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# Foreign ownership and foreign directors – the effects on firm performance in Japan

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## Abstract

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<b>Title:</b>	Foreign ownership and foreign directors – the effects on firm performance in Japan
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<b>Keywords:</b>	Corporate governance, foreign directors, foreign ownership, firm performance, Japan, Anglo-American
<b>Purpose:</b>	To analyze whether internationalization affects firm performance in Japanese firms. Internationalization is examined through the degree of foreign ownership and the inclusion of one or more outsider foreign directors.
<b>Methodology:</b>	Fixed effects panel data regressions where firm performance, measured in Tobin's Q and ROA, are dependent variables which are regressed against the share of foreign ownership, the inclusion of one or more outsider foreign directors and control variables.
<b>Theoretical perspectives:</b>	The theoretical framework consists of previous research on foreign directors, foreign ownership and their effects on firm performance. Furthermore, the effects from the convergence of the conventional Japanese corporate governance system with the Anglo-American model is discussed.
<b>Empirical foundation:</b>	The study is based on a sample of 250 firms from the Tokyo stock exchange's first section between 2010 and 2013, amounting to a total of 1000 observations.
<b>Conclusions:</b>	The findings of this study suggest that internationalization has a significant, positive effect on firm performance. When Tobin's Q is used as a measure for firm performance both foreign directors and foreign ownership yield positive effects. For the ROA regression on the other hand, only foreign ownership is shown to add a significant positive effect. ROA as a measurement of firm performance is suggested to be less suitable for capturing positive signaling effects that might stem from including foreign directors. This is advocated to explain the non-significance.

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# 1. Introduction

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*In this chapter, the background and recent developments for the study are presented. This will later in the chapter be used to build the thesis' purpose and research questions. At the end of the chapter the delimitations used in the study will be conferred.*

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## 1.1 Background

Internationalization appears as markets move closer and closer to each other and corporations operates across borders. While some countries can be considered to be more internationalized and thus more adapted to international standards than others, Japan stands out in its unique ways of doing business and preserving tradition. In the postwar years until the 1980's, the gap between international and Japanese methods also extended into firms' corporate governance systems, retaining a rather unique way of governing companies (Jackson & Miyajima, 2007). The most outstanding differences included large insider dominated boards, banks providing both capital and monitoring for the shareholders and companies being part of large business networks with cross-holdings (Jackson & Miyajima, 2007; Stulz, 1999). However, after the asset price bubble burst in the 1991 many from corporate Japan felt that a change was needed towards a more American or British-style of corporate governance (Jackson & Miyajima, 2007).

Conversely, even today there are still firms that applies the old system. One example is the power company many hold responsible for the nuclear disaster at Fukushima Daiichi: TEPCO (Benes, 2011). TEPCO had an earlier history of falsifying nuclear safety reports (Economist, 2002) and the radiation emittance after the earthquake in 2011 were very likely to be a result of a disregard for outside company opinions (Flannery, 2011). The corporate board of TEPCO, consisted of 20 directors, of which 18 were insiders and one of the two outsiders was affiliated with TEPCO through another financial institution (Tricker, 2012). The insiders were qualified by the tenure inside the firm and the head of the board had never been elected from outside the company (Tricker, 2012). The case of TEPCO along with many other corporate governance related scandals suggest that Japanese firms still today need to rethink their governance systems to make operations and decisions more transparent.

Japanese firms today are not only facing pressure by the public, but also by a growing number of international shareholders to internationalize their corporate governance system

(Ahmadjian, 2007). This is largely influenced by the increase in investments from foreign corporations and further by the portfolio ownership of American and British mutual funds, which has risen successively during the last 25 years (Tokyo Stock Exchange, 2013).

However, adapting to a new system can be hard and costly. Differences in legal systems, in stock markets, in ownership structures and in the culture of the country are all factors to consider when changing corporate governance system (Tricker, 2012). Making changes in corporate governance without considering these factors will end up leading to suboptimal firm performance, according to Anderson & Gupta (2013) and have in the past created mismatches with the Japanese business infrastructure (Stulz, 1999).

One relatively unexplored field of research is how internationalization, in the form of hiring foreign directors, affects firm performance. Oxelheim & Randøy (2003), suggest that if firms want a quick start to importing a new corporate governance system, they can include foreign directors with experience about another system in order to signal to the market that the company is ready to undergo changes. The foreign directors also provide knowledge about the foreign markets, both in the business and the financial markets field.

Internationalization in the form of a higher degree of foreign shareholdings can also contribute to firm performance. In previous studies, firms with high levels of foreign ownership has been shown to increase divestitures and dividends while also taking on a higher degree of corporate risk level (Ahmadjian & Robbins, 2005; Baba, 2009; Nguyen, 2012). These traits are suggested by the authors to have positive effects on firm performance while further making the firms approach a more Anglo-American way of doing business.

*In this study, the author will examine the effect that internationalization, measured through foreign directors and foreign ownership, has on Japanese firms' performance.*

## 1.2 Previous research

### 1.2.1 Foreign directors – effects on firm performance

Outsider foreign directors from the U.S., Canada and U.K.'s effect on firm performance in the Nordic region was first tested by Oxelheim & Randøy (2003). The researchers used a random sample of 253 traded firms, based in Sweden and Norway and had a sample period of 3 years. The results showed a significantly higher firm performance for firms that had recruited an Anglo-American board member than for firms that had not. 10% of firms in Norway and 16% in Sweden had a foreign director on their board. The results are discussed to originate from that by including an Anglo-American board member, the company signals a willingness to make a change towards the Anglo-American corporate board system. This in turn is suggested to enhance the international orientation of the firm.

Conversely, a study performed by Masulis et al. (2012) on U.S. firms advocates the opposite. With a sample of 9979 firms and a time-period measuring from 1998 to 2006, firms with foreign independent directors (FIDs) displayed significantly poorer results than their counterparts. This was especially apparent as the firm's business presence lessened in the country which the foreign director resided in. The authors explain this by the larger number of board meetings missed by FIDs because of long travel times. This in turn is suggested to lead to less time to perform monitoring activities.

In a bachelor thesis, with theory drawn from Oxelheim & Randøy (2003), Japanese firms which include foreign directors show significantly higher performance than comparable firms (Sugai, et al., 2008). The sample consists of roughly 60 firms, including foreign directors each year from 2006 to 2008. In order to compare companies including foreigner directors to those that did not, the authors used a sample, counter sample method. Here they selected two similar firms without foreign board members to the firm with one or more foreign directors. The firms selected were nearest in terms of total assets, and being the same industry as the firm with foreign director(s). This way of selecting is not completely unbiased and thus the results from this thesis might be less credible than the two previous articles which are both published.

The previous research conveys that the effect of recruiting foreign directors has on firm

performance is still uncertain. Depending on the region of the sample as well as how foreign directors are defined, the results will obviously change. A more in depth analysis of what factors may change the results and how including foreign directors could add to firm performance are discussed in the theory chapter, section 3.3.

### 1.2.2 Foreign ownership – effects on firm performance

The effects of foreign ownership on firm performance in Japan have been studied earlier, but not extensively.

Ferris & Park (2005) show a positive effect on firm performance from foreign ownership. However they find that a curvilinear relation exists between the two variables. For foreign equity ownership of up to 40%, firms yield an inclining positive performance, but for firms with over 40%, the results begin to decline.

A recent article from Nakano & Nguyen (2013) shows that foreign ownership in the electronics industry lead to increased performance from 2005 to 2011. They attribute the results, among others, to that foreign investors are more likely hinder Japanese firms from holding too much cash, and not being risky enough.

Phung & Le (2013) examine foreign ownership's effect on firm performance in Vietnam. Contrary to previous studies, they find a significant negative effect on firm performance. They describe that like Japan, Vietnam is characterized by an inefficient corporate governance system. They further discuss the reason for the poor results to be attributed to that foreign investors cannot perform adequate monitoring of the firms in the Vietnamese environment.

To summarize, firm performance in a Japan seems to be positively affected by foreign ownership, but one study of another Asian country suggest a negative impact. The way foreign owners are suggested to change to firm in order to raise firm performance will be discussed in the theory chapter, section 3.3.

## 1.3 Problem discussion

This thesis will examine internationalization through two channels: The first being the

inclusion of an outsider Anglo-American board member. The Anglo-American restriction is being used since the signaling effects for firms moving towards an Anglo-American corporate governance system are thought to be most apparent when including a director from that region. Previous research suggests both that the inclusion of foreign directors on the corporate board can increase firm performance but also decrease it (Oxelheim & Randøy, 2003; cf. Masulis et al., 2012).

The definition of Anglo-American board member used in this study will be an individual which now has, or previously had a citizenship in either the U.S. or in one of the U.K./Commonwealth countries. For Commonwealth countries, the author uses Tricker's (2012) definition which is: Australia, Canada, India, New Zealand, South Africa, and Singapore. These countries' company laws have been influenced by the U.K. since they were once members of the old British Empire. Oxelheim & Randøy (2003) only used U.S., Canadian and British board members in their original study, but since Japan's geographical location is different than the Nordic countries, the author believes that greater leeway needs to be given to include board members from the Asia/Pacific region.

This study will also be performed in a Japanese setting, where the author suggests that the differences in corporate governance systems are larger than in the Nordic countries, examined by Oxelheim & Randøy (2003). This might lead to increased signaling effects from taking on another corporate governance system. However, the Japanese market is also a much larger market than the Nordic one, which may mitigate the effects of approaching the Anglo-American market because it may be easier for the company to issue equity, and get access to capital in the domestic market than for the smaller Nordic economies.

The other channel used will be foreign ownership. Two earlier studies find positive effects in firm performance, related to a higher degree of foreign ownership (Ferris & Park, 2005; Nakano & Nguyen, 2013). However, since Nakano & Nguyen (2013) only find increased performance results during the end of their sample it is not certain if the results will persist today. Phung & Le (2013) further show negative results from increased foreign ownership in Vietnam, attributing this to that the foreign shareholders does not provide adequate monitoring in the Vietnamese firms.

If Japanese owned firms increased their divestitures, dividends and corporate risk taking maybe they would not see themselves beaten in firm performance and the foreign ownership effect would not be as large as before. The same argument could be made for change towards a more transparent corporate governance system. Yet we see that many Japanese firms stagnates in changing corporate governance and fails to apply it fully out (Buchanan, 2009). On the other hand, the amount of foreign ownership is rising each year, and there have also been indications of foreign institutional funds targeting Japanese companies with low risk profiles (Nguyen, 2012). This suggests that the foreign owners anticipate increased performance which in turn yields a higher payoff.

In this study, the author will look at data from recent years. This might mean that the number of foreign directors and share of foreign ownership have increased, making it easier to draw clear results but may also yield different results stemming from new market conditions.

This thesis will contribute to the research field by discussing the foreigner directors' effect on a market where board diversity is relatively new, and foreigners are only making up a small part of the board. It will further look to shed more light on what effects foreign ownership have on firm performance, to try to answer the question of why an increase in foreign shareholdings of Japanese firms can be observed.

## 1.4 Purpose

The purpose of this thesis is as follows:

*To examine whether internationalization affects firm performance in Japanese firms.*

The purpose will be divided into two more specific research questions:

1: *How does including Anglo-American outsider directors on the corporate board affect firm performance in Japanese firms?*

2: *How does foreign ownership affect firm performance in Japanese firms?*

## 1.5 Delimitation

The study is limited to the 250 largest, listed firms on the Tokyo Stock Exchange's first section, based on net sales. The reason for choosing listed firms is that they provide both corporate governance reports at the Tokyo Stock Exchange website (Tokyo Stock Exchange, 2015), as well as the share of foreign ownership in securities reports from the financial services agency (Financial Services Agency, 2015). The benefits of choosing larger companies is that the author suggest that they have a wider network, making it easier for them to find foreign directors which are suitable for the firm. This will in turn make answering the first research question less difficult. Recent research further confirms that the share of foreign directors in the 30 largest firms is about 2.1% of all directors which is a larger amount than the 0.17% of directors in all Japanese firms (Fujishima, 2009; c.f Tricker, 2012). In order to prevent possible biases originating from selecting large firms for the sample, firm size will be controlled for in the regression analysis, see 4.5.2.3 General control variables. Furthermore, this thesis will examine a four year time period, spanning from 2010 to 2013. This window was selected to be able to research the most recent developments while still have accessible data from the financial software. More details on delimitations imposed on the sample to be able perform the chosen methodology are presented in chapter 4.2.

## 1.6 Audience

This thesis is aimed at students and researchers with knowledge about corporate governance. Further, the author hopes that the study will be of interest for Japanese firms, looking to recruit foreign directors or to make changes in their corporate governance system.

## 2. Institutional conditions

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*To be able to investigate the effects that internationalization has on Japanese firms, the institutional conditions from the conventional Japanese-, American-, and U.K./Commonwealth- corporate governance models are presented. Lastly, recent developments from the implementation of the Abenomics program will be conferred.*

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### 2.1 The conventional Japanese corporate governance system

Tricker (2012) describes that many Japanese companies are tightly intertwined into business groups in which cross-holdings of shares are common and where directors serve on many boards within their own network, called “*keiretsu*”. He explains that trade within the network is common and that it usually includes a financial institution. Tricker (2012) further demonstrates that for companies within keiretsu systems, corporate boards are large and are mainly using the Japanese system of lifetime employment in which tenure in a firm is linked with rewards. Here, directors tend to be promoted into the corporate board from within the keiretsu (Tricker, 2012). By extension, this means that the number of independent outside directors becomes relatively small.

The hierarchical system found in Japanese culture also influences the decision making process on corporate boards (Tricker, 2012). Tricker (2012) shows this with an example where board directors lower down in the chain often have a more decision-ratifying role compared to the Anglo-American system, where board members tend to be more initiative taking. Because of the many informal meetings between management, board directors and other members of the keiretsu, a kind of social structure is created where the people with the last word will be the top ones, namely the president of the company and the chairman of the board (Tricker, 2012). Rather, than being put in place to represent shareholders as in the Anglo-American system, lower tier Japanese directors are used mostly because of their connections with outside parties such as government, banks and other firms within the same industry (Tricker, 2012).

The implication of this system is that the power of shareholders are not as significant as the power that lies within the keiretsu. The Japanese pension funds have tried to encourage firms which it invests in to at least attain a return on equity of 8% but so far, no effects have been seen (Tricker, 2012).

The Asian Corporate Governance Association (2008) describes the way most listed companies fail to meet the needs of the shareholders and the country:

- “By not providing for adequate supervision of corporate strategy
- By protecting management from discipline of the market, thus rendering the development of a healthy and efficient market in corporate control all but impossible
- By failing to provide the returns that are vitally necessary to protect Japan’s social safety net – its pension system”

The paper further encourages firms to, among others: recognize minority shareholders as owners, use capital more efficiently and to independently supervise management.

## 2.2 The American corporate board system

The American system is based around following strict laws provided in the Sarbanes-Oxley Act from 2002 (Tricker, 2012). For instance, the requirements for listing a company mean that a board audit, nomination and remuneration committee has to be instated. Companies also have to apply GAAP accounting rules in which there are strict penalties for directors who do not comply (Tricker, 2012).

Tricker (2012) describes the trait of the American model is to have unitary boards, contrary to the common dual board system in for example: Germany. He continues to explain that American boards are composed largely of independent outside directors, where the shareholders have little influence on deciding the formation of board members. The only method they can use is to show their dissatisfaction by not voting, selling their shares or resorting to legal process (Tricker, 2012). Finally he adds that in the U.S., the position of chairman of the board and CEO are often held by the same person, even though many shareholders actively oppose it.

## 2.3 The UK/Commonwealth corporate governance system

According to Tricker (2012), the UK/Commonwealth model differ from the American model in a sense that it is based more on principle than on law. He explains it with the fact that there

is a corporate code that firms are expected to follow, and if they do not, they will have to explain themselves. This means that there can be no legal repercussions for breaking the code, and that this regulation is largely left to the market to decide. Tricker (2012) further describes that opposed to the American system, it is more common to have separate individuals for the posts of the chairman of the board and for the CEO. Lastly, he adds that shareholders which have over 10% of the voting rights can summon an extraordinary meeting and vote on strategic decisions or removal of a director.

## 2.4 The Anglo-American system

According to Nisa (2008) the similarities between the American and British/Commonwealth systems are often referred to as the Anglo-American system and can be described as focusing on the rights of the “outsiders”. This is achieved by separating the control of the firm from the ownership of the firm by allowing for many institutional and smaller shareholders (Nisa, 2008).

The ownership of Anglo-American firms is dispersed and consists mainly of individual and institutional investors compared to in Japan where banks and holding companies are the major investors (Tricker, 2012). See Table 1.

Table 2.4.1 Differences in firm ownership (Tricker, 2012)

Country	Individuals	Institutional investors	Banks and government	Holding company	Foreign <sup>1</sup>
USA	51%	41%	3%	0%	5%
U.K.	19%	58%	5%	2%	16%
Japan	20%	21%	23%	28%	8%

In a study with a sample from 2000-2007, board size in both the U.S. and the U.K. is shown to be 11.3 in the U.S. and 10.69 in the U.K. and the quota of independent directors was 84% in the U.S. and 57% in the UK (Muller-Kahle, et al., 2014).

This can be compared to a study of larger firms on the Tokyo Stock exchange from 2007

<sup>1</sup> It is not stated whether the foreign column include foreign institutional investors or not.

where the average board size of Japan is 12.22 and percentage of outsider directors is just 13% (Johansson & Sawaguchi, 2009).

Nakao (2008) describes the Anglo-American corporate governance system to be based on “external market control” which are being shown in these observed characteristics:

- Corporate shares are dispersedly distributed. Investors have little influence on corporate operation and management.
- Monitoring are performed by external directors which play an important role in corporate governance.
- Employees, linked to firm by employment contracts have little influence on corporate governance.
- There is a developed securities market in which the shareholders can sell their shares if the company is not performing well. Mergers and Acquisitions based on market pressure are very common.
- A working legal system is in place which sees to that important information is being conveyed to the shareholders, insider trade is controlled and minority shareholders are being protected.

A summary from all of the discussed traits from both the conventional Japanese system and the Anglo-American model is presented below.

## 2.5 Summary of corporate governance systems

Table 2.5.1 Summary of corporate governance systems

The Anglo-American corporate governance system	The conventional Japanese corporate governance system
Shareholder oriented	Stakeholder oriented
Dispersed ownership	Stable owners, cross-holdings
Flexible labor market	Lifetime employment
Small board of directors	Large board of directors
Outsiders in majority on the boards	Few outside directors
Many takeovers	Few takeovers
Debt financing through bonds	Debt financing through banks

## 2.6 Criticism against the Anglo-American definition

Because differences persist between the U.K./Commonwealth and U.S. corporate governance system, researchers has criticized the use of an Anglo-American corporate governance model e.g. (Mullineux, 2010). For this thesis, the author mainly consider the Anglo-American model for firms trying to change their corporate governance system and not policymakers. This meaning that features which are unchangeable for firms are disregarded. One example of this is that the U.S. has very strict laws, related to corporate governance which essentially are unchangeable for firms while the U.K./Commonwealth countries makes use of codes which could be applied by firms (Tricker, 2012).. Furthermore, in this thesis the Anglo-American system is used to indicate the opposing model to the traditional Japanese corporate governance system. It could however be argued that there is convergence towards the U.K./Commonwealth model and the U.S. model in Japan, but for simplicity's sake the author will use the Anglo-American model when addressing the convergence of corporate governance models system in Japan.

## 2.7 The Abenomics program

Japan has recently entered a large financial reform program named "Abenomics" after the Japanese prime minister, Shinzo Abe. According to Boesler (2013), the program consists of three parts: increases in government spending, a massive increase in monetary stimulus and reforms, aimed to improve the Japanese economy. Boesler (2013) continues to explain that

one of the goals of the Abenomics program is to be able to get out of the long period of deflation that Japan has been stuck in and thus revitalizing the Japanese economy. While the goal of the monetary policy has been to reduce interest rates, it has further helped weaken the Japanese yen, leading to increased exports and an overall boost to the Japanese stock market (Boesler, 2013). However, in order to increase public spending, one of the reforms that needed to be carried through was an increase in sales tax from 5 to 8 percent in the end of 2013. This in turn affected the Japanese economy negatively, leading to a drop in consumption in the start of 2014 (Pandey, 2014). While the long term effects of the Abenomics program still remain unknown, the initial positive effects from the stock markets and the lower interest rates could have an impact on the results from this study, leading to measures being taken to control for this. More details will follow in the methodology section.

## 3. Theory

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*In order to establish hypotheses about the effects that foreign directors and foreign ownership might add to firm performance, the effects of implementing the Anglo-American system in Japan are described. The roots of the effects from foreign directors and foreign ownership will then be explained and the thesis hypotheses will be established.*

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### 3.1 Convergence with the Anglo-American system in Japan

As we will see in this section, the Japanese corporate governance system has started to converge more and more with the Anglo-American model, for both the Japanese firms wanting change (Tricker, 2012) and pressure from foreign investors to adapt to the Anglo-American corporate governance system (Ahmadjian, 2007). One example of such pressure is CalPERS's usage of a corporate governance code called "Global Principles of Accountable Corporate Governance" which dictates were the US\$200 billion pension fund is going to invest their members' money (Tricker, 2012).

According to Tricker (2012), recent cross-holding of shares has declined and a new market for corporate control has started to emerge. He further notes the first hostile takeover ever on the Tokyo Exchange were recorded in 2007.

Buchanan (2009) observes convergence, in that the Japanese government opened up for a different corporate governance model in 2002, which enabled and expansion of the external directors' roles within the firm called "committee system". His analysis shows that the effect of the implementation led to an initial increase in the number of external directors but has somewhat stagnated and their roles are still mainly advisory rather than monitoring. Eberhart (2012) compares firms using the committee system with the old system and finds increased firm performance for firms using the new system. He attributes this to the signaling effects of moving the firm into a more transparent state, with increased monitoring by outsiders and a reduction of agency costs due to information asymmetry.

On the other hand, Anderson & Gupta (2013) find that firms that have adopted the Anglo-American corporate governance performed sub-optimally because of a bad match with their own country's financial and legal systems. They suggest that increased performance only can be observed when the new corporate governance system is tailored efficiently after the home

country's specific requirements.

An example of this bad matching was the banks' role in raising new capital and the monitoring of firms in Japan. Stulz (1999) explains that before the 1980's Japanese firms were prevented from raising public debt in open markets and thus relied solely on banks to take on debt. He further continues that in return, the banks monitored shareholders, enabling them to threaten to withhold funds if the managers started shirking. The article concludes that opening up the possibility of raising funds in foreign markets actually worsened Japanese corporate governance drastically because it made the firms lose their strict ties to the banks. This happened in the transition period before the new shareholders were able to start monitoring, and thus left a gap in the governance of the firm (Stulz, 1999).

### 3.2 Foreign ownership

Aggregate foreign ownership in Japan is a number that has risen from a mere 4.1% in 1987 to an impressive 30.8% in 2013, making foreign owners larger than the national financial institutions who only owned 26.7% (Tokyo Stock Exchange, 2013). Out of these foreign shareholders, a majority were institutional investors since only 0.5% could be considered to be individual investors in 2008 (Tokyo Stock Exchange, 2009). The underlying interest that foreign investors have differs in many ways from those of the Japanese investors especially for institutional investors. Ahmadjian (2007) describes that U.S. and U.K. funds are bound by legal obligations which dictate how they can act with their investors' funds. She adds that rules like this exists in Japan as well but are not followed as diligently. She further notes that while foreign funds have been found to focus primarily on the return on their investments, the Japanese investors are more intertwined in relationships of cross-holdings and can thus be forced to invest in a firm because of an obligation created within the earlier discussed keiretsu system. By extension, this means that the Japanese institutional investors are able to impose less pressure on their target firms compared to the foreign investors (Ahmadjian, 2007).

Foreign ownership in Japan is also a part of internationalization and has been linked with increased divestitures (Ahmadjian & Robbins, 2005). The study looks at institutional investors between 1991 and 2000 and finds that companies in which foreign owners replaced Japanese owners, started to downsize and divest assets. Divestitures announcements have been linked with abnormal returns in for example Gadada & Thomas (2005) which speaks of

it as a factor which contributes to firm performance. Baba (2009) connects foreign ownership of Japanese firms with increased dividends payouts. This can be interpreted as showing greater financial discipline and may thus lead to a greater firm performance. Furthermore, a higher foreign ownership has also shown to raise corporate risk taking, and especially interesting is the fact that foreign investors seems to have deliberately chosen less risky Japanese firms as their targets (Nguyen, 2012). Since there is a well-known connection between risk and return (Fama, 1970), firms with foreign ownership should exhibit better performance than the Japanese-owned ones. Nakano & Nguyen (2013) confirms the increase in firm performance from foreign ownership in their study of the Japanese electronics industry from the years 2005 to 2011.

On the other hand, Phung & Le (2013) finds negative results in firm performance originating from a higher level of foreign ownership. They suggest that because of the inefficient corporate governance system and an asymmetric market in their sample country of Vietnam, foreign owners could not perform their monitoring function in the firms adequately, leading to a decrease in firm performance. Essentially they argue that because Vietnam is still an emerging market, the level of foreign ownership is not sufficient to provide comprehensive monitoring, and thus the firms end up with worse monitoring than before the foreign owners entered. These results can be connected with what Stulz (1999) describes about the gap that occurred in corporate governance when Japanese firm's became able to raise funds through foreign markets.

Evidence from Ahmadjian (2007) suggests that firms with foreign institutional investors are taking on reforms towards a more Anglo-American corporate governance system. According to the study, these reforms include equity-based performance measures, changing the board formation and responsibilities as well as the communication with shareholders. This is interesting since it is not just American and British investors which propose the implementation of the Anglo-American corporate governance system, but also investment firms and banks from France and Germany have been shown to promote this system when investing in Japan (Ahmadjian, 2007).

Aggarwal, et al. (2011) shows causality between that firms with higher international institutional ownership affects the corporate governance system and not the other way around. They show that firms with high institutional ownership are more likely to get rid of a poorly

performing CEO and that institutional investors can use the changing of corporate governance systems as mean to create value for the firm.

As discussed in this and the previous chapter, there are mixed results of implementing the Anglo-American corporate governance system in different countries. The benefits can be summarized as getting rid of information asymmetries towards investors, which reduce agency costs while the disadvantages could be that the new system matches poorly with the existing business infrastructure that the target country applies.

Most of the evidence discussed in the previous research section suggests a connection between a high foreign ownership and a high firm performance. Furthermore, the aggregate foreign ownership has risen even more since previous studies were performed, making it an interesting case for further examination.

The first hypothesis is therefore:

*Japanese firms with higher share of foreign ownership have higher firm performance than firms with lower share of foreign ownership.*

### 3.3 Foreign directors

Oxelheim and Randøy (2003) describe two ways of approaching the Anglo-American corporate governance system for non-Anglo-American firms. The first being to cross-list the firm stock on an Anglo-American foreign exchange listing and the second being to include an outsider Anglo-American foreign board member in the firm. These ways are assumed to create value is by breaking away from a partly segmented market<sup>2</sup> in which information asymmetries and/or legal barriers constitute obstacles for domestic firms. Firms based in partly segmented markets have a restricted access to shareholders which makes an equity issue here expensive (Oxelheim, et al., 1998).

Studies on the first factor have shown that cross listing for foreign firms on the U.S. stock exchange have yielded cumulative abnormal returns, meaning a positive effect on the stock

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<sup>2</sup> A segmented market is defined as "A market that is partially or wholly isolated from other markets by one or more market imperfections" (Harvey & R, 2011)

price on the time of listing and thus a lower cost of capital for the firm (Sundaram & Logue, 1996; Foerster & Karolyi, 1999; Miller, 1999).

Cross listing of firms enables foreign shareholders to buy a large share of the firm stocks. A large shareholder from the foreign country can afford more active monitoring for example by placing members on the board, mainly outsider directors, while a smaller shareholder might not be able to afford this (Shleifer & Vishny, 1986). Even though larger foreign shareholders tend to use their power as to obtain benefits that do not accrue to smaller shareholders, these negative effects are mitigated by the fact that large foreign shareholders are "outsiders" and can therefore perform their monitoring duty in a more unbiased way (Stulz, 1999).

Furthermore, cross-listing on foreign markets enables the firm to take advantage of shareholders buying a large stake in the company and provides a monitoring effect, while not being that active in the voting process and also being at an "arm's length" regarding management compensation and thus increasing the value of the firm (Stulz, 1999).

Reese & Weisbach, (2002) shows that cross-listing has been proven to provide increased minority interest protection by employing the stricter US GAAP rules. This means that the action of trying to extract private benefits will be more costly for the managers and thus protects minority shareholders which normally do not have any power to change the managers' behavior.

For firms not having the funds to complete a foreign listing, Oxelheim and Randøy (2003) discuss the possibility of having a foreign director from a more demanding corporate governance system to "signal its willingness to improve the monitoring opportunities by including foreign outsider members on the board" (Oxelheim & Randøy, 2003, p. 2372). They further argue that the board becomes more active and more independent from management by including one or more outside Anglo-American board members. Finally they add that including at least one outside Anglo-American board member "strengthens investor confidence, and this signal will eventually lead to an increase in firm value". Their results show that there is a positive effect of having an Anglo-American outsider on the corporate board and are discussed to stem from that the company signals a willingness to change towards the Anglo-American corporate governance system (Oxelheim & Randøy, 2003). The effects were especially apparent in firms that are older, larger and also in specific industries

such as the manufacturing, IT and Telecom sectors (Oxelheim & Randøy, 2003).

However a study made on U.S. firms by Masulis et al. (2012) shows opposite results. Firms with foreign independent directors (FIDs) displayed significantly poorer results than firms without, especially as the firms' business presence in the country the foreign director resided in lessened. The reason suggested for this was the amount of board meetings not being attended by FIDs because of long travel times. The authors concluded that by extension, this lead to the board member having less time to perform monitoring activities.

A key difference between these studies are the definition of “foreign independent director” and “outsider Anglo-American board member”. Oxelheim & Randøy (2003) defines their outside director as born “Anglo-American” while Masulis et al. (2012) defines foreign independent directors (FDI) as living in another country. This meaning that the birth place of the director does not matter as a FDI can be a U.S. citizen living abroad. Similar for both studies is that they both focus on outside directors. In the study performed by Masulis et al. (2012) the placing is also chosen to be in the U.S., a country well known to be using an Anglo-American corporate governance system (Tricker, 2012). This means that the effects Oxelheim & Randøy (2003) were looking for might not appear since including foreign investors will provide no signaling effects of moving towards a more demanding corporate governance system.

Eberhart (2012) shows that firms which are adopting the stricter “committee” corporate governance system do perform better than other firms in Japan. This may also indicate that including foreign directors which signals a move towards a stricter corporate governance system may increase value for a firm.

One possible negative factor of having foreigners on the board is the “silent board” effect. Because having Anglo-Americans on the board often calls for having English as the discussion language, members of the board that are not comfortable with speaking English often feel uneasy speaking up their opinion at board meetings, resulting in a “silent board” (Piekkari, et al., 2015). This effect was found to be significant amongst the board members that were not part of the executive group in a sample of Nordic firms (Piekkari, et al., 2015).

The author of this thesis suggest that this factor will also affect the results because of the

larger difference in language between Japanese and English, than between the Nordic languages and English and may possibly mitigate the result of having foreigners on the board. However, this variable is hard to measure since interviews need to be conducted in order to understand how comfortable board members are with the use of English.

To summarize, the effects of foreign directors on performance have not yet been widely researched and studies from different regions and with different definitions of foreign directors show different results. Despite this, the author establishes the second hypothesis based mainly around Oxelheim & Randøy (2003) since this study will use a similar definition of outside Anglo-American board member as well as a country with a non-Anglo-American corporate governance system.

The thesis second hypothesis is:

*Japanese firms with one or more outside Anglo-American directors have higher firm performance than firms without such directors.*

### 3.4 Summary of hypotheses

Hypothesis 1 Japanese firms with a higher share of foreign ownership have higher firm performance than firms with lower share of foreign ownership.

Hypothesis 2 Japanese firms with one or more outside Anglo-American directors have higher firm performance than firms without such directors.

## 4. Methodology and data collection

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*This section provides the type of data, sources and definition of variables used to answer the research questions. The motivation for the chosen regression specification is further explained and lastly the assumptions for the ordinary least square model and the quality of research design are discussed in context of the chosen methodology.*

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### 4.1 Research approach

This study will use deductive methodology for answering the research questions. This is achieved by following existing theory from which hypotheses are deduced and later tested (Bryman & Bell, 2003). Collected data will be tested against the hypotheses using a panel least squares estimation in which the hypotheses will be either accepted or rejected.

### 4.2 Data selection

Using quantitative research design and more specifically a panel data OLS regression, a sample of the 250 largest firms<sup>3</sup> from the Tokyo Stock Exchange will be analyzed. The number 250 is relatively large, considering variables which has to be extracted manually from corporate governance reports, but fewer observations may leave the sample with too few observations for the inclusion of foreign directors, making it difficult to perform a regression analysis. The reason a larger sample size was not selected is because of the problem with data reliability related to the number of non-answered fields increasing in the financial software after the 250 firm mark. Johansson & Sawaguchi (2009) uses a similar sample size for their panel data regression on corporate governance traits in Japanese firms, further suggesting that data is available and that regressions can be performed.

Financial, Banking and Insurance firms are all excluded from the sample because the way that accounting are performed within this sector differ from other industries and if they would be included, the firm performance measurements could become biased.

The time period of the sample will be year 2010-2013, as presented earlier. All firms included in the sample have been listed on the Tokyo Stock Exchange during all years. The time period is chosen to reflect the most recent developments and get a good sample range for the panel

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<sup>3</sup> Based on average net sales 2010-2013

data. However, the limit for free corporate governance data on the Tokyo stock exchange homepage is 5 years back and the performance data was only fully available 2 years back from today. Therefore 2010-2013 were selected as the sample years for this study.

### 4.3 Data collection

All data in this study can be classified as secondary data and is collected through the use of both financial software, corporate governance reports and year-end securities reports. The financial variables are extracted using the software: *Thomson Reuters Datastream*.

Corporate governance variables are mainly collected from the Tokyo Stock Exchange web page in which there are t-5 years of public information available through reports. These reports contain data with the names and history of the outside board members, number of independent board members, the size of the board and the ownership percentage of the ten largest shareholders (Tokyo Stock Exchange, 2015). The latest report of each year is chosen, representing the board configuration at the end of the year.

The Foreign Ownership factor for firm performance in which data will be collected from Edinet (Financial Services Agency, 2015), were year-end securities report for each of the firms are published. The only disadvantage with these reports is that they are only from one point in time, producing no average foreign shareholdings during the year. However, since all firms are measured under the same circumstances, this point in time measure will represent the foreign ownership level during that year. This way of collecting foreign ownership data further goes in line with Johansson & Sawaguchi (2009). The corporate governance variables and foreign ownership variable are collected in Japanese and translated by the author.

### 4.4 Model specification

For this thesis, the author will utilize panel data to investigate the research questions. In short, panel data is composed of information in both the cross sectional dimension and time dimension. Also, it follows the same cross sectional units during the whole sample period, which in this study means that the same chosen firms will be observed during each year of sample period.

This structure makes panel data beneficial, compared with standard time series or cross-

sectional data in many ways. First, it is possible to investigate and tackle more complex issues because of the well provided data. One example is that the increased number of observations provides more degrees of freedom for hypothesis testing which is especially apparent when variables are examined over time. Secondly, employing the right structure for the panel data can help to combat certain endogeneity problems (Brooks, 2008) which will be discussed further in section 4.7.4.

The simplest form of panel data regression is referred to as a pooled regression (Brooks, 2008). In this model it is assumed that all observations are stacked together and estimated as performed in a normal OLS regression (Brooks, 2008). This model is easy to estimate but ignores the aspect of movements within the cross sectional units, as well as the movements over time. This can be solved by estimating separate OLS regressions for each time period and cross sectional unit. However, since this this does not take the common structure of the panel data into account, a lot of useful data will go to waste.

In order to take the cross sectional and period movements into account, it is possible to model the data using fixed effects which can be applied in either the cross-sectional or time-dimension. Cross sectional fixed affects basically allows the intercept to vary cross-sectionally, but not over time and all slope estimates are fixed both cross-sectionally and over time (Brooks, 2008). For time-fixed effects, the intercepts are allowed to vary over time but locked in the cross-section dimension (Brooks, 2008). Same as for the cross-sectional fixed effects, all slope estimates are fixed in both the time and cross-sectional dimension. Below the regression notation from a panel data model with cross-section fixed effects is presented.

Equation 4.4.1 Example of panel data regression with cross-sectional fixed effects

$$y_{i,t} = a + \beta x_{it} + \mu_i + v_{it}$$

The common denominator for the fixed effect models is that you can interpret the models as dummy variable regression, with values on the dummies taking on 1 for the matching firm and zero for non-matching firms. The coefficients on in front of the dummies are estimated through the Least Squares Dummy Variable or LSDV. To take the above regression as an example,  $\mu_i$  are expanded, adding one dummy variable per firm with a constant to be estimated. The notation can thus be rewritten as the example regression below.

Equation 4.4.2 Example of the LSDV regression with Cross-sectional fixed effects

$$y_{i,t} = \beta x_{i,t} + \mu_1 D1 + \mu_2 D2 + \mu_3 D3 + \dots + \mu_N DN_i + v_{i,t}$$

The notation of time-fixed effects work exactly as above, only that the  $\mu_i$  is switched out with  $\lambda_t$  and where dummies for each of the periods are applied.

If these two methods are combined into one, it is often referred to as “two-way error component model” which essentially adds both the dummies for the cross-sectional and time-effects models (Brooks, 2008).

Equation 4.4.3 Example of the two-way error component model

$$y_{i,t} = a + \beta x_{it} + \lambda_t + \mu_i + v_{it}$$

Equation 4.4.4 Example of the two-way error component model in LSDV regression form

$$y_{i,t} = \beta x_{i,t} + \lambda_1 D1 + \lambda_2 D2 + \lambda_3 D3 + \dots + \lambda_N DN + \mu_1 D1 + \mu_2 D2 + \mu_3 D3 + \dots + \mu_N DN_i + v_{i,t}$$

The specification for this study will employ the two-way error component model. This is in line with the specification Nakano & Nguyen (2013) used to examine the performance gain from foreign ownership. The panel data regression for this thesis is provided below, in which  $\lambda_t$  and  $\mu_i$  represents the firm-fixed, and time-fixed effects.

Equation 4.4.5 Notation of the regression model in this study

$LNQ_{i,t}$  or  $ROA_{i,t}$

$$\begin{aligned} &= \alpha_1 + \beta_2 * \text{Outside Anglo American Board Member}_{i,t} + \beta_3 \\ &* \text{Foreign Ownership}_{i,t} + \beta_4 * \text{Foreign Subsidiary}_{i,t} + \beta_5 * \text{Board Size}_{i,t} + \beta_6 \\ &* \text{Board Independence}_{i,t} + \beta_7 * \text{Firm Size}_{i,t} + \beta_9 * \text{Firm Age}_{i,t} + \lambda_t + \mu_i \\ &+ v_{i,t}^4 \end{aligned}$$

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<sup>4</sup> Explanations of the variables in the regression follows in 4.6

First off, the reasoning for using firm-fixed effects are that there might exist heterogeneity between firms, not only in differing industries but also between firms in the same industry. Firms which possess unique technologies or other special traits might have performance boosts (or drops) which are higher than for firms without. In a regular pooled regression, these factors are usually not taken into consideration and the effect they provide might end up boosting or mitigating the variables which the study is examining which is usually referred to as an omitted variable bias (Brooks, 2008). Nakano & Nguyen (2013) uses an example in which foreign investors might look specifically for these technological or unique advances for deciding where to invest. The author of this thesis further suggests that the same reasoning can be applied in the foreign director variable. Factors could be anything from the company culture being more geared towards an international environment to that one of the firm's unique characteristics calls for overseas expertise in form of a foreign director. This means that if these firm effects are not accounted for, the effects they have might instead end up in the foreign board member or foreign ownership variables, leading to an omitted variable bias.

One limitation for the firm fixed-effects model is that it assumes that the unique firm traits remain constant over the entire measurement period. This can pose a problem if the study examines a fast growing industry where for example new technological breakthroughs or changes in firm organization can change these characteristics at a fast rate (Nakano & Nguyen, 2013). However, since this thesis examines a broad spectrum of industries, and a relatively short time spectrum, the firm fixed effect model seems to be a viable option. The method of using firm fixed effects in studies which tests ownership and performance is further recommended by Himmelberg, et al. (1999). The explanation for using time-fixed effects is simpler. Because each period of the sample might pose effects which affects all firms likely, such as changes in interest rates or tax laws, the author suggests that this aspect needs to be accounted for in this study as well. One of the reasons for this is the implementation of the Abenomics-program which in 2013 started to use quantitative financial easing programs to among others, combat deflation and lower unemployment (Bank of Japan, 2013). Other reasons that can be discussed to justify the use time fixed effects is the earthquake that hit Japan in 2011, as well as the aftermath of the global financial crisis in 2010 and 2011.

Testing for which specification that is most suitable for this regression is carried out in section 5.6 using redundant fixed effects- and Hausman- tests.

## 4.5 Measurements for firm performance

In line with Nakano & Nguyen (2013) and Masulis et al. (2012) two measurements for performance will be used in this study: Tobin's Q and ROA.

Tobin's Q is the market value divided by total assets. This is a ratio between the firms' assets' market value and their replacement value, making a good measurement to determine if the firms' stock is overvalued or undervalued by the market. Return on assets on the other hand measures operating income over total assets. This gives an idea on how effective management is at using its assets to generate earnings.

Datastream utilizes this calculation for retrieving Tobin's Q:

$$\frac{\text{Market value of a firm as captured by enterprise value}}{\text{Book value of total assets}}$$

And this calculation for Return on Assets:

$$\frac{\text{Net Income} - \text{Bottom Line} + ((\text{Interest Expense on Debt} - \text{Interest Capitalized}) * (1 - \text{Tax Rate}))}{\text{Average of Last Year's and Current Year's Total Assets} * 100}$$

In the application as a firm-performance measurement Tobin's Q and ROA has been criticized in that underinvestment from entrenched actually increases the denominator and thus poses an endogeneity problem (Dybvig & Warachka, 2010). Another problem posed for both ROA and Tobin's Q is that they vary, depending on what industry is used. This study will still include both measurements since it examines an average on all industries except the financial.

Furthermore, the use of these measurements makes comparison with previous studies simpler, since one or both of these measurements are used in all of firm performance studies this thesis is referring to.

## 4.6 Definition of variables

A review of the regression is presented to shed light on its components.

Equation 4.6.1 Review of the regression used in this study

$$\begin{aligned}
LNQ_{i,t} \text{ or } ROA_{i,t} &= \alpha_1 + \beta_2 * \text{Outside Anglo American Board Member}_{i,t} + \beta_3 \\
&* \text{Foreign Ownership}_{i,t} + \beta_4 * \text{Foreign Subsidiary}_{i,t} + \beta_5 * \text{Board Size}_{i,t} + \beta_6 \\
&* \text{Board Independence}_{i,t} + \beta_7 * \text{Firm Size}_{i,t} + \beta_9 * \text{Firm Age}_{i,t} + \lambda_t + \mu_i \\
&+ v_{i,t}
\end{aligned}$$

#### 4.6.1 Dependent variables

For the both research questions, the dependent variables in the regressions are composed of *LNQ* and *ROA*. *LN* is the natural logarithm of Tobin's Q and is used to reduce possible heteroscedasticity and to reduce the effect of outliers in the sample. Since the *ROA* variable includes negative numbers, a natural logarithm of *ROA* would greatly reduce the sample size. Because of this, the normal version of *ROA* is used, in line with Nakano & Nguyen (2013) and Masulis et al. (2012).

#### 4.6.2 Independent variables

For the first research question, the independent variables are: Outside Anglo-American board member (abbreviated to *OAABM* in the regression) and *Foreign Ownership*. The first variable includes all outsider directors which have a citizenship or has had a citizenship in the U.S. or U.K. / Commonwealth countries. A board member is considered an outsider if they are not employed or are indirectly employed by the firm. If the firm observation fulfill these requirements the variable will take on a value of 1, if not it will take on a value of 0. The reason being in line with Oxelheim & Randøy (2003) that the proposed signaling effect from Anglo-American outside directors will take place, regardless of how many foreign directors which are included. Data for this variable is extracted from the latest corporate governance report from each company, for each year, meaning that the outside Anglo-American board members inclusion is examined at the end of each year. Foreign ownership is the percent of shares controlled by foreign owners which are not individual investors at the end of the fiscal year.

##### 4.6.2.1 Foreign corporate governance control variable

The control variable used are: *Foreign Subsidiary* is a dummy variable taking on the value of 1 if 20 percent or more of all types of shares are owned by one foreign industrial owner, 0 if

not. This is to control that the effects board members might contribute to firm value, does not originate from the strategic holdings of a parent company, a so called foreign direct investments. Oxelheim & Randøy (2003) uses the 20% because of the relatively strong minority shareholder ownership rights in the Nordic countries. Since Japan also has relatively strong minority shareholder rights, low barriers for being the controlling shareholder (Laporta, et al., 2002) and for comparability with earlier studies, this study also employs 20% as the level for this variable.

#### 4.6.2.2 Corporate governance control variables

As stated in the theory section, it is known that the size of the board and the independence of the board are general traits that are affected when changing corporate governance system. However, since earlier studies has indicated that changing these variables can boost performance of firms (Eberhart, 2012) as well as being just a change made on paper (Buchanan, 2009), it is needed to control for these variables when performing the regression. *Board Size* is the amount of members of the corporate board, and *Board Independence* is the share of independent outside directors, relative to the board size. The data for these variables are extracted from the latest corporate governance report of each year, meaning the board composition the firm uses at the end of each year.

#### 4.6.2.3 General control variables

Since it is more common to recruit foreign directors in the largest 30 companies on the Tokyo stock exchange (Fujishima, 2009), the size of each firm needs to be controlled for. The *Ln Net Sales* variable represents the natural logarithm firms' net sales for each of the years. Previous studies has further found that the age of a firm can affect firm performance e.g. Loderer & Waelchli (2011) which encourages the author to control for both firm size and firm age. *Ln Firm Age* denotes the natural logarithm of the number of years since the firm was founded measured from each year in the data set. Oxelheim & Randøy (2003) established that firms which are older and larger show increased benefits from including outsider Anglo-American board members, which further suggests that these variables can impact the results if not controlled for.

## 4.7 Assumptions for the ordinary least squares method

In order to be able to use the ordinary least squares estimation for the regression there are some assumptions which must hold to be able to generate accurate results. These assumptions will be presented and discussed in the context of this study below.

### 4.7.1 $E(u_t) = 0$

The first assumption relies on that the mean for the error terms must be zero. This problem is solved by including an intercept in the regression (Brooks, 2008).

### 4.7.2 $var(u_t) = \sigma^2 < \infty$

One of the assumptions for the OLS-estimator is that the residuals should have a constant variance. (Brooks, 2008). This is referred to as homoscedasticity and if this relationship is broken, it is called heteroscedasticity. If problems with heteroscedasticity is left uncontrolled, it could lead to that the standard errors for the slope will be inaccurate (Brooks, 2008). A Breusch-Pagan-Godfrey test for detecting heteroscedasticity is carried out and the results are presented in section 5.5.2.

### 4.7.3 $cov(u_i, u_j) = 0$

If this assumption does not hold it means that the error terms are correlated over time or cross-sectionally and are usually referred to as autocorrelation or serial-correlation (Brooks, 2008). If autocorrelation are left un-checked, the regression's beta- coefficients will become inefficient, and can be interpreted incorrectly. However, since autocorrelation is most prominent in time-series data (Brooks, 2008), and since this sample only uses four years of data, it will be difficult to see a trend in the error terms and therefore no test for autocorrelation will be applied.

### 4.7.4 $cov(u_j, x_j) = 0$

When correlation exists between independent variable(s) and the error term in the regression the problem is often referred to as endogeneity (Brooks, 2008). As noted earlier, this study helps solve some of the omitted-variable endogeneity problem by applying fixed effects in both the firm and time dimension. Another form of endogeneity that becomes especially apparent when including corporate governance variables, is measurement error. However, depending on the way variables in the regression are interpreted, some of this endogeneity can

be mitigated. A corporate governance variable such as board independence are only a variable that acts as a proxy for how independent the board is. In reality it only measures how big share of the board members that are entered as independent, but measuring the real qualitative variable of board independence is almost impossible. Tobin's Q further uses the book value of debt rather than market value in its calculation, meaning that it only serves as a proxy for reality. Because of factors such as these, extra caution must be taken when interpreting results from the regression.

Another problem that might affect the results of studies like this thesis is simultaneity, stemming from that the fixed-effects estimator is not well suited for the sample data at hand. Since the firm-fixed effects can contain information which affects both firm performance and the independent variables over time, the assumption that they are time-invariant might be wrong (Nakano & Nguyen, 2013). However, in order to control fully for this problem, a large array of exogenous instrumental variables are usually needed. Given that the requirements for being exogenous is that the instruments should not be correlated with firm performance (the dependent variable) but be correlated with the assumed endogenous variables, it is hard to find suitable candidates. Nakano & Nguyen (2013) underlines this in a Japanese context, explaining that there has been no real changes to laws concerning foreign shareholdings in Japan or any attempts to liberalize or restrict laws from the origin countries of the investors towards Japan. It will thus be even harder to find exogenous variables that are correlated both with the Anglo American board membership and foreign ownership variables, while not affecting firm performance. Nakano & Nguyen (2013) continues by applying lagged versions of the already existing independent variables as instruments and utilizing a dynamic panel model regression. However, they state that the reason they are choosing to apply this model is both because they are investigating only the electronics industry, which characterized by fast technological growth, and that their sample span over a relatively long period (13 years). This being because the assumption of firm-fixed effects being constant over time does not hold without the use of instrumental variables. Conversely, the sample period used in this study is much shorter (4 years), while exhibiting firms from a variety of industries, making it less probable of breaking the assumption imposed by the firm-fixed effects model and in the end overestimate the effect of the independent variables, meaning that IV's will not be applied to control for simultaneity.

#### 4.7.5 ( $U_t \sim N(0, \sigma^2)$ )

The next assumption is that the residuals are normally distributed, which they are normally not when it comes to panel data (Brooks, 2008). Panel data does however usually consist of an adequate number of observations, meaning that the normality assumption becomes less relevant. Nevertheless, a Jarque-Bera test is carried and presented in chapter 5 to see whether the residuals are normally distributed or not.

### 4.8 Other problems in OLS regressions

#### 4.8.1 Multicollinearity

Multicollinearity means that a high correlation exists between the independent variables (Brooks, 2008). If such problems persist while applying the OLS estimator, the r-squared will be high, standard errors on the variables low, but the independent variables will not be significant. Furthermore, if small changes are made in the regression specification, it will lead to large changes in the estimator output. Lastly, a high multicollinearity leads to that the confidence intervals for the parameters get larger, and in turn makes it harder to draw conclusions in the regression. Since it is difficult to detect multicollinearity, a simple correlation matrix is constructed and the correlations of the independent variables are noted. The results and discussion from this is presented in chapter 5.

### 4.9 Quality of research design

Yin (2014) describes four different criteria that are used when evaluating the quality of the research design. The criteria presented are: construct validity, internal validity, external validity and reliability. These will be discussed below in the context of this study.

#### *Construct Validity*

This criteria refers to that adequate measurements are used for the research questions. For this study, foreign directors and foreign ownership are used as measurements for the degree of firm internationalization in a corporate governance aspects. While these two variables may not represent every form of internationalization in corporate governance, the author deem them to worthy to be used as proxies. This is supported by theory, indicating a connection between the variables and the degree of convergence with the Anglo-American corporate

governance system. This in turn would suggest a more international corporate governance model.

### *Internal Validity*

Internal validity refers to the casual direction between variables in the regression. Even though the fixed-effects specification helps combat problems related to simultaneity, there are still ways which the causality direction of the variables could be strengthened for this study. This could be performed by obtaining an exogenous set of instrumental variables, but as discussed in section 4.6.5. Endogeneity, finding such variables in the current specification are deemed to be difficult, and not performed in this study. To sum up, the internal validity of this study is determined to be fair.

### *External Validity*

This criteria is used to evaluate if the findings from the study are generalizable outside the study sample. Because of the unique characteristics of Japanese corporate governance, it might be difficult to generalize these findings for other countries. However, the author suggests the findings to be generalizable to other firms, listed firms on the first section of the Tokyo stock exchange, mainly because of firm size, and age being controlled for, as well as the use of firm fixed effects in the sample. Therefore the external validity is regarded to be moderate.

### *Reliability*

Reliability essentially is a criteria to measure if it is possible to replicate the study and produce the same results again. This criteria is imposed to decrease the risk of errors and biases in studies. Since all the names of the firms are included in appendix 1, Table 1.1 “List of firms”, and the regression analysis methodology is clearly documented, the reliability is deemed high for this study. Furthermore, the data are collected from a well-recognized software as well as publicly available corporate governance reports, meaning that the data collection could be performed again, yielding a high reliability for the study.

## 5. Empirical findings

*In this section, the descriptive statistics for the sample, as well as the regression results will be presented. The hypotheses, formed in the theory section will either be accepted or rejected. Finally, the results from the OLS-validity tests and the tests for fixed and random effects will be conferred.*

### 5.1 Descriptive statistics

Table 5.1 Descriptive statistics

Variables	Mean	Median	Max	Min	Std. Dev.	Observations
LNQ	-0.62	-0.52	1.02	-4.34	0.58	998
ROA	2.42	2.28	13.23	-22.64	3.31	996
OAABM	0.04	0.00	1.00	0.00	0.20	998
FOREIGN_OWNERSHIP	0.23	0.22	0.72	0.00	0.12	999
FOREIGN_SUBSIDIARY	0.02	0.00	1.00	0.00	0.12	1000
BOARD_INDEPENDENCE	0.13	0.09	0.87	0.00	0.15	998
BOARD_SIZE	11.36	11.00	28.00	3.00	3.93	998
LN_FIRM_AGE	4.08	4.22	5.34	0.00	0.72	992
LN_NET_SALES	20.76	20.64	23.82	19.35	0.80	1000

The sample is composed of 250 firms during the years 2010 to 2013, yielding roughly 1000 observations for each variables. The Anglo-American dummy variable has a mean of 0.04, meaning that around 4% of the firms in the sample includes one or more outsider Anglo-American board members. The average level of foreign shareholdings for the sample are at 23%. It can further be observed that the average board size lies at 11 individuals but that the standard deviation from this is relatively high, with the largest board having 28 members, and the smallest just 3 members. Board independence has a mean of 13%, confirming that Japanese companies has a smaller share of independent board members than on American British boards (Muller-Kahle, et al., 2014).

## 5.2 Regression results

Table 5.2 Regression results

Variable	LNQ	Probability	ROA	Probability
OAABM	0.188***	0.000	-0.47	0.635
FOREIGN_OWNERSHIP	0.703**	0.013	10.911***	0.000
FOREIGN_SUBSIDIARY	0.319***	0.000	7.787***	0.002
BOARD_SIZE	-0.053	0.685	2.02	0.188
BOARD_INDEPENDENCE	0.014***	0.008	0.05	0.299
LN_FIRM_AGE	0.042	0.728	4.211***	0.008
LN_NET_SALES	0.130	0.253	6.306***	0.000
Adjusted R <sup>2</sup>	0.891		0.574	
F-statistic	32.517***		6.163***	
Probability	0.000		0.000	

\*\*\* = Significant at the 1% level

\*\* = Significant at the 5% level

\* = Significant at the 10% level

The adjusted r-squared for the regressions are at a high 89.1% respectively 57.4%. This can be interpreted as that the regressions are good at explaining the variations in the dependent variable (Brooks, 2008). Previous studies yielded 30% in Adjusted R-squared for Sugai et al. (2008), 37.1 % (Oxelheim & Randøy, 2003) and 79.7% for Masulis et al.'s (2012) Tobin's Q regression. The high degree of explanation can be attributed to the inclusion of fixed effects in the regression. Masulis et al (2012) performs both a standard OLS regression and a panel data regression with firm fixed effects. The first yielded 41.2% in adjusted R-squared while the latter showed an adjusted R-squared of 79.7%. This means that even though the R-squared looks suspiciously high in the Tobin's Q regression, previous studies also show similar degrees of explanation. Amongst the independent variables, there are multiple variables that are shown to affect firm performance. The F-statistic indicates if the variables used in the regression are jointly significant or not. In both cases this statistic is significance at the 1% level meaning that the variables used are jointly significant.

## 5.3 Hypotheses acceptance or rejection

### 5.3.1 Hypothesis 1

Foreign ownership has a positive effect on firm performance and is positively significant at the 5% level in the Tobin's Q regression and at the 1% level in the ROA regression. This

means that the first hypothesis, that Japanese firms with a higher share of foreign ownership have higher firm performance than firms with lower share of foreign ownership is accepted in both regressions.

### 5.3.2 Hypothesis 2

The inclusion of at least one outsider Anglo-American board member has a positive effect on firm performance is positive and significant at the 1% level when Tobin's Q is used as a measure for firm performance. However, in the ROA regression, the effect is very far from being significant, meaning that no positive effect is observed. Therefore the second hypothesis, that Japanese firms with one or more outside Anglo-American directors have higher firm performance than firms without such directors, is accepted in the Tobin's Q regression, but rejected in the ROA regression.

## 5.4 Control variables

**Foreign subsidiary:** The dummy variable that takes on the value of one if 20% or more of the firm's shares are controlled by a single foreign industrial owner shows a positive, significant effect on 1 % level in both regressions.

**Board size:** The number of board members does not show any significant results in any of the regressions, meaning that we can't draw any conclusions for this variable.

**Board independence:** The share of independent board members has a significant positive effect in the Tobin's Q regression at 1% while showing no clear results in the ROA regression due to poor significance.

**Firm age:** The natural logarithm of how many years that has passed since the firm were founded shows no clear results in the Tobin's Q regression due to poor significance. However when ROA is used as the dependent variable, a clear positive significant effect is observed at the 1% level.

**Net sales:** Firm size, being explained by the natural logarithm of the firms' net sales is positive but show no significance when Tobin's Q is being used as the dependent variable. In the ROA regression a positive and significant effect is observed at the 1% level.

## 5.5 Validity tests results

As described in the methodology, a number of assumptions has to hold true in order to get reliable results from the OLS regression. In this chapter the results from the performed test will be presented and discussed.

### 5.5.1 Multicollinearity detection

*(See Appendix 2, Table 2.1.1)*

As can be seen in the table, the samples correlations ranging between 0.32 and -0.2, which means the sample should not suffer from any problems stemming from multicollinearity in this study.

### 5.5.2 Breusch-Pagan-Godfrey test

*(See appendix 3, Table 3.1.1 and 3.1.2)*

In order to check for heteroscedasticity the residuals from the regression are extracted, squared and regressed against the independents variables again. This test is known as the Breusch-Pagan-Godfrey test (Brooks, 2008). In short, if the F-statistic for the test is significant it indicates that the sample contains heteroscedasticity. For the Tobin's Q regression, the F-statistic is significant at the 5% level, meaning that the residual variance is non-constant in the independent variables. Since both firm-fixed and period fixed effects are being used, a white diagonal is added to the original regression. With the White diagonal standard errors & covariance being used, the significance for the two main variables increases slightly. Otherwise no major changes are detected. For the regression with ROA as the dependent variable, no heteroscedasticity problems are detected.

### 5.5.3 Violation of normality detection

*(See appendix 5 figure 5.1.1 and 5.1.2)*

As can be seen in the two figures, the residuals from the two regressions does are both significant at 1 % levels in the Jarque-Bera tests meaning that the residuals are not normally distributed. However, a normal distributed shape can be recognized from the histogram. As discussed in the methodology section, the assumption of having normally distributed residuals is not imperative when using panel data.

## 5.6 Fixed or random-effects specification testing

### 5.6.1 Redundant fixed effects tests

*(see appendix 4, tables 4.1.1 and 4.1.2)*

In order to determine whether a standard, pooled regression is a viable model for this thesis's specification, redundant fixed effects likelihood ratio tests are carried out (Brooks, 2008). The F-tests uses three different tests. The first is restricting the cross-section fixed effects to zero, the second is to restrict the period fixed effects to zero and the third restricts both types of fixed effects to zero. The test for both the Tobin's Q and the ROA regression shows that these three restrictions is not in line with the data at hand and thus indicating that the pooled regression model cannot be applied.

### 5.6.2 Hausman test for random effects

*(See appendix 4, tables 4.2.1 and 4.2.2)*

After it was established that a pooled regression could not be used, a Hausman test is applied to check whether fixed or random effects are most suitable for our sample (Brooks, 2008). This test essentially tests if the random effects, applied are uncorrelated with the explanatory variable, which is a requirement for using random effects in the regression. However, since the p-value for the Hausman test basically is zero in both tests, correlation exists and fixed effects are deemed to be most suitable in the regression. Random effects cannot be applied in the time dimension due to the number of independent variables used.

## 6. Analysis

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*In this chapter, the results will be analyzed and compared to findings from previous studies.*

*The theoretical background will be used to further analyze the results and connect the findings of this study with theory.*

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### 6.1 Foreign directors' effect on firm performance

Since the Tobin's Q regression showed positive results while the ROA regression did not show any significant results, the definition of performance is suggested to have an impact on the outcome. Tobin's Q essentially measures the market value the firm compared to the firm's total assets. Oxelheim & Randøy (2003) discusses the possibility of that by including foreign directors, a form of signaling effect that the firm is about to change its corporate governance system towards the Anglo-American system can be observed. This suggests that the signaling effects may be captured better using Tobin's Q, since it includes the current market value of the firm in its calculation. Therefore changes in the stock's price related to the possible signaling effects from the foreign directors can be captured instantly. ROA on the other hand measures the operating results of the firm, suggesting that positive effects from including a foreign board member might not become apparent as quickly as in the Tobin's Q regression.

This study shares its positive results in Tobin's Q with the ones in Oxelheim & Randøy (2003) and Sugai et al. (2008). Even though Sugai et al. (2008) included outside foreign board members from all foreign countries in their sample it is interesting to see that the results apply when concentrating only on the Anglo-American board members as well. Since Sugai et al. (2008) used the percentage of foreigners as their main explanatory variable, the results they get in Tobin's Q (0.0144) is difficult to put in contrast with this study. If this study's results are compared with Oxelheim & Randøy, (2003), the level of gain in LNQ from including a foreign director for this study lands at 0.188 which is slightly higher than Oxelheim & Randøy, (2003) who produced 0.148 gain in LNQ in their OLS regression. A reason that supports higher results in a Japanese environment could be that the signaling effects from including a foreign board member is larger in Japan than in Sweden or Norway. This would in turn mean that the act of including a foreign director in Japan could be seen by the market to be a very unique and maybe even bold move thus yielding an increased signaling effect. The argumentation for this could be that many Japanese firms still fits in the traditional Japanese corporate governance system model and that foreign board members are still considered

somewhat of rarity in Japan. It is also possible that the knowledge the foreign board members bring to the firm has a direct effect on firm performance, especially if the Japanese firm are active in same region as the foreign director is based. This could mean, that the Japanese firms in the sample gained more from this effect than the Nordic firms, maybe because of wider cultural differences being able to be mitigated by a foreign director from the region the Japanese firm is active in. Furthermore, increased monitoring effects of the firm's management may also be one of the reasons for the increased effects on Tobin's Q from foreign directors.

The results from this thesis are further compared with results from the U.S. sample from Masulis et al. (2012). This thesis shows a larger Tobin's Q than for the U.S. sample, in which foreign independent directors affects Tobin's Q at -0.144 in the OLS regression. The author suggests that this difference can be attributed to that including foreign directors in U.S. firms, does not signal a move towards a more efficient corporate governance system in the same sense as it would in the Japan or the Nordic region. This part of the positive effect could thus have been mitigated in Masulis et al.'s (2012) sample, and may explain some of the difference in the results when compared to this thesis. Masulis et al. (2012) further concludes that the firm performance boost that foreign directors are suggested to add, largely dissipates when companies are relocating their activities from the origin country of the foreign director. This suggests, that the knowledge effect that foreign directors bring of overseas markets might be the only value adding effect in an U.S. context. Therefore the by Masulis et al. (2012) suggested decreased firm performance the company incurs related to missed meetings from faraway foreign directors might be greater than the positive knowledge effects that they might add. These travel times and missed meetings should also be a factor in a Japanese context, mainly because of the lack of Anglo-American countries in Japan's near vicinity. However, they are not large enough to make foreign directors affect Tobin's Q negatively in this study.

Another way in which foreign directors were thought to affect firm performance unfavorably is the problem of language differences, shown to have a negative on firm performance in the Nordic region (Piekkari, et al., 2015). This effect should also exist in Japanese firms. However, when examining the details of the foreign directors in order to acquire their nationality, many were stated to be fluent Japanese speakers. Because of the average poor English-speaking level of Japanese people (TOEFL, 2013) it may be possible that, unlike the Nordic region, some of the foreign directors are forced to speak the target language of the

country they are employed in to make themselves understood. This in turn, would contribute less to the “silent board” effect, because the majority of the board is able to use the language they are most comfortable with.

In this sample, there were only nine outside Anglo-American board members in the year of 2010 while being 16 in 2013, suggesting an increase in the popularity of recruiting outside Anglo-American board members over time in this sample.

In the correlation matrix in Appendix 2, table 2.1.1 it can be seen that the Anglo-American board member dummy variable is positively correlated to net sales at a 13% level suggesting that larger firms are more likely to include outsider board members. The board independence variable is positively correlated at 22%, foreign ownership at 19% and board size at 10%. The board independence correlation suggests that firms including outsider Anglo-American board members are more aware of the benefits from having independent board members, and thus employing a more Anglo-American style of corporate governance. The foreign ownership correlation could mean that firms with a high amount of foreign ownership are more likely to include outsider Anglo-American board members. The board size variable were thought to be correlated the other way, mainly because large boards are more prevalent in the traditional Japanese corporate governance system (Tricker, 2012) and firms including outside Anglo-American board members are thought to signal a move towards the Anglo-American corporate governance system. It has to be noted that the indications from the correlation matrix are limited and thus makes it difficult to draw any conclusions. It does however, provide interesting indications which can be used for further studies.

## 6.2 Foreign ownership's effect on firm performance

According to the regression results, the foreign ownership variable has a positive effect on firm performance, both in the Tobin's Q and ROA regression. This is in line with the results from Nakano & Nguyen (2013). The effect on firm performance is also much larger than from the outside Anglo-American board member variable. The reason for the high effect on firm performance could stem from many different factors, such as a pressure from foreign institutional investors to change corporate governance system towards a more Anglo-American style system, like Aggarwal, et al. (2011) and Ahmadjian (2007) shows in their studies. It could also depend upon a higher degree of divestitures (Ahmadjian & Robbins,

2005), more corporate risk taking (Nguyen, 2012) or increased dividends (Baba, 2009) that are often associated with higher degrees of foreign ownership in Japan. The increased divestitures and increased risk taking are factors that could be the reason why foreign ownership affects ROA, unlike the foreign director variable. The author suggests that increasing divestitures could free up cash that later can be inserted quickly into the operations. Furthermore, a higher level of risk taking can contribute directly to net income, increasing ROA.

The amount of change in LNQ and ROA that foreign ownership constitutes are 0.703 and 10.911 respectively. The positive results are well in line with previous studies. Nakano & Nguyen (2013) finds a 0.542 effect on LNQ, and only a 0.09 effect on ROA for the latest time period in their fixed effects sample. Ferris & Park (2005) results indicate a 6.51 change in Tobin's Q or 1.87 in LNQ when observed in their fixed effects regression which is larger than in this sample. The main question to ask is why foreign ownership has such a large impact on ROA, compared with Tobin's Q in this thesis's results. As discussed earlier, it is suggested that ROA may be better at observing slightly delayed effects from the dependent variables. Since the data for foreign ownership only could be extracted at the end of each Japanese fiscal year, which for most firms ends in March, this would create a natural delayed effect for the dependent variable, and may be why so large results are being observed in ROA.

This thesis's results contradict the findings of Phung & Le (2013) who report a decrease in firm performance of -0.565 in Tobin's Q from foreign ownership in their fixed effects regression. The results are discussed to originate from the fact that their sample country, Vietnam is still an emerging market, where foreign ownership is low, divergent and does not have enough influence to perform adequate monitoring. Japan is like Vietnam in the aspect that an efficient corporate governance system is not yet adapted. However, in Japan it seems like the foreign investors have no problems performing sufficient monitoring, at least according to theory (Ahmadjian, 2007). The difference in results might originate from that Japan has already crossed the initial hurdle of the monitoring gap described by Stulz (1999) in which equity holders are responsible for the major part of firm-monitoring.

In the correlation analysis in appendix 2, table 2.1.1, positive correlations between the foreign ownership variable and foreign subsidiary, board independence and firm size can be observed. The foreign subsidiary should be intuitively connected with the foreign subsidiary variable

since it is a measurement for firms with a high share of ownership from a foreign industrial actor. The board independence correlation could mean that foreign institutional investors have higher requirements for transparency or that the foreign owners actually change the board to allow for a higher share of independent directors. The firm size correlation could show that foreign investors are more prone to choose large firms as investment prospects. As discussed in the foreign director section, no concrete conclusions can be drawn from these correlations, since they are only indications of relationships.

## 7. Conclusion

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*The conclusions drawn from answering the thesis' research questions are presented. At the end, suggestions on further research are provided.*

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The purpose of doing this study has been to establish whether internationalization has an effect on firm performance. This has been examined through testing two factors of internationalization: foreign ownership and the inclusion of foreign directors, empirically. The results have shown an overall positive effect for both foreign ownership and foreign directors, even though differences in the two firm performance measurements can be observed. The reason for the increased effects from including foreign board members are mainly discussed to stem from the signaling effects of the firm moving towards a new corporate governance model. It could also reflect the foreign directors' knowledge of the regions the firm is active in. Lastly, it could also indicate increased monitoring effects that the foreign director provides when entering the company. The effects provided from foreign ownership are suggested to be rooted in the strategic change towards a more Anglo-American way of doing business which has been observed in the past in firms with high amounts of foreign ownership. Strategic changes include aspects such as increased risk taking, larger dividends and more of the firms' unneeded assets being sold off. Changes from having a high degree of foreign ownership could also be attributed to the foreign investors increased requirements for monitoring effects and transparency. The answer to why foreign investors increase their holdings in Japanese firms could be that they see a potential in increasing the profits for the firms, and thus acquiring a higher return on investment.

By using foreign ownership and foreign directors as measurements, it is indicated that firms which has internationalized their corporate governance systems performs better than their counterparts. The consequences for this could be substantial in Japan, during this day and age. For a country which is both facing problems with falling birthrates and a long term economic slump, internationalization of Japanese firms could provide the key for the Japanese economy recovering. This could in turn open up new markets, and provide new possibilities for Japan. However, as the data for this study indicates, there are still firms who refuse to change towards more transparency and monitoring of the management. If recent events continues on their course, we could see these firms being outperformed by more new thinking and open-minded companies, who not only enjoy the benefits of getting rid of their old shackles, but

also gets access to large amounts of foreign investments, which in turn should raise their market value.

Another dimension that has not been discussed in his thesis yet is the way adding a foreign board member could help the organization gain more diversity, which could further contribute to the firm's domestic and international image. Since many of the Japanese firms are highly active internationally, including a foreign board member from that region could further be seen as a way to give the employees in the region some form of representation and a voice on the company's handling recent handling of matters there. A prime example of a diverse firm from the sample is 105 year old Hitachi, the 3<sup>rd</sup> largest firm in the sample. In 2013 they included so much as one female and two male foreign board members on their corporate board. The author is convinced that when large firms like Hitachi sets an example, smaller firms will follow in their footsteps, diversifying their board room as well as employees to better respond to the global challenges that firms face today.

When the asset price bubble burst in the 1990's, Japanese firms saw an opportunity for change. This willingness to adapt to another system, when in times of crisis has helped many Japanese firms to increase the transparency within the firms in in their actions. Foreign investors have further assisted in this change, pushing firms to be at the forefront of having a good and efficient corporate governance system. This thesis results suggests that the effort to change the governance in firms are worth its while, encouraging a continued convergence towards the Anglo-American corporate governance system for the near time to come.

Lastly, the author would like remind the readers about the possible issues related to the internal validity when interpreting the results of the study. As mentioned in chapter 4, study might be affected by endogeneity issues not accounted for by the fixed-effects estimators applied in the methodology. The author suggests that given more time and resources, a larger sample with access to exogenous instrumental variables could be used to try to mitigate some of these possible issues in further studies.

## 7.1 Further research

During the work process for this thesis, some points which could be of interest for future research has been encountered, but deemed impossible through the spectrum of this study.

*Examine the effects of Japanese board members with international experience.*

One interesting aspect of this study is how much of the increased effects that can actually be attributed to the nationality of the board members, and how much that is actually experience. The author believes that the difference in nationality could both lead to many eye-opening experiences in the board room as-well as being sources of miscommunication. If the performance effects of both outsider Japanese directors with international experience and outsider foreign directors would be compared, more light could be shed on which traits that actually have a positive impact on firm performance.

*Investigate the reasons for which Japanese firms recruit foreign directors.*

It would be of great importance to find the characteristics of firms who are deciding to recruit foreign directors. By knowing these characteristics, more details could be provided in the question how foreign directors affect firm performance and how firms make changes in corporate governance after including a foreign director.

*Evaluate if corporate governance has changed in Japanese companies that has large domestic institutional shareholdings during recent years.*

After seeing the benefits that the active foreign owners grant their investment targets one would want to see if the Japanese investment funds will strengthen the demands on the firms in which they own shares in. The author therefore suggests to examine how corporate governance changes in firms with large domestic institutional ownership in the near future.

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# Appendix 1

## 1.1 List of companies included in the sample

This is a list of the 250 firms contained in the sample. All firms are registered on the Tokyo Stock Exchange first section.

Table 1.1 List of firms

Toyota Motor Corp	Nippon Steel & Sumikin Bussan	Nippon Sheet Glass
Nippon Teleg/Teleph.	Shin-Etsu Chemical	Tokyo Electron Ltd.
Hitachi, Ltd.	Kubota Corporation	Vital Ksk Hold
Honda Motor Co., Ltd	Nh Foods Ltd	Alps Electric Co.
Nissan Motor Co.	Toyota Boshoku Corp	Toyoda Gosei Co.
Panasonic Corp	J Front Retailin	Don Quijote Holdings
Sony Corp	Kawasaki Kisen	Nippon Suisan Kaisha
Toshiba Corporation	Astellas Pharma Inc	Odakyu Electric Rail
Toyota Tsusho Corp	Hakuhodo Dy Hldgs	Ntn Corp
Tokyo Electric Power	Daiichi Sankyo	Izumi Co., Ltd.
Mitsubishi Corp	Jtekt Corp	Hitachi Metals, Ltd.
Aeon Co Ltd	Kanematsu Corp	Jgc Corp
Seven & I Hldgs Co	Kintetsu Corp	Fujikura Ltd.
Mitsui & Co., Ltd.	Yamazaki Baking Co.	Otsuka Corp
Fujitsu Limited	Sekisui Chemical Co.	Leopalace21 Corp
Ntt Docomo Inc.	Nintendo Co Ltd	Seino Holdings Co
Marubeni Corp	Fast Retailing Co	Kewpie
Nippon Stl.& Sumit.Mtl.	Seiko Epson	Life Corporation
Itochu Corp	Nikon Corporation	H2o Retailing Corp
Idemitsu Kosan Co	Furukawa Electric Co	Brother Industries
Canon Inc.	San-Ai Oil Co., Ltd.	Hokuriku Elec. Power
Mitsubishi Electric	Takashimaya Co., Ltd	Nok Corp
Kddi Corp	Tdk Corp	Air Water Inc
Sojitz Corp	Olympus Corp	Megmilk Snow Brand
Denso Corp	Renesas Electron	Kamei Corporation
Nec Corp	Sumitomo Metal Mng.	Rengo Co., Ltd.
Bridgestone Corp	Showa Denko K.K.	Kinden Corporation
Jfe Holdings Inc	Dic Corporation	Haseko Corp
Softbank Corp	Sumitomo Forestry Co	Japan Pulp & Paper
Sumitomo Corp	Shinsho Corp	Toda Corp
Mitsubishi Chem	Teijin Limited	Daiwabo Holdings
Cosmo Oil Co Ltd	Edion Corp	Hitachi Chemical Co.
Mitsubishi Heavy Ind	Konica Minolta Inc	Lawson Inc
Tonengeneral Sekiyu	Hitachi Const Mach	Taiyo Nippon Sanso
Kansai Elec. Power	Taiheiyo Cement Corp	Nissan Shatai Co
Medipal Holdings	Calsonic Kansei Corp	Toho Gas Co., Ltd.
Sharp Corpor	Century	Sapporo Holdings Ltd

Showa Shell Sekiyu	Fuji Electric	Inabata & Co., Ltd.
East Japan Railway	Toyo Seikan Group	Shimamura Co., Ltd.
Suzuki Motor Corp	Kato Sangyo Co., Ltd	Kaneka Corporation
Chubu Electric Power	Eisai Co Ltd	Nhk Spring Co., Ltd.
Japan Tobacco Inc.	K's Holdings Corp	Kandenko Co., Ltd.
Aisin Seiki Co Ltd	Sumitomo Rubber Ind.	Hitachi Transport
Alfresa Holdings	Nsk Ltd.	Nichirei Corp
Fujifilm Holdings	Secom Co., Ltd.	Hikari Tsushin, Inc.
Mazda Motor Corp	Shiseido Co., Ltd.	Itoham Foods Inc.
Kirin Holdings Co	Tosoh Corp	Pioneer Corp
Sumitomo Electric	Nidec Corp	Toto Ltd.
Ricoh Company, Ltd.	Fuji Oil	Nisshin Seifun
Yamada Denki Co.	Canon Marketing	Daido Steel Co Ltd
Sumitomo Chemical Co	Hankyu Hanshin	Oki Electric Inds.
Mitsubishi Shok	T-Gaia Corp	Mitsubishi Gas Chem
Dentsu Inc	Nagase & Co., Ltd.	Koito Mfg. Co., Ltd.
Nippon Yusen K.K.	Bic Camera Inc	Fanuc Ltd.
Suzuken Co., Ltd.	Electric Power Dev	Ebara Corp
Daiwa House Industry	Nitto Denko Corp	Dcm Holdings
Komatsu Ltd.	Mitsui Engin. & Ship	Bandai Namco
Kobe Steel, Ltd.	Iwatani Corp	Matsumotokiyoshi
Mitsubishi Motors	Hitachi High-Tech	Benesse Holding
Tohoku Elec. Power	Nagoya Railroad Co.	Rakuten Inc
Tokyo Gas Co., Ltd.	Ube Industries, Ltd.	Mitsui Mining/Smelt.
Daihatsu Motor Co	Arata Corp	Unicharm Corp
Fuji Heavy Inds.	Murata Manufacturing	Daio Paper Corp
Nippon Express Co.	Omron Corp	Marui Group Co
Asahi Kasei	Fuji Media Holding	Mitsubishi Tanabe
Asahi Group	Itochu-Shokuhin Co	H.I.S. Co., Ltd.
Dai Nippon Printing	Morinaga Milk Ind.	Hoya Corp
Central Japan	Hokkaido Electric	Joshin Denki Co.
Toray Industries	Shikoku Electric Pwr	Coca-Cola West
Toppan Printing Co.	Sumitomo Heavy Inds.	Keio Corp
Toyota Industries	Tobu Railway Co.	
Sekisui House, Ltd.	Yokohama Rubber Co	

## Appendix 2

### 2.1 Correlation matrix

Table 2.1.1 Correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
LNQ	1.00								
	-----								
ROA	0.30***	1.00							
	0.00	-----							
OAABM	0.02	0.06*	1.00						
	0.52	0.05	-----						
FOREIGN_OWNERSHIP	0.21***	0.26***	0.19***	1.00					
	0.00	0.00	0.00	-----					
FOREIGN_SUBSIDIARY	0.01	0.04	-0.03	0.26***	1.00				
	0.81	0.17	0.41	0.00	-----				
BOARD_INDEPENDENCE	0.18***	0.09***	0.22***	0.32***	-0.05	1.00			
	0.00	0.00	0.00	0.00	0.14	-----			
BOARD_SIZE	0.09**	-0.03	0.10***	-0.04	-0.10***	-0.20***	1.00		
	0.01	0.31	0.00	0.17	0.00	0.00	-----		
LN_FIRM_AGE	0.10***	0.01	-0.08**	0.02	0.03	0.05	0.12***	1.00	
	0.00	0.69	0.01	0.45	0.32	0.11	0.00	-----	
LN_NET_SALES	-0.02	-0.08**	0.13***	0.25***	0.12***	0.12***	0.21***	0.02	1.00
	0.44	0.02	0.00	0.00	0.00	0.00	0.00	0.56	-----

\*\*\* = Significant at the 1% level

\*\* = Significant at the 5% level

\* = Significant at the 10% level

The upper number is the correlation and the lower number is the p-value which measures if the correlation is significant. The number in the header which are enclosed in parentheses represents the variables on left side in numerical order.

## Appendix 3

### 3.1 Heteroscedasticity tests

Table 3.1.1 Tobin's Q regression - Breusch-Pagan-Godfrey test

Dependent Variable: RESID01\_SQ

Method: Panel Least Squares

Date: 04/30/15 Time: 13:59

Sample: 2010 2013

Periods included: 4

Cross-sections included: 248

Total panel (unbalanced) observations: 987

Variable	Coefficient	Std. Error	t-Statistic	Prob.
OAABM	-0.003	0.017	-0.185	0.853
FOREIGN_OWNERSHIP	0.051	0.030	1.686	0.092
FOREIGN_SUBSIDIARY	-0.031	0.028	-1.104	0.270
BOARD_SIZE	-0.001	0.001	-0.592	0.554
BOARD_INDEPENDENCE	-0.048	0.024	-1.961	0.050
LN_FIRM_AGE	-0.012	0.005	-2.526	0.012
LN_NET_SALES	-0.004	0.004	-0.869	0.385
C	0.151	0.090	1.691	0.091
R-squared	0.014	Mean dependent var		0.024
Adjusted R-squared	0.007	S.D. dependent var		0.103
S.E. of regression	0.102	Akaike info criterion		-1.716
Sum squared resid	10.219	Schwarz criterion		-1.677
Log likelihood	855.020	Hannan-Quinn criter.		-1.701
F-statistic	2.043	Durbin-Watson stat		1.185
Prob(F-statistic)	0.047**			

\*\*\* = Significant at the 1% level

\*\* = Significant at the 5% level

\* = Significant at the 10% level

Table 3.1.2 ROA regression - Breusch-Pagan-Godfrey test

Dependent Variable: RESID02\_SQ

Method: Panel Least Squares

Date: 04/30/15 Time: 14:06

Sample: 2010 2013

Periods included: 4

Cross-sections included: 248

Total panel (unbalanced) observations: 985

Variable	Coefficient	Std. Error	t-Statistic	Prob.
OAABM	-2.263	1.986	-1.139	0.255
FOREIGN_OWNERSHIP	7.430	3.556	2.089	0.037
FOREIGN_SUBSIDIARY	-1.934	3.299	-0.586	0.558
BOARD_SIZE	-0.193	0.104	-1.853	0.064
BOARD_INDEPENDENCE	-3.091	2.839	-1.089	0.277
LN_FIRM_AGE	-0.919	0.549	-1.675	0.094
LN_NET_SALES	0.027	0.510	0.052	0.958
C	7.651	10.476	0.730	0.465
R-squared	0.013	Mean dependent var		3.431
Adjusted R-squared	0.006	S.D. dependent var		11.974
S.E. of regression	11.938	Akaike info criterion		7.805
Sum squared resid	139235.868	Schwarz criterion		7.845
Log likelihood	-3836.161	Hannan-Quinn criter.		7.821
F-statistic	1.850	Durbin-Watson stat		1.002
Prob(F-statistic)	0.074616*			

\*\*\* = Significant at the 1% level

\*\* = Significant at the 5% level

\* = Significant at the 10% level

## Appendix 4

### 4.1 Fixed effects testing

Table 4.1.1 Tobin's Q regression - redundant fixed effects testing

Redundant Fixed Effects Tests

Equation: EQ01

Test cross-section and period fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F***	29.735878	(247,729)	0.0000
Cross-section Chi-square***	2373.439960	247	0.0000
Period F***	33.182284	(3,729)	0.0000
Period Chi-square***	126.335657	3	0.0000
Cross-Section/Period F***	29.982339	(250,729)	0.0000
Cross-Section/Period Chi-square***	2391.707629	250	0.0000

\*\*\* = Significant at the 1% level

\*\* = Significant at the 5% level

\* = Significant at the 10% level

Table 4.1.2 ROA regression - redundant fixed effects tests

Redundant Fixed Effects Tests

Equation: EQ01

Test cross-section and period fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F***	5.435166	(247,727)	0.0000
Cross-section Chi-square***	1030.437145	247	0.0000
Period F***	9.972006	(3,727)	0.0000
Period Chi-square***	39.720941	3	0.0000
Cross-Section/Period F***	5.518437	(250,727)	0.0000
Cross-Section/Period Chi-square***	1047.949791	250	0.0000

\*\*\* = Significant at the 1% level

\*\* = Significant at the 5% level

\* = Significant at the 10% level

## 4.2 Random effects testing

Table 4.2.1 Tobin's Q regression - Hausman test

Correlated Random Effects - Hausman Test

Equation: EQ01

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random***	41.696703	7	0.0000

\*\*\* = Significant at the 1% level

\*\* = Significant at the 5% level

\* = Significant at the 10% level

Table 4.2.2 ROA regression – Hausman test

Correlated Random Effects - Hausman Test

Equation: EQ01

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random***	75.408565	7	0.0000

\*\*\* = Significant at the 1% level

\*\* = Significant at the 5% level

\* = Significant at the 10% level

# Appendix 5

## 5.1 Residuals

Figure 5.1.1 Residuals - Tobin's Q regression

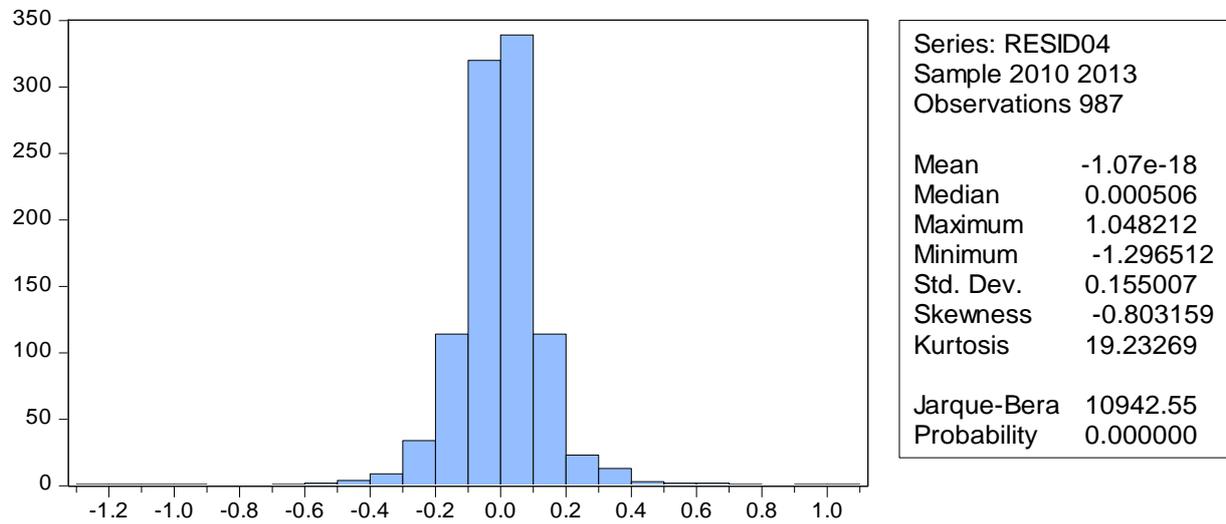
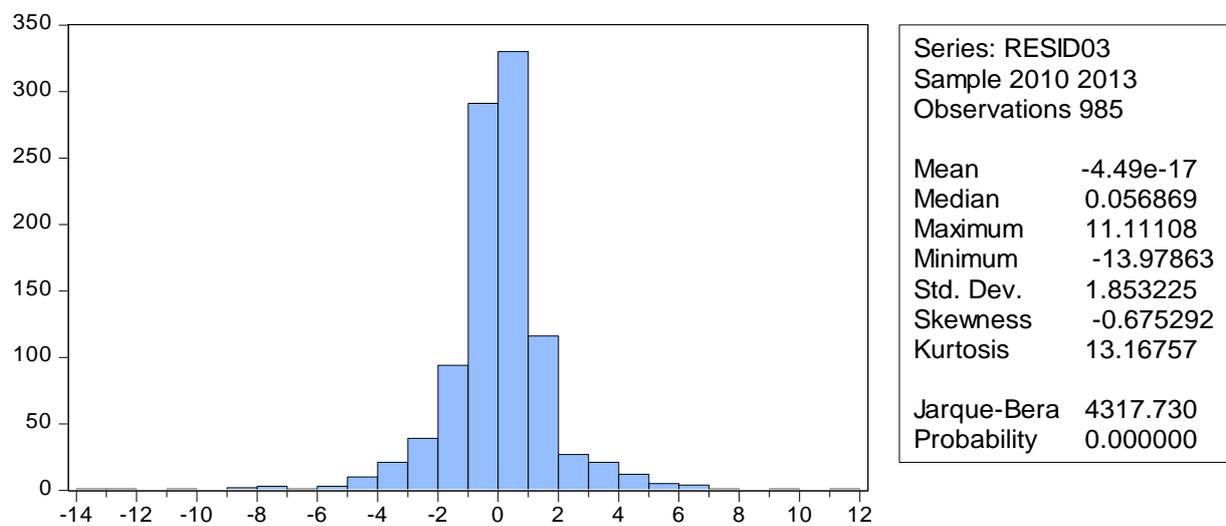


Figure 5.1.2 Residuals: ROA – regression



# Are internationally adapted Japanese companies better performers?

During the last decades, Japanese companies have found themselves struggling to improve their corporate governance systems. Similarly, both the public and foreign institutional investors has raised their demands to make firms more transparent as well as becoming better on monitoring the actions of the management. This process of change has earlier been studied through observable corporate governance factors such as the size of the board and the amount of outsiders on the board. In an attempt to contribute from another angle to this field, Bremholm investigates the effects that firms employing the unusual method of adding a foreign director to their boards have on firm performance. Furthermore, firms that enjoys a higher degree of foreign ownership are evaluated to see how they perform against their counterparts.

Previous studies on the inclusion of foreign directors have been focused on the Nordic and U.S. regions, yielding mixed results. The signaling effects of a firm being ready to move towards a more international corporate governance system were considered to have yielded positive results in the Nordic market, while the distance and time spent traveling in the U.S. were suggested to be the cause to negative effects. The effects from foreign ownership, are more widespread and include direct measures such as firms taking on riskier strategies, increase their divestitures and give larger dividends to the shareholders. These traits are strongly related to the American and British ways of doing business, and are founded on that foreign

institutional investors have higher demands for return on their investments.

In his study, Bremholm includes 250 firms from the Tokyo stock exchange's first section and analyzes the data between 2010 and 2013. Both Tobin's Q and return on assets are used as performance measurements, giving opportunities to analyze both performance effects from the market, and from firm operations. To be able to make full use of the panel data methodology, fixed effects are included, making the sample more resistant to both firm specific effects such as technological breakthroughs and time fixed effects related to the aftermath of the financial crisis and the implementation of the new "Abenomics"- program, which includes numerous financial reforms that affected the stock market in a positive manner in 2013.

The results from the study shows a significant increase in Tobin's Q for including foreign directors. The result in ROA however, are statistically insignificant. The difference in the essence of these two performance measures are thought to be the cause of these outcome. Signaling effects are often more related to the immediate market response, making Tobin's Q a more accurate measurement for performance in these types of studies. Foreign ownership was linked with performance increases, both in Tobin's Q and ROA, confirming the direct effects higher foreign ownership were thought to have on firms' operating performance.

Bremholm suggests further research on foreign directors in Japan. A study in which overseas experience would be taken into account could put a new perspective on the performance gain, enabling to see to what degree the nationality of the directors affect firm performance.