)
$TANG_{(t-1)}$	-0.207***	-0.206***	-0.207***	-0.301***	-0.301***
	(-21.92)	(-21.81)	(-21.85)	(-19.99)	(-20.01)
$INDLVRGE_{(t-1)}$	0.0737**	0.0676**	0.0670**	0.0222	0.0210
	(2.344)	(2.147)	(2.134)	(0.430)	(0.408)
$DIV_{(t-1)}$	0.0107***	0.0107***	0.0108***	0.00558*	0.00547
	(5.174)	(5.177)	(5.215)	(1.675)	(1.644)
$LOSS_{(t-1)}$	-0.00570***	-0.00559***	-0.00561***	-0.00415**	-0.00421**
	(-4.134)	(-4.051)	(-4.066)	(-2.289)	(-2.321)
$AGE_{(t-1)}$	0.00268***	0.00286***	0.00277***	-0.00106	-0.00100
	(7.303)	(7.828)	(7.567)	(-0.0803)	(-0.0758)
Observations	14,952	14,952	14,952	9,027	9,027
R-squared	0.170	0.169	0.169	0.182	0.183
Year-Fixed Effects	Yes	Yes	Yes	Yes	Yes
Firm-Fixed Effects	Yes	Yes	Yes	Yes	Yes

*, **, ***: Significant at the 10%, 5%, and 1% levels, respectively.

otherwise (*FOWNCONTROL*). Results remain unchanged, as I find similar evidence across all three specifications, the coefficients on the interaction between foreign institutional ownership and investment opportunities are positive and statistically significant. The findings so far are in line with the hypotheses and posit that unlike the relationship-oriented ownership type, equity ownership by independent investors increases the investment efficiency of firms in Japan. Unlike previous studies, this research reports additional evidence on the association between foreign institutional ownership and investment efficiency by showing whether foreign shareholders with longer investment horizons lead to efficient investment decisions. Accordingly, this study investigates the impact of foreign institutional block-holders' investment horizon on investment efficiency. Column (4) of Table 4.4 provides the results on the relation between investment horizon of foreign block-holders and investment efficiency by using the first measure of investment horizon, foreign institutional ownership persistence (*FOWNIOP*). Consistent with the third hypothesis of this study, the regression estimates shown in column (4) indicate that investment horizon of foreign institutional shareholders is positively and significantly associated with investment efficiency. The coefficient on the interaction between investment horizon of foreign investors and investment opportunities (*FOWNIOP×TOBINSQ*) is positive and statistically significant at 10% level. For the second measure of investment horizon of foreign institutional block-holders, I use maintain-stake-points (*FOWNSTAKES*) and report the results in column (5). According to the results, the coefficient on the interaction between maintain-stake-points of foreign investors and investment opportunities (*FOWNSTAKES×TOBINSQ*) is positive and statistically significant at 1% level, suggesting that foreign institutional shareholders with longer investment horizons increase the investment efficiency of firms. The results so far, indicate that managers make efficient investment decisions in the presence of larger and longer shareholdings by independent institutional investors. Results are consistent with the previous literature (Elyasiani & Jia, 2010; Attig et al. 2010; Chen et al. 2007) and indicate the active monitoring role played by large long term foreign institutional investors.

4.4.4. Robustness and Additional Tests

In this section, I perform a number of additional checks for the robustness of the primary findings of this study. I first investigate whether ownership type and investment impact investment efficiency if

Tobin's Q is greater than 1. Since the replacement cost of additional investments are likely to be less than the yielded market value, firms are more likely to benefit from increasing investments when Tobin's Q exceeds 1 (David et al. 2006). Next, following Biddle et al. (2009), this study conducts analysis on the relation between ownership type, including investment horizon of foreign institutional shareholders, and the level of investment conditional on whether the firms are more prone to under or over-invest. To do this, I use ex-ante firm specific characteristics that are associated with a higher probability that a firm will under or over-invest.

4.4.4.1. The Impact of Ownership Type and Investment Horizon on Investment Efficiency When Tobin's Q is Greater than 1

Table 4.5 presents the investigation of the effect of ownership type and investment horizon of foreign institutional block-holders on investment efficiency by using an indicator variable for investment opportunities with value 1 when Tobin's Q is greater than 1 and 0 otherwise. Results for stable ownership is shown in column (1), column (2) presents results for the association between foreign ownership and investment efficiency, and investment horizon of foreign block-holders in column (3) and (4). The results on the effect of stable ownership and foreign ownership remain unchanged after using indicator variable for Tobin's Q greater than 1. However, the investment horizon variables are no longer significant. The findings for the impact of investment horizon on investment are consistent with the previous studies (Chapter 2 and Chapter 3) of this dissertation and depict that ownership proportion plays a larger role.

4.4.4.2. Conditional Effect of Ownership Type and Investment Horizon, on Investment

Next, for additional checks, this study examines whether ownership type and investment horizon is associated with investment, when there is a higher likelihood of firms to under or over-invests. Similar to Biddle et al. (2009), I separately estimate the following model for both the relation-oriented stable domestic shareholders and independent foreign institutional shareholders including the investment stability of foreign block-holders:

$$\text{INVEST}_{i,t} = \alpha + \beta_1 Ownership_{i,t-1}(InvestHorizon_{i,t}) + \beta_2 Ownership_{i,t-1}(InvestHorizon_{i,t}) \times Overfirm_{i,t-1} + \beta_3 Overfirm_{i,t-1} + \beta_n Control\ Variables_{i,t-1} + Year\ Dum + Firm\ Fixed\ Effects + \varepsilon_{i,t}$$

Table 4.5 Ownership Type and Investment Horizon on Investment Efficiency (Q>1)

This table shows estimates of a relation between foreign institutional ownership and investment horizon on investment efficiency. Firm-level investment is the dependent variable across all columns. Investment is the sum of yearly growth in property, plant, and equipment, plus growth in inventories, plus research and development expenditures (R&D), deflated by lagged total assets. TOBINSQ is an indicator variable that equals one if Tobin's Q exceeds 1. Foreign ownership (FOWN) is measured as ratio of shares owned by foreign investors to number of shares issued at the end of period. Foreign IOP (FOWNIOP) and foreign stakes (FOWNSTAKES) are indicator variables that equals one for the highest quartile of IOP and foreign stakes respectively. Control variables include cash flow from operations (CFLOW) is defined as the ratio of earnings before interests and taxes plus depreciation and amortization less interests, taxes, and common dividends to total assets. Firm size (SIZE) is natural logarithm of total assets. Tangibility (TANG) is the ratio of plant, property, and equipment to total assets. Industry leverage (INDLVRGE) is the average industry leverage. Dividend (DIV) is an indicator variable that equals one if firms paid dividends in the current fiscal year. Loss (LOSS) is an indicator variable that equals one if net income is negative. Age (AGE) is the difference between firm's first listing year and current year. All ratios are winsorized at the 1% and 99% levels. t-statistics are presented in brackets.All models report estimates of firm fixed-effects regressions with year dummies.

Dependent Variable (*Investment*)	(1)	(2)	(3)	(4)
$TOBINSQ_{(t-1)}$	0.0142***	0.00494***	0.00887***	0.00832***
	(6.467)	(3.159)	(4.980)	(4.696)
$STABLEOWN_{(t-1)}$	0.0114			
	(1.562)			
$STABLEOWN \times TOBINSQ_{(t-1)}$	-0.0122**			
	(-2.041)			
$FOWN_{(t-1)}$		0.0190*		
		(1.673)		
$FOWN \times TOBINSQ_{(t-1)}$		0.0481***		
		(5.032)		
$FOWNIOP_{(t)}$			0.000927	
			(0.503)	
$FOWNIOP \times TOBINSQ_{(t-1)}$			-0.00123	
			(-0.433)	
$FOWNSTAKES_{(t)}$				0.000351
				(0.184)
$FOWNSTAKES \times TOBINSQ_{(t-1)}$				0.00159
				(0.536)
$CFLOW_{(t-1)}$	0.111***	0.103***	0.0782***	0.0783***
	(6.609)	(6.103)	(3.842)	(3.851)
$SIZE_{(t-1)}$	-0.0614***	-0.0634***	-0.103***	-0.103***
	(-25.92)	(-26.51)	(-23.98)	(-24.00)
$TANG_{(t-1)}$	-0.209***	-0.209***	-0.299***	-0.299***
	(-22.07)	(-22.10)	(-19.89)	(-19.91)
$INDLVRGE_{(t-1)}$	0.0554*	0.0646**	0.0188	0.0180
	(1.750)	(2.055)	(0.365)	(0.350)
$DIV_{(t-1)}$	0.0114***	0.0110***	0.00538	0.00536
	(5.531)	(5.340)	(1.617)	(1.611)
$LOSS_{(t-1)}$	-0.00484***	-0.00499***	-0.00392**	-0.00393**
	(-3.511)	(-3.623)	(-2.163)	(-2.166)
$AGE_{(t-1)}$	0.00284***	0.00266***	-0.00206	-0.00200
	(7.744)	(7.234)	(-0.156)	(-0.152)
Observations	14,952	14,952	9,027	9,027
R-squared	0.1679	0.1709	0.1842	0.1843
Year-Fixed Effects	Yes	Yes	Yes	Yes
Firm-Fixed Effects	Yes	Yes	Yes	Yes

*, **, ***: Significant at the 10%, 5%, and 1% levels, respectively.

Where *Overfirm* is a ranked variable used to investigate the conditional relation between ownership type and investment efficiency. It distinguishes between situations in which firms are more prone to under-invest or over-invest. *Overfirm* is a composite score measure constructed based on the ex-ante firm specific characteristics that are likely to impact the probability that firms with under-invest or over-invest. Building on Biddle et al. (2009), this study follows previous literature (Jensen, 1986; Opler et al. 1999; Harford et al. 2008; Myers, 1977) that suggests that firms with high cash and low leverage are more prone to over-invest, and rank the sampled firms into deciles based on the level of their excess cash holdings and negative leverage at year t. For both excess cash and leverage, I re-scale the deciled ranks so that they range between zero and one. A composite score is then created as the average of ranked value of firm's excess cash balances and negative leverage which increases in the likelihood of over-investment. For the measurement of excess cash, I follow the standard empirical model of cash holdings by Opler et al. (1999) and estimate excess as the residual of cash levels regression after controlling year and firms fixed effects[26].

Based on the hypothesis of this study, stable shareholders are negatively associated with investment efficiency, that is, they increase both under and over-investment. To test the prediction whether stable shareholders are positively associated with under-investment, I follow Biddle et al. (2009) and investigate if the coefficient on stable shareholders alone is less than zero (under-investment: $\beta_1 < 0$). Specifically, given that *Overfirm* is decreasing in the likelihood of under-investment, and increasing with over-investment, β_1 measures the relation between stable shareholders and investment when firms are prone to under-invest. On the other hand, β_2 measures the incremental relation between stable shareholders and investment in the higher likelihood of over-investment, the sum of the coefficients on stable shareholders and the interaction effects ($\beta_1 + \beta_2$) measures the association between stable shareholders and investment when firms are prone to over-invest (*STABLEOWN* × *Overfirm*). Therefore, I use the joint effect of these coefficients to test the prediction that stable shareholders lead to over-investment (over-investment: $\beta_1 + \beta_2 > 0$). In contrast, for the independent type shareholders, the hypothesis of this study predicts that they are associated with efficient investment decisions, therefore, they negatively impact both under and

[26] Please see Chapter 3 of this dissertation for a detailed explanation of excess cash measurement.

over-investment. Accordingly, I test if the coefficient on foreign institutional shareholders is greater than zero (under-investment: $\beta_1 > 0$). Moreover, if foreign institutional shareholders indeed decrease investment when there is a higher likelihood of firms to over-invest, the coefficient on the interaction term between foreign institutional shareholders and overfirm (*FOWN* × *Overfirm*) is predicted to be negative (over-investment: $\beta_1 + \beta_2 < 0$). Similar to foreign institutional shareholders, I predict the association for the investment horizon of foreign block-holders with under-investment to be positive (under-investment: $\beta_1 > 0$) and negative for over-investment (over-investment: $\beta_1 + \beta_2 < 0$).

Results for the conditional tests of the hypothesis for stable shareholders are shown in Table 4.6. In column (1), I report regression results for the association between relationship-oriented stable domestic shareholders and investment conditioned on the higher likelihood of over-investment. I find no significant evidence that stable shareholders (*STABLEOWN*) are associated with investment among firms that are more prone to under-invest. In terms of the interaction between stable shareholders and the likelihood of over-investment (*STABLEOWN*×*Overfirm*), it was found that the estimated coefficient is positive and significant at 99% confidence level. The results suggest that stable shareholders increase over-investment, providing consistent support for the hypothesis of this study that they are associated with inefficient investment decisions. In accordance with the previous analysis, I segment the aggregate stable ownership into corporate and financial ownership due to differences in their risk preferences. According to column (2) of Table 4.6, corporate ownership has no significant effect on investment when firms are prone to under-invest. Similar to the aggregate level of stable shareholders, corporate shareholders positively affect investment when there is a higher likelihood of over-investment and therefore, negatively affect the investment efficiency. I find no significant evidence on the association between financial ownership in the presence of both under and over-investment propensity. This confirms evidence from the investment-Q sensitivity analysis and depict that among the relationship-oriented stable shareholders, corporate ownership is negatively associated with investment efficiency.

In terms of the relationship between foreign institutional investors and investment when firms are prone to under and over-invest, I also find evidence similar to investment-Q sensitivity analysis. As seen in column (1) of Table 4.7, foreign institutional ownership increases investment

when firms are prone to under-invest. In contrast, foreign ownership significantly decreases firm-level investment in case of over-investment propensity. On the other hand, using multiple measures of foreign block-holders' investment horizon as shown in column (2) and (3), I find no significant

Table 4.6 Stable Ownership and Conditional Investment

This table shows estimates of a conditional relation between ownership type and investment. Firm level investment is the dependent variable across all columns. Investment is the sum of yearly growth in property, plant, and equipment, plus growth in inventories, plus research and development expenditures (R&D), deflated by lagged total assets. Stable domestic block-holders (STABLEOWN) is the ratio of sum of shareholding by banks, insurance companies, and corporations. Corporate ownership (CORPTOWN) is ownership ratio of corporate block-holders. Financial ownership (FINCLOWN) is the sum of ownership ratio of banks and insurance companies. Overfirm is a ranked variable that represents firm's propensity to over-invest. Control variables include Tobin'Q, the ratio of market value of total assets to book value of total assets. Cash flow from operations (CFLOW) is defined as the ratio of earnings before interests and taxes plus depreciation and amortization less interests, taxes, and common dividends to total assets. Firm size (SIZE) is natural logarithm of total assets. Tangibility (TANG) is the ratio of plant, property, and equipment to total assets. Industry leverage (INDLVRGE) is the average industry leverage. Dividend (DIV) is an indicator variable that equals one if firms paid dividends in the current fiscal year. Loss (LOSS) is an indicator variable that equals one if net income is negative. Age (AGE) is the difference between firm's first listing year and current year. All ratios are winsorized at the 1% and 99% levels. t-statistics are presented in brackets.All models report estimates of firm fixed-effects regressions with year dummies.

Dependent Variable (*Investment*)	(1)	(2)	(3)
$STABLEOWN_{(t-1)}$	-0.0106		
	(-0.935)		
$STABLEOWN \times Overfirm_{(t-1)}$	0.0409**		
	(2.122)		
$CORPTOWN_{(t-1)}$		-0.00938	
		(-0.765)	
$CORPTOWN \times Overfirm_{(t-1)}$		0.0410**	
		(2.054)	
$FINCLOWN_{(t-1)}$			0.0193
			(0.542)
$FINCLOWN \times Overfirm_{(t-1)}$			-0.0626
			(-0.834)
$Overfirm_{(t-1)}$	0.0393***	0.0430***	0.0739***
	(5.147)	(6.672)	(6.549)
$TOBINSQ_{(t-1)}$	0.0145***	0.0145***	0.0305***
	(9.171)	(9.128)	(8.175)
$CFLOW_{(t-1)}$	0.104***	0.104***	0.0960***
	(6.045)	(6.044)	(3.649)
$SIZE_{(t-1)}$	-0.0565***	-0.0565***	-0.0641***
	(-23.31)	(-23.28)	(-16.76)
$TANG_{(t-1)}$	-0.172***	-0.171***	-0.144***
	(-17.02)	(-16.99)	(-9.060)
$INDLVRGE_{(t-1)}$	0.0966***	0.0981***	0.103**
	(3.017)	(3.067)	(2.178)
$DIV_{(t-1)}$	0.00981***	0.00991***	0.0111***
	(4.724)	(4.771)	(4.112)
$LOSS_{(t-1)}$	-0.00488***	-0.00486***	-0.00620***
	(-3.533)	(-3.522)	(-3.280)
$AGE_{(t-1)}$	0.00316***	0.00313***	0.00261***
	(8.541)	(8.370)	(4.900)
Observations	14,581	14,581	7,316
R-squared	0.1736	0.1736	0.1720
Year-Fixed Effects	Yes	Yes	Yes
Firm-Fixed Effects	Yes	Yes	Yes

*, **, ***: Significant at the 10%, 5%, and 1% levels, respectively.

evidence that foreign block-holders with longer investment horizon increase investment in under-investing firms. Similar results were found for firms with a higher likelihood of over-investment. The results are robust and posit that the proportion of independent type foreign

Table 4.7 Foreign Ownership, Investment Horizon, and Conditional Investment

This table shows estimates of a conditional relation between ownership type and investment. Firm level investment is the dependent variable across all columns. Investment is the sum of yearly growth in property, plant, and equipment, plus growth in inventories, plus research and development expenditures (R&D), deflated by lagged total assets. Stable domestic block-holders. Foreign ownership (FOWN) is measured as ratio of shares owned by foreign investors to number of shares issued at the end of period. Foreign IOP (FOWNIOP) and foreign stakes (FOWNSTAKES) are indicator variable that equals one for the highest quartile of IOP and foreign stakes respectively. Overfirm is a ranked variable that represents firm's propensity to over-invest. Control variables include Tobin'Q, the ratio of market value of total assets to book value of total assets. Cash flow from operations (CFLOW) is defined as the ratio of earnings before interests and taxes plus depreciation and amortization less interests, taxes, and common dividends to total assets. Firm size (SIZE) is natural logarithm of total assets. Tangibility (TANG) is the ratio of plant, property, and equipment to total assets. Industry leverage (INDLVRGE) is the average industry leverage. Dividend (DIV) is an indicator variable that equals one if firms paid dividends in the current fiscal year. Loss (LOSS) is an indicator variable that equals one if net income is negative. Age (AGE) is the difference between firm's first listing year and current year. All ratios are winsorized at the 1% and 99% levels. t-statistics are presented in brackets.All models report estimates of firm fixed-effects regressions with year dummies.

Dependent Variable (*Investment*)	(1)	(2)	(3)
$FOWN_{(t-1)}$	0.0813***		
	(4.513)		
$FOWN \times Overfirm_{(t-1)}$	-0.0850***		
	(-3.019)		
$FOWNIOP_{(t-1)}$		0.00156	
		(0.438)	
$FOWNIOP \times Overfirm_{(t-1)}$		-0.00161	
		(-0.261)	
$FOWNSTAKES_{(t-1)}$			-0.00175
			(-0.462)
$FOWNSTAKES \times Overfirm_{(t-1)}$			0.00514
			(0.792)
$Overfirm_{(t-1)}$	0.0584***	0.0667***	0.0651***
	(10.28)	(9.037)	(8.841)
$TOBINSQ_{(t-1)}$	0.0139***	0.0140***	0.0140***
	(8.720)	(5.415)	(5.429)
$CFLOW_{(t-1)}$	0.0982***	0.0690***	0.0692***
	(5.707)	(3.315)	(3.323)
$SIZE_{(t-1)}$	-0.0580***	-0.0999***	-0.0998***
	(-23.63)	(-22.28)	(-22.26)
$TANG_{(t-1)}$	-0.172***	-0.257***	-0.257***
	(-17.04)	(-16.24)	(-16.24)
$INDLVRGE_{(t-1)}$	0.107***	0.0921*	0.0926*
	(3.357)	(1.770)	(1.781)
$DIV_{(t-1)}$	0.00964***	0.00642*	0.00648*
	(4.642)	(1.931)	(1.951)
$LOSS_{(t-1)}$	-0.00498***	-0.00428**	-0.00425**
	(-3.608)	(-2.366)	(-2.348)
$AGE_{(t-1)}$	0.00302***	0.00147*	0.00148*
	(8.127)	(1.648)	(1.659)
Observations	14,581	8,668	8,668
R-squared	0.174	0.196	0.196
Year-Fixed Effects	Yes	Yes	Yes
Firm-Fixed Effects	Yes	Yes	Yes

*, **, ***: Significant at the 10%, 5%, and 1% levels, respectively.

institutional investors alone positively affect the investment efficiency of Japanese firms. I also investigate. However, there are reasons to doubt that the estimates could be subjected to a significant bias because of the endogeneity of foreign institutional investors. The results might be affected by the widely known fact that foreign institutional investors are more interested to invest in highly liquid firms without good investment opportunities. To address the endogeneity problem, I run the two-stage least squares (2SLS) regressions where I use instrumental variables for foreign institutional ownership, similar to Chapter 2. Results are reported in Appendix Table A4. The results reported in Table A4 support the findings that foreign institutional ownership leads to efficient investment decisions.

4.5. Summary

This research investigates the association between ownership structure and investment efficiency concentrating on the relationship-sensitivity of different investors' type. The impact of equity ownership by relationship driven stable domestic shareholders and independent foreign institutional shareholders on the investment efficiency was investigated. The findings of this study reveal that shareholders who are more focused on close business relations with the firms in which they own stakes are negatively related to investment efficiency. The evidence holds only for corporate type stable shareholders when I investigate the effect of equity ownership by corporations and financial ownership in isolation. No significant evidence was found on the association between financial ownership and investment efficiency. The findings regarding corporate ownership are in line with the assumption that non-financial shareholders may benefit from firms aggressively investing, even in unwanted projects, because they may either be on the supplying or buying side of a trade relationship.

In contrast, the ownership type that is independent of commercial ties with the invested firms, such as foreign institutional investors, leads to efficient investment decisions. Since the relationship-oriented investors are mostly large and stable shareholders with longer investment horizons, this study also accounts for the effect of stable shareholdings by foreign institutional block-holders. This study was unable to find consistent evidence whether large foreign institutional investors promote efficient investment decisions. Overall, results of this study show that ownership proportion of independent shareholders, foreign institutional investors, significantly increases the

investment efficiency of firms by curb the managerial incentives to engage in value destroying projects through increased and efficient monitoring.

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Appendix 4

A4. Control for Endogeneity

Table A4. Foreign Ownership, Investment Horizon and Investment Conditional on Firm's Propensity to Over (Under)-Invest Two-Stage Least Squares

This table shows estimates of a relation between foreign ownership, investment horizon of foreign investors, and investment conditional on firm's propensity to over (under)-invest. Firm-level investment is the dependent variable across all columns.

		Endogeneity of Foreign Ownership			
		2SLS 1st Stage	2SLS 2nd Stage		
	(1)	*FOWN*	(3)	(4)	(5)
$FOWN_{(t-1)}$	0.132***				
	(7.469)				
$FOWN \times OVERFIRM_{(t)}$	-0.127***				
	(-4.615)				
$MSCI_{(t-1)}$		0.0570***			
		(21.25)			
$PRDCTFOWN_{(t-1)}$			0.207***		
			(6.626)		
$PRDCTFOWN_{(t-1)} \times OVERFIRM_{(t)}$			-0.149***		
			(-6.724)		
$FOWNIOP_{(t)}$				-0.000184	
				(-0.0532)	
$FOWNIOP \times OVERFIRM_{(t)}$				0.00265	
				(0.446)	
$FOWNSTAKES_{(t)}$					0.000802
					(0.219)
$FOWNSTAKES \times OVERFIRM_{(t)}$					0.00198
					(0.315)
$OVERFIRM_{(t)}$	-0.0952***		-0.00270	-0.141***	-0.141***
	(-17.32)		(-0.843)	(-19.66)	(-19.66)
$TOBINSQ_{(t-1)}$	0.0119***	0.0364***	0.0121***	0.0105***	0.0105***
	(7.788)	(21.48)	(7.097)	(4.364)	(4.376)
$CFLOW_{(t-1)}$	0.119***	0.269***	0.121***	0.109***	0.109***
	(7.088)	(13.02)	(7.760)	(5.418)	(5.423)
$SIZE_{(t-1)}$	-0.0674***	0.0376***	-0.00591***	-0.111***	-0.111***
	(-28.36)	(56.08)	(-4.157)	(-25.79)	(-25.79)
$TANG_{(t-1)}$	-0.258***	-0.0788***	-0.0283***	-0.346***	-0.346***
	(-27.04)	(-16.37)	(-6.787)	(-23.25)	(-23.26)
$INDLVRGE_{(t-1)}$	0.00192	-0.185***	-0.0173	-0.0377	-0.0374
	(0.0619)	(-3.473)	(-0.507)	(-0.751)	(-0.745)
$DIV_{(t-1)}$	0.0105***	0.00922***	0.0228***	0.00361	0.00364
	(5.204)	(3.240)	(12.51)	(1.116)	(1.125)
$LOSS_{(t-1)}$	-0.00616***	0.00901***	-0.0102***	-0.00445**	-0.00443**
	(-4.564)	(4.191)	(-7.372)	(-2.532)	(-2.519)
$AGE_{(t-1)}$	0.00173***	-0.000365***	-5.61e-05*	-0.000567	-0.000577
	(4.773)	(-8.510)	(-1.908)	(-0.652)	(-0.664)
Observations	14,952	14,952	14,952	8,849	8,849
R-squared	0.204	0.490	0.224	0.231	0.231
Year-Fixed Effects	Yes	Yes	Yes	Yes	Yes
Firm-Fixed Effects	Yes	No	No	Yes	Yes
Industry-Fixed Effects	No	Yes	Yes	No	No

*, **, ***: Significant at the 10%, 5%, and 1% levels, respectively.

Chapter 5

Conclusion

This study explores the effect of the shift from a previously insider-based to a more shareholder-oriented ownership structure on corporate governance by focusing on the role of increased equity ownership by foreign investors in Japanese firms. In this dissertation, my approach differs from previous research in that I pursue the investigation of foreign ownership as one of the driver of governance improvements by using both ownership level and the investment horizon of foreign investors. In addition, grounded on the view that they have the expertise and incentives to effectively monitor the invested firms, the extent to which foreign shareholders affect the strategic decisions of firms related to cash holdings and investment was also examined in this dissertation.

5.1. Changes in Japanese Corporate Ownership Structure and Corporate Governance

I begin this research by investigating the relationship between equity ownership by foreign institutional investors and corporate governance by employing a composite index that emphasizes on the quality of firm's internal controls and includes various corporate governance attributes from multiple dimensions (Chapter 2). Using a sample of all the listed Japanese firms, this study compliments the evidence presented in previous studies and shows that foreign institutional investors are beneficial in improving corporate governance even when the shareholder protection is stronger than the portfolio firm's country. In an attempt to alleviate the endogeneity of foreign institutional ownership, I employ two-stage least squares (2SLS) regressions and get qualitatively similar results. The results are consistent with the hypothesis that foreign equity ownership leads to improvements in corporate governance practices. This study also examines the governance role played by the domestic investors, and finds that while investors having potential business relationships with the invested firms (relationship-oriented) negatively impact corporate governance, the association is positive for investors without close business ties (independent). These findings are in accordance with the hypothesis of this study and put forward the view that there is a large variation in the effectiveness of monitoring performed by domestic investors with and without close business relations with the firms. However, I find that the presence of large foreign institutional investors are more likely to reverse the

negative influence of relationship-oriented domestic investors on governance, thereby change the way how such domestic investors affect the quality of corporate governance.

Unlike previous studies on the association between foreign ownership and governance, this research explores whether the investment horizon of large foreign institutional investors has additional effect in improving the quality of corporate governance. Although literature suggests that owners with long-term investments more actively monitor the firms, I do not find evidence that foreign block-holders with stable investment horizons play a larger role in improving corporate governance. Results are similar for independent domestic institutional investors, whereas investment horizons of relationship-oriented domestic investors negatively impact corporate governance. Overall, the results do not support the stable investment horizon hypothesis and suggest that in terms of investors who are independent of close business relations with the invested firms, the proportion of ownership is a significant determinant of governance improvements.

5.2. Foreign Ownership and Corporate Cash Holdings

This research continues to examine the effect of foreign investors on corporate governance by focusing on the effectiveness of their monitoring role in forcing managers to implement strategic policies that enhance shareholder value. Accordingly, I investigate the association between foreign ownership and corporate cash holdings (Chapter 3). Since the hypothesis of this dissertation propounds the view that foreign investors have the expertise and incentives to mitigate agency conflicts between managers and shareholders, they may also impact firms' cash management decisions, especially after the recent surge in their equity ownership. Coupled with examining their impact on the level of cash balances, this study tests whether the recent shift in the corporate ownership structure improves the valuation and usage of liquid assets. Using a dataset over the period 2004-2012, I first examine the role of foreign institutional investors in explaining why Japanese firms have relatively decreased their cash holdings by exploring the effect of ratio of equity ownership and the investment horizon of foreign institutional block-holders. Consistent with the predictions of this study, it was found that increased foreign investors' involvement leads to a decline in the level of cash holdings in the subsequent periods.

Next, this study attempts to revisit the agency explanation of cash holdings and explores if outsider-investor dominance leads to a reduction in the level of liquid assets that can be easily appropriated by the self-interested managers. To investigate this, I build on previous studies and attempt to develop a methodology in order to target the setting where cash reserves are more prone to generate agency conflicts between managers and shareholders. In line with the hypothesis, it was found that foreign institutional investors cause a decline in cash balances of firms only in the presence of a higher propensity of wasteful managerial behavior. With respect to the value of cash, the findings of this chapter show that marginal value of cash is greater in firms with high foreign ownership suggesting that foreign investors are effective in monitoring the firms in which they hold equity stakes. In terms of the usage of excess cash reserves, the findings show firms with a decline in their cash reserves negatively impact the operating performance of firms which is suggestive of inefficient ways of cash deployment. However, the negative impact of decline in excess cash on operating performance is reversed if firms have larger presence of foreign institutional investors. I find no significant evidence on the impact of investment horizon of foreign institutional block-holders and stable shareholders on cash holdings. Overall, the results presented in this study further supports the premise that Japanese corporate governance improved with the increased equity ownership by foreign institutional investors.

5.3. Foreign ownership and Investment Efficiency

This research investigates the association between ownership structure and investment efficiency concentrating on the relationship-sensitivity of different investors' type. The impact of equity ownership by relationship driven stable domestic shareholders and independent foreign institutional shareholders on the investment efficiency was investigated. The findings of this study reveal that shareholders who are more focused on close business relations with the firms in which they own stakes are negatively related to investment efficiency. The evidence holds only for corporate type stable shareholders when I investigate the effect of equity ownership by corporations and financial ownership in isolation. No significant evidence was found on the association between financial ownership and investment efficiency. The findings regarding corporate ownership are in line with the

assumption that non-financial shareholders may benefit from firms aggressively investing, even in unwanted projects, because they may either be on the supplying or buying side of a trade relationship.

In contrast, the ownership type that is independent of commercial ties with the invested firms, such as foreign institutional investors, leads to efficient investment decisions. The evidence suggests that arms-length foreign institutional ownership increases the investment efficiency of Japanese firms and leads to a decline in the deviations from optimal investment decisions. Since the relationship-oriented investors are mostly large and stable shareholders with longer investment horizons, this study also accounts for the effect of stable shareholdings by foreign institutional block-holders. This study was unable to find consistent evidence whether investment horizon of large foreign institutional investors promote efficient investment decisions. Overall, results of this study show that ownership proportion of independent shareholders, foreign institutional investors, significantly increases the investment efficiency of firms by curbing the managerial incentives to engage in value destroying projects through increased and efficient monitoring.

5.4. Conclusion

This dissertation provides a detailed investigation on the effect of the shift from a previously insider-based to a more shareholder-oriented ownership structure on corporate governance. I analyze whether and how foreign institutional investors, after the surge in their equity ownership in the 21st century, affect the quality of corporate governance. This dissertation also explores whether foreign investors are effective in putting disciplining pressure on firms' management to adopt shareholder-oriented practices. By directly testing the effect of foreign institutional investors on governance as well as other multiple dimensions that proxy for governance improvements, this study shows that increased presence of foreign institutional investors in Japanese capital markets is one of the drivers of governance improvements. The results also posit that relationship-oriented stable shareholders negatively impact corporate governance quality. Consistent with the view that large investors with stable and longer investment horizons have ample opportunities and greater incentives to effectively monitor the firms, this study analyzes the effect of investment stability of foreign

institutional block-holders and find no significant evidence. The available evidence therefore suggests that the proportion of foreign ownership is a significant determinant of governance improvements.

5.5. Contributions of Dissertation

In testing the impact of foreign institutional ownership, this study uses multiple measures to capture their monitoring incentives. First one is the fraction of the firm's total shares outstanding owned by foreign institutional investors, which is common in the literature. In addition, I employ several alternative measures of investment horizon (ownership stability) of foreign block-holders, since the incentive and ability of investors to engage in improving governance practices may increase with their investment horizon. Bushee (1998) shows that compared to transient owners, institutions with long-term investments more actively monitor the firms. Stable owners may have greater incentives to engage in monitoring for longer and ongoing basis, and therefore they may be able to bring about improvements in the quality of corporate governance (Elyasiani and Jia, 2010; Attig, Cleary, Ghoul, and Guedhami, 2010). In addition, whether the long-term (stable) foreign institutional investors have a more significant effect on governance is likely to be especially an interesting question in the Japanese setting, given the presence of traditional "stable" investors. This study therefore adds new evidence to the literature by investigating how foreign shareholders with longer investment horizons affect corporate governance. In addition, coupled with identifying their incremental impact on the governance of firms from strong shareholder protection market, this research offers an insight into whether foreign investors have the ability to impact the corporate governance role of domestic shareholders with long-term business relations with the invested firms.

Further, this dissertation revisits the agency explanation of cash holdings and explores if outsider-investor dominance leads to a reduction in the level of liquid assets that can be easily appropriated by the self-interested managers. Hamao et al. (2011) show that foreign investors cause a significant decline in the level of cash balances by forcing Japanese managers to increase dividend payouts to shareholders. Somewhat similar results are reported in Kato et al. (2014). In this research however, I extend the evidence presented in previous studies and show that foreign investors address the agency costs of free cash flow by causing a decline in cash balances only in the presence of a

higher propensity of wasteful managerial behavior. In this study, I also present evidence that foreign institutional investors, through increased monitoring, significantly affect the value and usage of cash reserves.

Concentrating on the relationship-sensitivity of investors' type, this research also contributes to the literature by providing evidence that foreign institutional investors influence investment efficiency. This study is related to David et al. (2006), who explore the effect of foreign investors on firms' investment decisions using data from 146 industrial firms over the period 1991 to 1997. This research is also related to Chen et al. (2014) who use international data from privatized firms and test the association between foreign ownership and investment efficiency. Using a larger dataset and alternative methods to measures investment efficiency, my research shows that foreign institutional investors significantly affect the firms' ability to make efficient investment decisions.

5.6. Limitations and Future Research

While this dissertation was able to confirm that equity ownership by foreign institutional investors promotes corporate governance improvements in Japan, it has not yet completely uncovered the governance effect of foreign investors' investment horizon because of data limitations. Since data of individual foreign investors is not readily available, this research measures the investment horizon of foreign institutional investors by using only the top largest shareholders. Although, my objective of using investment horizon is to account for both the length and size of foreign shareholding, this limitation, to some extent, may affect the results of investment horizon of foreign institutional investors. The data limitation also restricted this research to employ other widely used methods of measuring investment horizon such as investor portfolio turnover (Gasper et al. 2005; Chen et al. 2007) and Wahal and McConnell turnover (WM turnover) (Wahal and McConnell, 2000). Future research should revisit this issue with alternative measures that may better reflect each investor's investment style. Further, while investigating the impact of foreign ownership on investment efficiency, this research focuses on internal investment decisions such as capital expenditures and R&D expenditures. Due to data limitations, this research does not examine whether foreign institutional investors impact external investment decisions such as acquisitions. Future research can

extend the evidence on the effect of foreign institutional ownership on investment decisions by taking into account its impact on acquisitions.

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