



SCHOOL OF  
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# The impact of institutional investors' ownership on firm's value and performance

by

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# Abstract

Institutional investors and large investors play a crucial role as a governance mechanism to protect outsiders from excessive rent extraction by insiders. Where institutional investors can serve as a governance mechanism to intervene and discipline management, it also has several drawbacks and imperfections. This thesis investigates the principal-agent problem and empirically investigates how institutional investors impact shareholder value and firm operating performance on the Swedish market for large- and small-cap firms listed on the Stockholm Stock Exchange. The sample consists of 102 large-cap and 78 small-cap firms, including financial and non-financial except investment companies, which are observed quarterly from 2014 to 2021. The instrumental variable approach results in a negative impact from institutional investors on large-cap firm operating performance. Additionally, institutional investors have a negative impact on firm operating performance for small-cap firms. Consequently, total institutional investors impact shareholder value negatively. Furthermore, the thesis finds that several categories of institutional investors contribute to shareholder value and firm performance differently.

**Keywords:** Corporate governance, delegated monitoring, agency problem, institutional investors, shareholder value, Tobin's Q, Return on Assets, Return on Invested Capital

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# 1. Introduction

*Do institutional owners add to shareholder value and firm performance?*

At the basic level, whenever an outside investor wishes to exercise control differently from the manager in charge of the firm, a corporate governance problem arises. The dispersion of ownership exacerbates this insider-outsider problem by giving rise to a conflict of interest between various investors and creating coordination problems among investors. Therefore, several governance mechanisms have been presented by research to resolve this collective action problem. One category proposed to mitigate the control problem is delegated monitoring by large shareholders and institutional investors (Becht et al., 2002). The research on how large investors and institutional investors may mitigate this problem, and increase shareholder value, has been extensively researched within corporate finance. However, as evidence suggests, institutional investors' portfolios are close to the market portfolio (Fama and French, 2010). Therefore, the success of their delegated monitoring to increase shareholder value can be questioned.

This paper empirically investigates how institutional ownership impacts corporate operating performance and firm value. Following past research, shareholder value is measured through Tobin's Q and operating performance through Return on Assets (ROA). The literature seems to have a gap regarding the operating performance metrics. Therefore, this thesis also considers Return on Invested Capital (ROIC) as operating performance due to its superiority relative to ROA. The topic has been extensively researched in recent decades, and institutional investors do, in some instances, significantly impact shareholder value and operating performance. This holds true when observing several countries (e.g., Ferreira and Matos (2008)) but also for specific countries (e.g., Cornett et al. (2007), Shleifer and Vishny (1986), or Chen, Liu, and Yan (2022)). On the other hand, Bhattacharya and Graham (2009) find inconclusive results when controlling for endogeneity between shareholder value and institutional ownership. However, few studies have focused on the Swedish market, which this thesis aims to shed light on. The Swedish market is fitting for investigation due to its high and growing institutional ownership (Baker, 2009) and unique corporate governance characteristics (Birgisson et al., 2009).

The results regarding total institutional ownership are not in line with previous research. Overall, total institutional ownership does not exhibit a statistically significant impact on shareholder value or operating performance. Only the ROA for small-cap companies and ROIC for large-cap companies exhibit a significant negative coefficient for the total institutional ownership. Thus, total institutional ownership does not significantly contribute to shareholder value. The findings for the Swedish market are in contrast to previous research, which has proven that institutional ownership is positively related to firm value and firm operating performance.

Our study also contributes to the literature by including more defining groups of institutional investors, which is far less common in previous research. Following several previous papers (e.g., Cornett et al. (2007), Ferreira and Matos (2008), Brickley et al. (1988), or Elyasiani and Jia (2010)), the thesis consider to group institutional investors into two segments: pressure-insensitive and pressure-sensitive institutional investors. Pressure-insensitive institutional investors are those institutions that have fewer potential business relationships with the firm and therefore are better suited to monitor. In contrast, the pressure-sensitive group has existing or potential business relationships with firms and, due to those relationships, is assumed to be less willing to challenge management decisions. The results indicate that pressure-insensitive investors are more suited for delegated monitoring for large-cap firms. In contrast, for small-cap firms, pressure-insensitive investors impact shareholder value negatively.

As the thesis includes more defined institutional investors categories, it can distinguish between different types of investors and their willingness to monitor their holdings. Our results indicate that several different institutional investors impact shareholder value differently. For large-cap firms, sovereign wealth funds and foreign institutional investors are beneficial for shareholder value. In contrast, for small-cap firms, mutual funds, pension and insurance companies, and foreign institutions negatively impact shareholder value. Many of the included categories of institutional investors are insignificant for both large- and small-cap firms. Therefore, they do not significantly contribute to shareholder value. The results prove the complexity of theoretical perspectives and empirical results of studies regarding institutional ownership.

## 1.1 Background

Institutional investors can generally be classified based on several different aspects. The aspects can be the geographical location with respect to the firm (foreign – domestic investors), certain characteristics (pressure-sensitive or pressure-insensitive), size of their ownership (majority - minority ownership), etc. In terms of location, previous empirical studies (Ferreira and Matos, 2008; Bjuggren, Eklund, and Wiberg, 2007; Nguyen, 2012) find a positive effect of foreign investors in the firm. In terms of ownership features, Brickley et al. (1988), Ferreira and Matos (2008), and Elyasiani and Jia (2010) have generally categorized institutional investors as either pressure-sensitive or pressure-insensitive. Institutions classified as pressure-sensitive investors have existing or potential business relationships with firms and, due to those relationships, are assumed to be less willing to challenge management decisions. In contrast, pressure-insensitive investors are those institutions that have fewer potential business relationships with the firm and therefore are better suited to monitor, discipline, and impose controls on corporate managers. These authors suggest that pressure-insensitive investors improve firm performance.

## 1.2 Aim and Scope

The aim of this thesis is to provide new empirical insights on the impact of institutional ownership on both firm value and corporate operating performance. It is investigating the impact of different categories of institutional ownership on Tobin's Q, ROA, and ROIC for large- and small-cap firms on the Stockholm Stock Exchange from Q1 2014 to Q4 2021. Even though the previous literature on the topic is extensive, the results are mixed, and the literature is heavily focused on larger firms. The focus on larger firms is motivated as these companies are included in equity indexes and are of higher interest to large institutional investors that manage indexed portfolios or use such portfolios as performance benchmarks. However, the focus on larger firms could also stem from the lack of reliable data for smaller firms. In Sweden, Modular Finance provides consistent and reliable data on different categories of institutional ownership for all Swedish firms by reviewing transactions and data thoroughly. Therefore, this thesis can seek to address if institution ownership for large- and small-cap companies has distinguishable differences. This is important as Dharwadkar, Goranova, Brandes, and Khan (2008) suggest that the monitoring effectiveness



diminishes when firms get larger. Finally, the thesis aims to eliminate the endogeneity issue related to institutional ownership by using a two-stage least squares (2SLS) instrumental variable method.

In conclusion, this thesis seeks to address the following questions:

- *Do institutional owners add to shareholder value and firm performance?*
- *Do particular institutional owners contribute to shareholder value and firm performance differently?*
- *If institutional ownership impacts shareholder value and operating performance, what are the implications for stakeholders?*

The purpose is to provide evidence of how and if different categories of institutional ownership impact shareholder value and operating performance. The empirical findings can provide suggestions for investment vehicles or asset allocation decisions and how to promote sufficient delegated monitoring to enhance shareholder value.

The contributions of this paper to the existing literature are as follows. First, this study helps clarify the inconclusive evidence regarding the relationship between institutional ownership and firm value as well as firm performance. Previous research produces mixed results. While Shleifer and Vishny (1986) conclude that large institutional ownership positively impacts the firm value, Navissi and Naiker (2006) argue that the firm value is improved only up to a certain level of shareholding. In terms of operating performance, Loderer and Martin (1997) find an insignificant relationship between the level of institutional ownership and firm performance. However, Thomsen and Pedersen (2000) and Chen, Liu, and Yan (2022) come to the opposite conclusion that institutional investors significantly promote the performance of the firms.

Second, only a handful of studies examine the impact of institutional shareholdings on corporate value or performance in the Swedish context, and sample data is not updated. Our study examines the impact of institutional shareholdings on corporate value with quarterly data of 180 companies in the OMX Stockholm Exchange index from Q1 2014 to Q4 2021. With more recent data, the

research gains more significant insights into the impact of institutional ownership on firms in the current Swedish capital market. Additionally, similar to several other stock markets used in recent studies (Cornett et al., 2007, Ferreira and Matos, 2008, Bhattachayra and Graham, 2009), the Swedish stock market is characterized by high institutional ownership, which can provide a further understanding of institutional investors effect on shareholder value. Furthermore, as information is available on almost all shareholders of listed companies in Sweden, one can draw general conclusions about governance and valuation for the Swedish market.

Third, much of the previous literature focuses on larger firms. However, Dharwadkar, Goranova, Brandes, and Khan (2008) suggest that the monitoring effectiveness diminishes when firms get large. Thus, this thesis further contributes by observing Swedish large- and small-cap companies.

Fourth, in contrast to the dominating literature, we also include ROIC as a firm operating performance metric. ROA is a metric that indicates a company's profitability in relation to its total assets. The indicator is widely employed to measure firm performance in many academic papers, especially when authors want to test the effects of corporate governance mechanisms on operating performance. While with ROA, stakeholders can estimate how efficiently a company uses its assets to generate a profit. However, ROIC determines how well a company uses its invested money in operating invested capital (both assets and liabilities). In previous literature, ROIC is used less popularly than ROA, especially in the Swedish market context. With this approach, the study is expected to shed light on the impact of institutional investors assessed from more diverse perspectives.

This study is subject to several limitations. In the study, the analysis is restricted to institutional investors' holdings. Therefore, unlisted firms are omitted from the sample. This exhibits some limitations as it cannot account for a significant portion of these investors' portfolios, such as investment companies, which are in unlisted firms. However, the ownership of investment companies is likely to impact shareholder value and operating performance long-term. In the absence of observing unlisted firms, the discussion of investment companies' impact on shareholder value is out of the scope of this thesis. Furthermore, the period of the collected data does not include

the recent 2007 to 2009 financial crises, which might create a bias. Additionally, as this thesis utilizes Fixed Effect (FE) models, the inference can only be supported for the specific samples. The implication is that the results cannot be applied or generalized to a larger population of Swedish firms. Therefore, there is a possibility of observing different impacts on shareholder value and firm operating performance if all large- and small cap firms listed on the OMX Stockholm Exchange were included in the sample (Brooks, 2008).

### 1.3 Outline of the Thesis

The remainder of this paper is structured as follows. Chapter 2 provides a literature review from which the thesis's hypotheses are derived. Chapter 3 explains the data and methods, and limitations. Chapter 4 presents descriptive statistics. Chapter 5 presents the results and Chapter 6 is about the discussion. Lastly, chapter 7 concludes.

## 2. Literature review

### 2.1 Theoretical Background

#### 2.1.1 Agency Problem

Jensen & Meckling (1976) define an agency relationship as a contract under which the principal engages the agent to perform some service on their behalf, which involves delegating some decision-making authority to the agent. Agency problems occur when the agent does not act in the principal's best interest. Monitoring costs that arise from the principal to limit the abnormal activities of the agent are referred to as agency costs. Gillan & Stark (2003) argue that (1) differences in goals and preferences; and (2) imperfect information are two primary sources of the agency conflict.

Agent-principal relationship exists between a company's management (agent) and its shareholders (principal). The agency problem arises whenever managers have incentives to pursue their interests at the expense of shareholders. According to Boshkoska (2014), several mechanisms to control the agency problem include internal measures: internal audits, compensation to managers, concentrated ownership, good corporate governance, and external measures: external audit, market of capital, legal frame.

#### 2.1.2 Institutional Investors

An institutional investor is a company or organization that invests money on behalf of clients or members. Hedge funds, mutual funds, pensions, insurance companies, and endowments are all examples of institutional investors. Much research mentions the active role of large shareholders in the governance of firms, which contributes to limiting agency problems. (Shleifer & Vishny, 1986; Gillan & Stark, 2003; Boshkoska, 2014). Institutional investors usually hold a high proportion of equity ownership. Through their ownership and trading of their shares, institutional investors have the potential to strongly influence management's activities (Gillan & Stark, 2003). The authors argue that institutional shareholders, one of the firm's owners, have the right to elect the board of directors, which is responsible for monitoring corporate managers and their performance. Similarly, a study by Jiang and Yamada (2011) concludes that stock returns exhibit a positive relationship

with institutional ownership. Furthermore, these authors document that large shareholders have more incentives and the ability to monitor company activities, and then the firm performance will be improved accordingly.

### 2.1.3 Active Monitoring Hypothesis

The ownership of large investors is associated with their role in monitoring managers. It is argued by Demsetz (1983) and Shleifer and Vishny (1986) that there are stronger incentives for active monitoring amongst relatively large shareholders. The results of Jarrell and Poulsen (1987) are comparable to those. However, Jarrell and Poulsen instead focus on how different shareholders vote and whether or not they vote in their economic interests. They find that well-informed and sophisticated investors tend to do precisely this and vote in their interests, whereas less-informed investors do not tend to do this to the same extent. Agrawal and Mandelker (1990) refer to this as the “active monitoring hypothesis”. Edmans (2014) classifies two approaches that large shareholders, who actively monitor, can take in order to influence the management. The first is to use their voting rights to influence the management and make proposals. The second is to threaten the management by potentially selling their shares and thereby reducing the share price.

### 2.1.4 Free-riding Problem

Not all shareholders will engage in active monitoring of the firm’s management as not all shareholders necessarily have control rights or the intention to intervene in decision-making. Therefore, large investors (banks, institutional investors, families) with the ability to exert influence combined with the size of the stake give them an incentive to monitor the management activities and undertake costly delegated monitoring responsibilities (Becht et al., 2002). Cornett et al. (2007) argue that all shareholders benefit from monitoring activities. However, expropriation of minority shareholders is a potential risk with large investors as monitors. In conclusion, an apparent free-riding problem occurs. Large investors with higher incentives for delegated monitoring will take on the monitoring cost, while smaller investors with a lower monitoring incentive will free-ride (Shleifer & Vishny, 1986).

## 2.2 Literature review and Hypothesis Development

### 2.2.1 Institutional Ownership and Firm Value

The role of institutional ownership in the economy is a debatable subject. Few studies that exist provide mixed evidence on the effect of institutional shareholding on the value of the firm.

Institutional investors apply their highly developed managerial skills, professional knowledge, and voting rights to influence managers and support corporate decision-making in terms of corporate governance. Shleifer and Vishny (1986) conclude that the presence of large institutional investors will positively affect the firm's market value owing to the more effective monitoring (active monitoring hypothesis). In terms of funding, with strong financing sources along with extensive networking, institutional investors can stand by the firm for capital expenditures support. Thus, Shleifer and Vishny (1986) argue that the ownership structure as institutional owners are more effective monitors and can align managers and shareholders through supervision.

Navissi and Naiker (2006) point out that active monitoring may improve firm value only up to a certain level of shareholding. In detail, shareholding by active institutional investors of up to 30 percent is positively related to corporate value, while holding beyond 30 percent is found to reduce the firm value, confirming a non-linear relationship between shareholdings of active institutional investors and corporate value. The author argues that at higher levels of share ownership, institutional institutions may encourage sub-optimal decisions that could cause harmful effects on the firm.

Under the “active monitoring hypothesis”, higher institutional ownership is associated with stronger monitoring activities. With this efficient monitoring, insiders’ likelihood of making sub-optimal decisions is reduced, and consequently, corporate value increases. Consistent with these arguments, the following hypotheses are proposed:

**Hypothesis 1a: Institutional ownership is positively related to firm value.**

## 2.2.2 Institutional Ownership and Firm Performance

Institutional investors are widely acknowledged as major players in corporate governance mechanisms. However, the existing empirical evidence regarding the relationship between institutional ownership and firm performance remains inconclusive.

Investigating a sample of 867 acquisitions of publicly traded firms in the US between 1978 and 1988, Loderer and Martin (1997) do not find any significant relationship between the level of institutional ownership and firm performance.

In contrast, according to Thomsen and Pedersen (2000), institutional ownership is expected to imply advantages in terms of finance, low-risk aversion, and a relatively long-time horizon; and they possess a strong relationship with the company in which they invest. Thomsen and Pedersen (2000) add that for institutional ownership, relatively specialized as the owner, their performance is often measured in terms of financial success. It is believed that institutional investors have positive effects on firm performance. As Navissi and Naiker (2006), Thomsen and Pedersen (2000) identify that ownership holdings and shareholder value is non-linear. The results indicate that institutional ownership beyond a cut-off point is found to have adverse effects on shareholder value.

Using the data of the Chinese capital market from 2007 to 2020, Chen, Liu, and Yan (2022) find that institutional investors' shareholding can significantly promote the performance of listed companies. The authors mention that institutional investors can strengthen corporate governance by their strength and supervision and effectively participate in corporate decision-making. Moreover, the results indicate that the benefits of monitoring increase with the size and length of time of ownership.

Regarding inconclusive empirical evidence, Tsai and Gu (2007) suggest that the mixed results may be due to institutional investors being treated as a homogenous group in some prior studies. In contrast, they should be treated as heterogeneous since they demonstrate different investment behaviors and pursue diverse objectives subject to various conditions and constraints. To further reveal varying impacts, our research separates institutional investors by types: investment companies and asset management, mutual funds, pension funds, insurance companies, sovereign wealth funds, and trusts.

In our empirical analysis, based on a comprehensive sample of Swedish listed firms, we follow the extant corporate governance literature and test the following hypothesis:

**Hypothesis 1b: Institutional ownership is positively related to firm performance.**

### 2.2.3 Foreign and Individual Institutional Investors

Prior works of literature document that the presence of foreign and independent institutions could affect firms to adopt their desired corporate governance practices through two main channels of influence. One is through divesting the investment (selling their shares), and the other is through the formal and informal exercise of voice (voting rights, making opinions) (Ahmadjian, 2007; Ferreira & Matos, 2008; Edmans, 2014). Focusing on non-US firms, Ferreira and Matos (2008) research finds that ownership by foreign and independent institutions improves firm value and operating performance. Ferreira and Matos (2008) stress that institutional shareholders are different as they hold diverse business ties with the firms they invest in. Therefore, not all institutional investors can be considered independent shareholders whose focus is to maximize shareholder value.

Under Sweden's context, which allows for vote-differentiation of shares, the shareholder is able to retain control over a company by owning a relatively small fraction of the shares. Bjuggren, Eklund, and Wiberg (2007) find a positive relationship between foreign ownership and investment performance as well as firm value with a sample of 95 firms listed on the Stockholm Stock Exchange in the period 1997-2002. The authors also find that foreign owners are biased to acquire shares with lower voting power. This may indicate that foreign institutional investors may not be active monitors in the Swedish market.

Investigating Japanese firms listed on the Tokyo Stock Exchange from 1998 to 2007, Nguyen (2012) provides that foreign investors significantly affect corporate risk-taking or the degree of risk a firm should take. By affecting this critical decision, foreign investors seem to have the power to affect firm value and performance positively.



Regarding individual investors, Abidin et al. (2020) argue that mutual funds can be considered as short-term investors. Generally, mutual funds do not have business relationships with the firm. For that reason, benefit of a mutual fund's manager is positively associated with firm performance in the short-term. The authors find a positive relationship between mutual fund and ROE, and conclude that the presence of this individual investor can increase the value for companies. Additionally, Abidin et al. (2020) find a negative significant impact of insurance companies on all the performance measures in their study. The authors imply that the small shareholding of insurance companies along with their passive monitoring characteristics do not enough to improve firm performance.

Anticipating foreign owners to be relatively independent of managers and have strong incentives to monitor, we predict that foreign ownership will be related to more manager monitoring and greater firm value. Hence, we hypothesize a favorable relationship between foreign ownership and business value and performance.

**Hypothesis 2a: Foreign ownership is positively related to firm value.**

**Hypothesis 2b: Foreign ownership is positively related to firm performance.**

#### 2.2.4 Pressure-sensitive and Pressure-insensitive Investors

In previous research (e.g., Brickley et al. (1988), Cornett et al. (2007) or Elyasiani and Jia (2010)), institutional investors are grouped into two segments: pressure-insensitive and pressure-sensitive institutional investors. Institutions classified as pressure-sensitive investors have existing or potential business relationships with firms and, due to those relationships, are assumed to be less willing to challenge management decisions. Examples of pressure-sensitive institutional investors are pension and insurance companies or trusts. In contrast, pressure-insensitive investors are those institutions that have fewer potential business relationships with the firm and therefore are better suited to monitor, discipline, and impose controls on corporate managers. One example of a pressure-insensitive institutional investor is mutual funds. Typically, monitoring by pressure-insensitive institutions is considered to cost less as they have the advantage of actively monitoring without the fear of harming the relationship with the firm (Chen, Harford, and Li, 2007).

The impact of pressure-insensitive investors has been studied in previous papers, such as Brickley et al. (1988). Using data from 1984 with a sample of 201 US firms, the authors find that pressure-insensitive investors are more likely to stand up to the management and impose active monitoring.

Cornett, Marcus, Saunders, and Tehranian (2007) investigate the effects of institutional ownership on corporate performance in the US from 1993 to 2000. They conclude that the positive relationship between the number of institutional investors holding stock and operating cash flow returns is found only for pressure-insensitive institutional investors.

Providing more international empirical evidence, Ferreira and Matos (2008) examine a comprehensive database of equity holdings located in 27 different countries from 2000 to 2005 and document that foreign and independent institutions are associated with better operating performance and reduced capital expenditures. The authors also confirm the increasingly important role of institutional investors in corporate governance worldwide.

With a large sample of 1532 US firms over the 1992–2004 period, Elyasiani and Jia (2010) suggest that insensitive institutional investors and investors owning 5% or more of shares have a more significant positive impact on firm performance than sensitive institutional investors and institutional investors owning less than 5% of the outstanding shares. Elyasiani and Jia (2010) suggests that pressure-sensitive institutional owners act as passive investors and therefore are less probable to actively participate in monitoring the management and intervene in decision-making.

Based on the foregoing, this study thus proposes the following hypothesis:

**Hypothesis 3: The positive relationship between firm value/ performance and institutional ownership is stronger for pressure-insensitive institutional investors than for pressure-sensitive institutional investors.**

## 2.3 The Characteristics of the Swedish Market

As noted, previous papers have focused on markets outside of Nordic markets. However, as this thesis focuses on the Swedish market, it is relevant to address the differences in corporate governance in Sweden and other markets. Birgisson et al. (2009) highlight nine critical features of Nordic corporate governance. For this thesis, the following six out of nine key features, which distinguish Nordic markets from the rest of the world, are relevant:

1. In Nordic companies, shareholders have strong power through the General Meeting. At the General Meeting, the shareholders participate in the company's supervision and control, e.g., by approval of the company's annual accounts and any distribution of profits.
2. Vote-differentiated shares are permitted. This results in that voting rights are frequently separated from the amount of capital invested and are used as an ownership control enhancing mechanism.
3. Through legal protection, strong minority shareholder protection is enforced. Therefore, Nordic companies are under a strict obligation to treat all shareholders equally.
4. In Nordic companies, individual shareholders have far-reaching rights. Individual shareholders have the right to participate in the General Meeting and the right to vote on their shares, regardless of the number or class of shares held.
5. In Nordic companies, a separation between the Board and Executive Management is required. There is no CEO duality. Thus, in Nordic companies, non-executive boards are frequently observed.
6. The Nordic corporate governance codes recommend that boards utilize subcommittees that focus on specific corporate governance areas. Birgisson et al. (2009) argue that Nordic boards usually utilize these subcommittees.

Sjöström (2010) finds that foreign institutions hold the most prevalent institutional ownership. More specifically, the Swedish Stock Exchange has high institutional ownership relative to private ownership. Furthermore, Sjöström (2010) argues that institutional owners in the Swedish market

do not have significant connections with the firms they hold in their portfolios. Thus, the effect of institutional investors in the Swedish market may potentially be limited. Bhattacharya and Graham (2009), which studied the two-way relationship between institutional ownership and shareholder value and firm operating performance on listed firms in Finland, found no relationship. This might be explained by the Nordic market's corporate governance characteristics, which lead to increased monitoring costs. As prominent shareholders frequently use vote-differentiated shares through, for example, dual-class shares, differentiation between control- and cash flow rights would also increase agency costs (Bjuggren et al., 2007). The frequent use of vote-differentiated shares in the Swedish market is essential to note as Swedish firms have relatively concentrated ownership structures, with the largest shareholders holding an excess of 30% of the votes (Giannetti & Laeven, 2009).

Shleifer and Vishny (1997) argued that concentrated shareholdings are the most direct way to align cash flow and control rights. The largest shareholder has a great incentive to engage in delegated monitoring. The largest shareholders can frequently be family business owners in Sweden (Birgisson et al., 2009). This would imply an increase of "pressure-sensitive" investors and fewer "pressure-insensitive" shareholders, which, according to Cornett et al. (2007), are more suitable for active monitoring. Therefore, institutional investors in the Swedish market may become less active. However, Giannetti and Laeven (2009) find that pressure-insensitive pension companies can increase shareholder value through large equity stakes. In contrast, pressure-sensitive pension companies had a negative effect. In conclusion, the Swedish market's characteristics are unique and crucial to further this thesis discussion when compared to previous international research.

## 3. Data and Method

### 3.1 Data

The data used in the regression analysis in this thesis is collected from different sources. However, each variable comes from one source. As different databases potentially calculate financial ratios and ownership data differently, a single source for a variable will decrease the measurement error and increase the consistency of the data. The dataset consists of 102 large-cap and 78 small-cap Swedish companies in 8 years, from quarter 1, 2014 to quarter 4, 2021. Large-cap companies are on the OMX Stockholm Exchange list with over 1 billion euros in market capitalization. The list of small-cap companies consists of companies with a market capitalization under 150 million euros. A comprehensive list of all companies included can be found in appendix D.

Furthermore, the panel dataset used in the thesis consists of 2904 and 2300 quarterly observations for large- and small-caps, respectively. The sample consists of large- and small-cap companies listed on the Stockholm Stock Exchange during the recorded period. We exclude non-Swedish firms that can have their primary exchange other than OMX Stockholm or legal domicile outside Sweden. The exclusion criteria are due to a lack of reliable data for these firms. Firms that made an initial public offering (IPO) during the period remain in the sample. However, only companies with more or equal to 4 observations (1 year) are included. Additionally, investment companies are excluded from the sample. The inclusion of investment companies would increase the issues with simultaneity.

As noted previously, the panel dataset used in the thesis consists of 2904 and 2300 quarterly observations for large- and small- caps, respectively. In the large-cap sample, 293 observations from investment companies are omitted. Another 691 omitted observations are categorized as non-Swedish or had another primary exchange other than OMX Stockholm. Additionally, 7 observations are excluded as too few observations are observed due to them recently going public (IPO). In the small-cap sample, 123 observations from investment companies are omitted. Furthermore, 130 observations are excluded for 2 companies as their home exchange is not OMX Stockholm. Lastly, 10 observations are excluded regarding 4 companies due to them recently going public (IPO).

## 3.2 Variable Discussion

In line with Ferreira and Matos (2008), this thesis investigates the effects of institutional ownership on shareholder value and operating performance, particularly for different groups of institutional investors. The dependent variables, Tobin's Q, ROA, and ROIC, are retrieved from Bloomberg. Tobin's Q is included as a measurement for shareholder value. Furthermore, the thesis uses ROA and ROIC as the measurements for operating performance. According to Cornet et al. (2007), profitability ratios such as ROA offer several advantages compared to Tobin's Q in measuring operating performance. The main advantage is that ROA and ROIC are more focused measures of current performance, while Tobin's Q reflects expectations of the firm's prospects in future years. For example, Tobin's Q for poor-performing firms could be inflated due to expectations of bid premium in a corporate takeover. ROA and ROIC would not be subject to these considerations in this situation. The decision to include ROIC in addition to ROA stems from the fact that ROIC is a better measurement of operating performance. ROA is an inadequate measure of performance. It includes financial and non-core assets and ignores the beneficial effect of operating liabilities (e.g., accounts payable), resulting in a lower invested capital (Koller et al., 2020). Furthermore, ROA uses net income in the numerator as the performance measure, which is influenced by interest expense, i.e., by the financing structure choice, and subject to managerial discretion in terms of reporting (Koller et al., 2020).

The measurement of an institutional investor holding is calculated as the fraction of capital owned by it. Modular Finance categorizes different institutional investors into five unique groups (investment companies and asset management, mutual funds, pensions and insurance companies, sovereign wealth funds, and trust funds). The categories included as explanatory variables depend on each owner's origin of country and the business mandate.

Following Cornett et al. (2007), institutional investors are categorized as pressure-sensitive or -insensitive. Institutions labeled as pressure-sensitive have existing or potential business relationships with firms and, due to those relationships, are assumed to be less willing to challenge management decisions. In contrast, pressure-insensitive investors are those institutions that have fewer potential business relationships with the firm. Therefore, pressure-insensitive institutions are more suitable for delegated monitoring as these investors have a higher probability of collecting

information and are subject to fewer regulations (Ferreira & Matos, 2008). In this thesis, investment companies and asset management, pensions and insurance companies, sovereign wealth funds, and trusts are considered pressure-sensitive. Following Cornett et al. (2007) and other previous studies, mutual funds are pressure-insensitive investors. A comprehensive view of the categorization of institutional investors is presented in appendix A.

Foreign institutional ownership is measured as the fraction foreign institutions own relative to all institutional investors. This implies that domestic institutional ownership would be measured as the remaining fraction that is not measured as foreign institutional ownership. Therefore, only foreign institutional investors will be included as an explanatory variable in the regression to measure any effect regarding institutional ownership by foreign and domestic institutional ownership. Otherwise, the explanatory variables would be linearly related.

The control variables included in the thesis are retrieved from Bloomberg and Modular Finance. Firm leverage, log of total assets, and volatility are retrieved from Bloomberg. Where quarterly volatility, which is annualized from daily stock price movements, is retrieved from Bloomberg. These control variables are consistent with the literature. Firm leverage, which is measured as the book value of debt relative to total assets, is included as a control variable as it is associated with firm value. The size of the firm is measured as the log of total assets. The firm size variable is log-transformed to reduce the “size-effect”. The control variable is included as it is associated with performance in previous literature.

It is necessary to include governance metrics as control variables since governance mechanisms allow shareholders to protect outsiders and investors from excessive rent extraction by insiders. Therefore, the board size for each firm is obtained from Modular Finance. Jensen (1993) suggests that larger boards are less efficient in monitoring CEOs for many reasons, such as lack of independence and conflict avoidance. Due to these imperfections, most of the residual control rights will effectively end up in the hands of the CEO and insiders. Additionally, Yermack (1996) concluded an inverse relationship between board size and Tobin’s Q and other financial ratios in a sample of 452 large U.S. industrial companies. Yermack (1996) also concluded that large boards are less effective than smaller ones. These studies suggest a significant negative relationship between board size and firm operating performance. Therefore, including board size as a control

variable is necessary to explain how institutions can create shareholder value through the use of the board as a delegated monitoring mechanism.

Below, all relevant dependent and independent variables are defined:

Equation 1: Tobin's Q

$$\text{Tobin's } Q = \frac{(\text{Market Cap} + \text{Total Liabilities} + \text{Preferred Equity} + \text{Minority Interest})}{\text{Total Assets}}$$

Equation 2<sup>1</sup>: Return on Assets (ROA)

$$\text{ROA} = \frac{\text{LTM Net income}}{\text{Total assets}}$$

Equation 3: Return on Invested Capital

$$\text{ROIC} = \frac{\text{LTM Net operating profit after tax}}{\text{Average invested capital}}$$

Equation 4: Leverage ratio

$$\text{Leverage} = \frac{\text{Book value of debt}}{\text{Total assets}}$$

Equation 5<sup>2</sup>: Volatility

$$\text{Volatility} = \sqrt{T}x \sqrt{\frac{(x - \bar{x})^2}{n - 1}}$$

Equation 6: Share turnover

$$\text{Share turnover} = \frac{\text{Total quarterly share volume}}{\text{Total shares outstanding}}$$

---

<sup>1</sup> Net income is measured on a Last Twelve Month basis (LTM)

<sup>2</sup> Stock return volatility is annualized, which implies that T refers to number of trading days per relevant calendar year



**Table 1** Variables and their sources

<b>Name of the variable</b>	<b>Comments</b>	<b>Source</b>
<i>Dependent variables</i>		
<b>Tobin's Q</b>	(See equation 1)	Bloomberg
<b>ROA</b>	Return on asset (See equation 2)	Bloomberg
<b>ROIC</b>	Return on invested capital (See equation 3)	Bloomberg
<i>Independent variables</i>		
<b>FRA_INVOWN</b>	Fraction of capital owned by investment companies and asset management	Modular Finance
<b>FRA_MFOWN</b>	Fraction of capital owned by mutual funds	Modular Finance
<b>FRA_PIOWN</b>	Fraction of capital owned by pensions and insurance companies	Modular Finance
<b>FRA_STATE</b>	Fraction of capital owned by sovereign wealth fund	Modular Finance
<b>FRA_TRUSTOWN</b>	Fraction of capital owned by trusts	Modular Finance

<b>IO_FOREIGN</b>	Total fraction of foreign institutional ownership of total institutional ownership	Modular Finance
<b>IO_TOTAL</b>	Fraction of capital owned by total institutional investors	Modular Finance
<b>FRA_PREINSENSOWN</b>	Fraction of capital owned by pressure-insensitive institutional investors	Modular Finance
<b>FRA_PRESENSOWN</b>	Fraction of capital owned by pressure-sensitive institutional investors	Modular Finance
<b>log(BOARD SIZE)</b>	Number of directors on the company board (log)	Modular Finance
<b>LEV</b>	Firm leverage (See equation 4)	Bloomberg
<b>log(SIZE)</b>	Total assets (log)	Bloomberg
<b>SIGMA</b>	Stock volatility (See equation 5)	Bloomberg
<i>Data for the instruments</i>		
<b>Analyst coverage</b>	Total number of analyst making recommendations for the security	Bloomberg
<b>Share turnover</b>	(See equation 6)	Bloomberg

### 3.3 Method

This thesis separately estimates the casual relationship between firm performance and different levels of institutional ownership and if institutional ownership as delegated monitoring can enhance the company's performance. Firstly, the estimation strategy uses OLS regressions with each quarter's Tobin's Q, ROA, and ROIC as a function of different ownership and governance variables. Secondly, cross-sectional fixed-effects models are also included. Finally, a 2SLS panel IV estimation is performed.

Several previous studies have tried to establish a causal relationship between corporate operating performance and institutional ownership. One of the most significant obstacles when determining the casual relationship is endogeneity. In this setting, the endogeneity problem stems from if the increased number of institutional investors affects the firm's operating performance or if increased operating performance attracts more institutional investors. Therefore, this thesis employs the panel 2SLS IV method to account for endogeneity. Following Cornett et al. (2007), the number of analysts covering the firm is used as an instrumental variable for institutional share ownership for large-cap firms. The logic is that analyst coverage will be correlated with institutional share ownership, but analysts' coverage will not be dependent on short-term variations in firm operating performance. However, due to the lack of analysts covering small-cap firms, we follow Hartzell and Starks (2003) and utilize share turnover as an instrument for institutional ownership. We thus expect that stocks with higher share turnover attract more ownership by institutions as when the liquidity of a stock increases, the transaction cost to rebalance the portfolio decreases. Furthermore, Aggarwal et al. (2011) prove that share turnover as an instrument for institutional ownership is not a weak instrument. Additionally, the authors' results show that share turnover as an instrumental variable yields similar results to when the number of analysts covering the firm is used.

In the presence of a good instrument, 2SLS can establish a causal relationship and treat the endogeneity issue. However, the instrument must satisfy two conditions referred to as the relevance and exclusion conditions. The first condition requires that the partial correlation between the instrument and the endogenous variable not be zero. For simplicity, consider the regression model below. The relevance condition requires that the coefficient in the regression,

$$x_k = \alpha_0 + \alpha_1 x_1 + \dots + \alpha_{k-1} x_{k-1} + \gamma Z + v$$

does not equal zero. Where  $x_k$  is the endogenous variable and  $z$  is the instrument variable. Regarding the relevance, post estimation test results in appendix C for the instruments (analyst covering the firm and share turnover) prove that the instrumental variables are strong. Regarding the exclusion restriction, it is reasonable to assume that the instruments are exogenous as a random shock to the dependent variable should not impact the instrumental variable. Moreover, the instrument variables will not be subject to simultaneity from the expectations of short-term variations in firm operating performance. Despite the conditions being theoretically justified, one of the instruments yields a coefficient with an unexpected sign, i.e., an unreasonable big coefficient estimate for *regression 1* in table 10 and loss of efficiency (i.e. have higher variance). In conclusion, *analyst covering the firm* does not seem to be a good predictor for total institutional ownership in *regression 1*. For this regression, fixed effects coefficients are used instead.

As a baseline, all regression models in the thesis are using a FE model. The FE model decomposes the error term into time-invariant and time-variant parts i.e.,  $\mu_i$  and  $\varepsilon_{it}$ .  $\mu_i$  can be interpreted as capturing the aggregate effect of all of the unobservable, time-invariant explanatory variables for the dependent variable. Therefore, the time-invariant error term controls differences in firm-specific average valuation and performance. In other words, the FE model addresses the omitted variable bias for time-invariant factors by looking at within-unit variation. FE should be implemented with caution for several reasons. It assumes that all explanatory variables need to be strictly exogenous and uncorrelated with the error term (Roberts and Whited, 2012, p. 76). As explained previously, institutional share ownership is deemed endogenous, and therefore 2SLS is applied. Another pitfall of including FE is that it can exacerbate measurement errors (Roberts and Whited, 2012, p. 77). The thesis uses data from Modular Finance to gather the most complete and frequently updated ownership data for listed companies in the Nordics to mitigate measurement errors. Lastly, with FE, the inference can only be supported by the specific sample, which are large- and small-cap firms on the Stockholm Stock Exchange.

In conclusion, fixed cross-sectional effects are considered for all regression for unobserved variance. Hausman tests are conducted for each regression and present significant test results. Therefore, according to the test results, random effects are deemed miss-specified, and FE models should be appropriate for the data set (Brooks, 2008). The results for the Hausman tests are presented in appendix B.

The fixed effects regression models are:

### Regression Models Testing For Total Institutional Ownership

$$(1) \text{ Tobin's } Q_{it} = \alpha + \beta_1 IO\_TOTAL_{it-1} + \beta_2 \log(BOARD\ SIZE_{it-1}) + \beta_3 \log(SIZE_{it-1}) + \beta X_{it} + \mu_i + \varepsilon_{it}$$

$$(2) ROA_{it} = \alpha + \beta_1 IO\_TOTAL_{it-1} + \beta_2 \log(BOARD\ SIZE_{it-1}) + \beta_3 \log(SIZE_{it-1}) + \beta X_{it} + \mu_i + \varepsilon_{it}$$

$$(3) ROIC_{it} = \alpha + \beta_1 IO\_TOTAL_{it-1} + \beta_2 \log(BOARD\ SIZE_{it-1}) + \beta_3 \log(SIZE_{it-1}) + \beta X_{it} + \mu_i + \varepsilon_{it}$$

### Regression Models Testing For Different Types of Institutional Ownership

$$(4) \text{ Tobin's } Q_{it} = \alpha + \beta_1 FRA\_INVOWN_{it-1} + \beta_2 FRA\_MFOWN_{it-1} + \beta_3 FRA\_PIOWN_{it-1} + \beta_4 FRA\_STATEOWN_{it-1} + \beta_5 FRA\_TRUSTOWN_{it-1} + \beta_6 IO\_FOREIGN_{it-1} + \beta_7 \log(BOARD\ SIZE_{it-1}) + \beta_8 \log(SIZE_{it-1}) + \beta X_{it} + \mu_i + \varepsilon_{it}$$

$$(5) ROA_{it} = \alpha + \beta_1 FRA\_INVOWN_{it-1} + \beta_2 FRA\_MFOWN_{it-1} + \beta_3 FRA\_PIOWN_{it-1} + \beta_4 FRA\_STATEOWN_{it-1} + \beta_5 FRA\_TRUSTOWN_{it-1} + \beta_6 IO\_FOREIGN_{it-1} + \beta_7 \log(BOARD\ SIZE_{it-1}) + \beta_8 \log(SIZE_{it-1}) + \beta X_{it} + \mu_i + \varepsilon_{it}$$

$$(6) ROIC_{it} = \alpha + \beta_1 FRA\_INVOWN_{it-1} + \beta_2 FRA\_MFOWN_{it-1} + \beta_3 FRA\_PIOWN_{it-1} + \beta_4 FRA\_STATEOWN_{it-1} + \beta_5 FRA\_TRUSTOWN_{it-1} + \beta_6 IO\_FOREIGN_{it-1} + \beta_7 \log(BOARD\ SIZE_{it-1}) + \beta_8 \log(SIZE_{it-1}) + \beta X_{it} + \mu_i + \varepsilon_{it}$$

### Regression Models Testing Pressure-insensitive and Pressure-sensitive

$$(7) \text{ Tobin's } Q_{it} = \alpha + \beta_1 FRA\_PREINSENSOWN_{it-1} + \beta_2 FRA\_PRESENSOWN_{it-1} + \beta_3 \log(BOARD\ SIZE_{it-1}) + \beta_4 \log(SIZE_{it-1}) + \beta X_{it} + \mu_i + \varepsilon_{it}$$

$$(8) ROA_{it} = \alpha + \beta_1 FRA\_PREINSENSOWN_{it-1} + \beta_2 FRA\_PRESENSOWN_{it-1} + \beta_3 \log(BOARD\ SIZE_{it-1}) + \beta_4 \log(SIZE_{it-1}) + \beta X_{it} + \mu_i + \varepsilon_{it}$$

$$(9) ROIC_{it} = \alpha + \beta_1 FRA\_PREINSENSOWN_{it-1} + \beta_2 FRA\_PRESENSOWN_{it-1} + \beta_3 \log(BOARD\ SIZE_{it-1}) + \beta_4 \log(SIZE_{it-1}) + \beta X_{it} + \mu_i + \varepsilon_{it}$$

where each dependent variable is Tobin's Q, ROA, and ROIC. In table 1, comments can be found for each abbreviation for the explanatory variables. Furthermore, in section 3.2, relevant calculations for the explanatory variables are presented. Each institutional ownership variable is lagged by one year in all of the equations.  $X_{it}$  is a vector of control variables which are not lagged, including firm leverage (*LEV*) and volatility (*SIGMA*). The measure  $\mu_i$  captures the cross-sectional fixed effects. Finally, the  $\varepsilon_{it}$  is the error term that is independent over time and between companies.

Following Cornett et al. (2007), several explanatory variables are lagged with one year in the regression models. Cornett et al. (2007) argue that this is needed because institutional investors impact shareholder value and operating performance through governance mechanisms that take substantial time to implement. Therefore, to consider this fact, the regression's explanatory variables are lagged by one year, except for firm-specific control variables such as leverage and volatility.

## 4. Descriptive Statistics

Summary descriptive statistics of the variables of interest for both large- and small-cap companies are presented in tables 2 and 3. The mean Tobin's Q in the sample is 2,49 and 2,18 for large- and small-cap companies. The observed values show a high valuation of firm assets relative to book value. Ferreira and Matos (2008) observed a mean of Tobin's Q of 1,318, and other studies also found a lower mean of Tobin's Q. The high valuation can potentially be explained by outliers and recent years of higher valuations in the stock market.

There is a significant difference in both ROA and ROIC for large- and small-cap firms. Large-cap firms' average ROA and ROIC are 8% and 14%, respectively. In contrast, negative values are observed for small-cap firms for the average ROA and ROIC. Small-cap firms are, on average, less profitable. However, there is a more significant variation within the small-cap category than in large-cap firms when observing the ROA and ROIC. This can be seen from the standard deviations and the minimum and maximum values for ROA and ROIC.

Unsurprisingly, mutual funds are the largest group of institutional owners in large- and small-cap companies. Mutual funds own, on average, 32% and 9% of total share capital outstanding for large- and small-cap, respectively. This should be expected as mutual funds can have significant capital as it is the most common investment vehicle for private savings and the Swedish pension system (Norman, 2017).

Total institutional ownership is significantly higher for large-cap companies than for small-cap. On average, the total institutional ownership is 56% of total share capital outstanding for the large-cap category while only 17% for the small-cap category. This should be expected as institutional investors prefer to allocate capital towards larger firms as they are more liquid.

The average total foreign ownership in large-cap firms is significantly higher than for small-cap firms. Total foreign ownership represents 36% of total share capital outstanding on average for large-cap companies. In contrast, total foreign ownership represents 20% on average for small-cap companies. Over ten years, the total foreign ownership measure for both large-cap companies has increased during the measuring period. However, such a trend is not observed for small-cap companies with a reasonably stable ownership structure for foreign investors. The trend of foreign

ownership is shown in figure 1 and appendix E, where foreign ownership in large-cap companies is significantly higher than for small-cap companies.

**Table 2:** Descriptive statistics - Large-cap

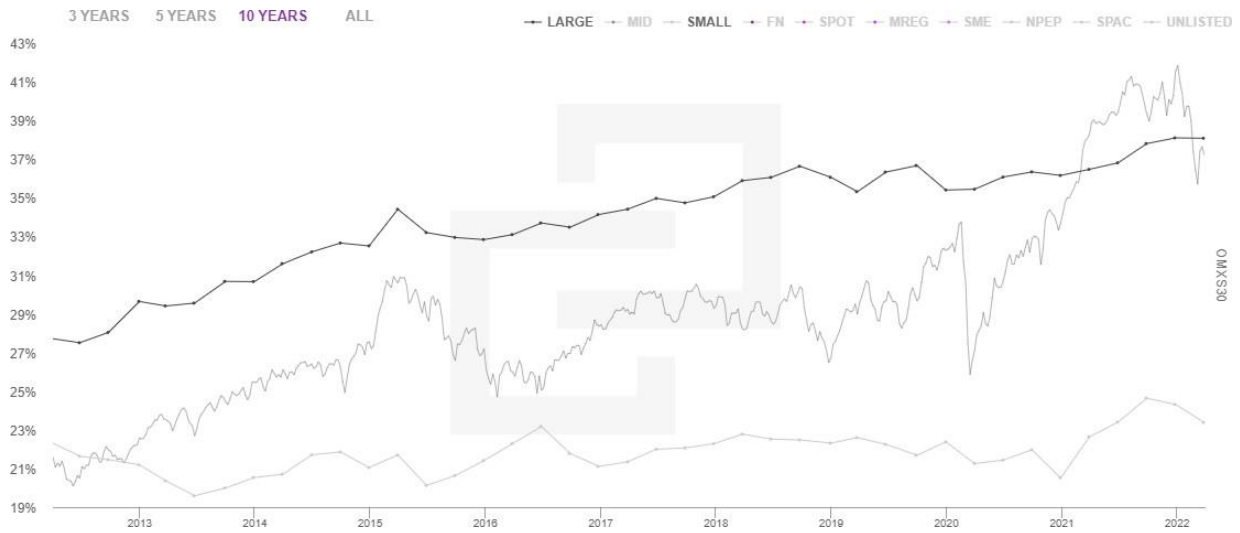
	Obs	Mean	Std. Dev.	Min	Max
Tobins_Q	2877	2,49	3,46	0,51	74,72
ROA	2832	0,08	0,09	-0,20	1,33
ROIC	2813	0,14	0,13	-0,35	1,25
Investment companies and asset management	2704	0,10	0,13	0,000002	0,64
Mutual funds	2862	0,32	0,15	0,00003	0,76
Pensions and insurance companies	2885	0,09	0,06	0,0001	0,34
States ownership	2670	0,03	0,07	0,00001	0,50
Trusts	2837	0,03	0,05	0,000005	0,51
Total institutional investors	2886	0,56	0,20	0,001	0,94
Pressure-insensitive	2862	0,32	0,15	0,00003	0,76
Pressure-sensitive	2904	0,24	0,15	0	0,76
Foreign institutional investors	2856	0,36	0,19	0	0,90
Board size	2904	9,77	3,54	3	19
Firm leverage	2871	29,13	17,40	0	112
Firm size	2886	142605	505744	37,68	3596481
Stock volatility	2850	0,31	0,20	0,00	1,65



**Table 3:** Descriptive statistics - Small-cap

	Obs	Mean	Std. Dev.	Min	Max
Tobins_Q	2263	2,18	2,55	0,26	52,29
ROA	2221	-0,04	0,23	-1,26	0,94
ROIC	2162	-0,02	0,35	-2,73	1,43
Investment companies and asset management	1090	0,08	0,10	0,000005	0,44
Mutual funds	2159	0,09	0,09	0,00009	0,46
Pensions and insurance companies	2279	0,04	0,05	0,00004	0,27
States ownership	481	0,01	0,01	0,000002	0,08
Trusts	1916	0,01	0,02	0,000001	0,21
Total institutional investors	2287	0,17	0,15	0,0004	0,77
Pressure-insensitive	2159	0,09	0,09	0,00009	0,46
Pressure-sensitive	2300	0,08	0,10	0	0,54
Foreign institutional investors	2290	0,20	0,19	0,001	1,30
Board size	2300	6,14	1,82	3	13
Firm leverage	2230	17,36	17,63	0	85,12
Firm size	2266	881	1057	15,46	8256
Stock volatility	2286	0,49	0,28	0,00	1,85

**Figure 1:** Foreign ownership in large- and small-cap companies (Modular Finance, 2022)



In appendix F, two correlation matrices are displayed for explanatory variables included in regression models for large- and small-cap companies. The correlation matrices are presented to observe if the regression models are subject to multicollinearity. A high correlation between any included independent variables in a specific regression would cause multicollinearity (Brooks, 2008). Therefore, only the correlation between the specific variables included in regressions 1-9 is relevant for the discussion of multicollinearity (e.g., the correlation between pressure-insensitive owners and mutual funds ownership is equal to 1 but not included in the same regression). Overall, no significant correlation is observed for the relevant independent variables for the large- or small-cap data set.

## 5. Results

This thesis investigates institutional ownership's impact on corporate operating performance and shareholder value by employing two main estimation methods: fixed effects as a baseline and further 2SLS with fixed effects to investigate potential endogeneity concerns. Most studies have focused on other markets than the Swedish market alone (see literature review)—additionally, this thesis focuses on individual groups of institutional investors. Therefore, the results intend to bring new evidence regarding the relationship between these individual groups and shareholder value as well as performance metrics (ROA and ROIC).

The main findings are: (1) Overall, total institutional ownership does not seem to exhibit a statistically significant impact on shareholder value or operating performance. Only the ROA for small-cap companies and ROIC for large-cap companies exhibits a significant negative coefficient for the total institutional ownership. The results contrast hypothesis 1a and 1b, which is that institutional ownership is positively related to shareholder value and operating performance. (2) For small-cap companies, the effect of mutual funds ownership on ROIC is negative. Additionally, pension and insurance companies and foreign institutional ownership effect on Tobin's Q is observed to have a negative effect on Tobin's Q. However, foreign institutional ownership has a substantially lower significance than pension and insurance companies. Moreover, for large-cap firms, sovereign wealth funds significantly affect ROA and ROIC positively. However, for *regression 6* (ROIC), the endogeneity issue should remain pronounced. Additionally, for large-cap firms, the effect of foreign institutional ownership is positive for Tobin's Q and ROA at a significant level at 10%. In conclusion, the findings regarding foreign institutional ownership's positive impact on firm value and performance strengthen hypothesis 2a and 2b for large-cap firms. For small-cap firms, the results contrast hypothesis 2a and 2b, which is that foreign ownership is positively related to firm value and performance. (3) Using a measurement of pressure-insensitive institutional investors, the effect of their holdings on ROA is negative for small-cap firms. In contrast, pressure-insensitive investors positively affect Tobin's Q for large-cap companies. However, the issue of endogeneity for the large-cap companies could remain pronounced. The results test hypothesis 3, which states that the positive relationship between firm value/performance and institutional ownership is stronger for pressure-insensitive institutional investors than for pressure-sensitive

institutional investors. In conclusion, hypothesis 3 is supported for large-cap firms but not for small-cap firms.

The results of the endogeneity test for endogenous regressors from using the 2SLS method can be seen in appendix B and table 10. The tests provide a result that suggests that only *regression 1* and *regression 3* large-cap regressions are subject to endogeneity. The instrument used for large-cap regressions is *the number of analysts covering the firm* and *share turnover* for small-cap regressions. Only *regression 1-3* can be tested for endogeneity due to limited valid instrument variables. In regards to valid instruments for the 2SLS method, the instrument is considered to be strong. As shown in appendix C, the coefficient for the first stage regression of the 2SLS method is significant, proving the relevancy of the instrument variable *number of analysts covering the firm*. However, for *regression 1* in table 10, the estimated coefficient for total institutional investors is unreasonably large and less efficient (i.e., has higher variance) than previous results. Therefore, the endogeneity issue should not be considered solved and remains pronounced for these individual regressions of interest. Therefore, fixed effects are used as a second-best option.

As total institutional ownership are comprised of the five unique institutional investors (investment companies and asset management, mutual funds, pensions and insurance companies, sovereign wealth fund, and trusts), and therefore also pressure-(in)sensitive investors, the endogeneity results from the total institutional ownership could potentially be applicable to *regressions 4-9*. However, we cannot completely rule out the concerns regarding endogeneity or spurious correlations between institutional holdings and above-average market performance. The most prominent cause would be that particular institutional investors can pick better-managed firms without any particular active monitoring. In contrast, if the assumption is that institutional investors have the equal ability for stock picking, then no endogenous relationship would be expected for institutional investors (Chen, Harford, and Li, 2007).

Regarding structure, table 4 and 5 presents the results for large- and small-cap respectively. The tables present the results of how shareholder value (Tobin's Q) and the performance metrics (ROA and ROIC) is affected by the fraction of capital owned by total institutional investors. Table 4 and 5 presents the results for hypothesis 1a and 1b, which test total institutional ownerships effect on the dependent variables. Table 6-7 outlines the results for hypothesis 2a and 2b, where foreign

institutional investors effect on the dependent variable is of interest. Lastly, table 8-9 presents the results regarding hypothesis 3, the effect of pressure-(in)sensitive ownership on the relevant dependent variables (Tobin's Q, ROA and ROIC). The columns in each table lists each dependent variable in the following order: Tobin's Q, ROA and ROIC. The number of each regression is referenced in the method section 3.3.

### **Institutional Ownership and Firm Value and Firm Performance**

Table 4 presents *regressions 1-3* for large-cap firms. As the 2SLS in table 10 is not deemed valid for *regression 1* (Tobin's Q), the fixed effects model presented in table 4 is the preferred model for *regression 1*. The variable of interest, the fraction of capital owned by total institutional investors, does not show significant results for *regression 1* or *regression 2*. In table 10, the fraction of capital owned by total institutional investors is significant at 10% level and has a negative coefficient for ROIC. The 2SLS method is deemed valid for *regression 3* in table 10. The R2 is 10%, which suggests that the model specification holds a decent explanatory power for ROIC. In contrast, *regressions 1* and *2* have low R2, which accounts for a low explanatory power of the model specification. Out of the control variables, the size variable has a significant negative impact on the ROIC as well for firm leverage in *regression 3*. Furthermore, firm leverage and stock volatility significantly impact the ROA in *regression 2* in table 4. However, the estimated parameters are close to zero and have insignificant economic effects. The control variable for board size is not significant in the three estimated models.

Table 5 presents *regressions 1-3* for small-cap firms. On a 5% significance level, the variables of interest, the fraction of capital owned by total institutional investors, are significant and have a negative coefficient. The results show that one percent larger total institutional investor holding yields a decrease of 0.238 in ROA. A meaningful result that is in contrast to hypothesis 1b. Out of the control variables, the size factors significantly impact Tobin's Q negatively in *regression 1*. Furthermore, firm leverage is significant in *regressions 2* and *3*. However, the estimated coefficient is close to zero. For *regression 3* the R2 is very low. *Regression 2*, regarding ROA observed a higher R2 at 10%. Lastly, *regression 1*, has a significant R2 at 17%.

**Table 4:** Large-cap results for Tobin's Q (Regression 1), ROA (Regression 2) and ROIC (Regression 3)

Explanatory variable	(1) Tobin's Q	(2) ROA	(3) ROIC
Fraction of capital owned by total institutional investors (lagged one year)	1.699 (1.373)	0.020 (0.026)	0.039 (0.046)
log(Board Size) (lagged one year)	-3.128 (3.697)	-0.054 (0.063)	0.028 (0.065)
log(Size) (lagged one year)	-0.384 (1.055)	-0.030 (0.028)	-0.096*** (0.028)
Firm Leverage	0.007 (0.036)	-0.001*** (0.000)	-0.003*** (0.001)
Stock volatility	0.008 (0.007)	-0.0004** (0.000)	-0.0002 (0.000)
Constant	5.833 (3.640)	0.301*** (0.093)	0.610*** (0.111)
Observations	2,442	2,441	2,437
R-squared	0.06	0.102	0.198

(Robust standard errors in parentheses)

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

**Table 5:** Small-cap results for Tobin's Q (Regression 1), ROA (Regression 2) and ROIC (Regression 3)

Explanatory variable	(1) Tobin's Q	(2) ROA	(3) ROIC
Fraction of capital owned by total institutional investors (lagged one year)	-0.115 (1.045)	-0.238** (0.103)	-0.185 (0.196)
log(Board Size) (lagged one year)	0.180 (0.931)	-0.038 (0.105)	-0.063 (0.165)
log(Size) (lagged one year)	-1.728** (0.821)	0.067 (0.049)	-0.005 (0.084)
Firm Leverage	-0.002 (0.005)	-0.004*** (0.001)	-0.003*** (0.001)
Stock volatility	0.002 (0.004)	-0.0003 (0.000)	-0.002** (0.001)
Constant	6.607*** (1.871)	-0.067 (0.162)	0.229 (0.306)
Observations	1,924	1,924	1,908
R-squared	0.168	0.097	0.020

(Robust standard errors in parentheses)

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

## Foreign and Individual Institutional Investors

From table 6 – large-cap companies, it can be seen that the total fraction of foreign institutional ownership is found to be positively significant with coefficient values (4.663 and 0.082) on Tobin's Q and ROA at  $p < 0.1$ . According to hypothesis 2a and 2b, it is expected that foreign ownership has a positive effect on firm value and firm performance. The outcome supports these hypotheses. No significant result is found for the ROIC indicator.

Regarding other variables, Fraction of capital owned by investment companies and asset management (FRA\_INVOWN), mutual funds (FRA\_MFOWN), pensions and insurance companies (FRA\_PIOWN), trusts (FRA\_TRUSTOWN) have no statistically significant relationship with all models Tobin's Q, ROA and ROIC. Meanwhile, the variable sovereign wealth fund (FRA\_STATE) has a positive significant relationship (0.456 and 0.4) at the 1% level for both firm performance indicators (ROA and ROIC). The R2 for *regression 1* and *2* in table 6 for large-cap firms are very low. In contrast, the R2 is high and sufficient for *regression 3*, implying that the model specification can explain a sufficient level of variation in the dependent variable, ROIC.

From table 7 – small-cap companies, in contrast with the hypothesis, we find a negative impact of foreign institutional ownership on Tobin's Q (-0.843,  $p < 0.1$ ), and an insignificant effect on firm performance (ROA, ROIC). A negative relationship is also found between mutual funds and ROIC at a 1% significance level.

Regarding other variables, Fraction of capital owned by investment companies and asset management (FRA\_INVOWN), sovereign wealth fund (FRA\_STATE), trusts (FRA\_TRUSTOWN) have no statistically significant relationship with all models Tobin's Q, ROA and ROIC. In contrast with large-cap firms, the fraction of capital owned by pensions and insurance companies for small-cap companies experiences a negative impact on firm value with a coefficient value of -3.125 at a 1% level.

While the impact of stock volatility is not identified for large-cap firms, it is statistically significant and negative for small-cap ones (-0.002, -0.003 and -0.005 at  $p < 0.01$ ). The R2 is reasonably high for *regressions 1-3* in table 7 (0.136, 0.227, 0.256) which indicates that the chosen regression model explains 14%, 23% and 26% of the variation respectively.



**Table 6:** Large-cap results for Tobin's Q (Regression 4), ROA (Regression 5) and ROIC (Regression 6)

Explanatory variable	(4) Tobin's Q	(5) ROA	(6) ROIC
Fraction of capital owned by investment companies and asset management (lagged one year)	-1.208 (3.873)	-0.009 (0.042)	0.031 (0.095)
Fraction of capital owned by mutual funds (lagged one year)	3.485 (2.344)	0.016 (0.035)	0.054 (0.069)
Fraction of capital owned by pensions and insurance companies (lagged one year)	-9.444 (6.963)	0.087 (0.095)	-0.003 (0.142)
Fraction of capital owned by sovereign wealth fund (lagged one year)	-3.759 (5.450)	0.456*** (0.123)	0.400*** (0.139)
Fraction of capital owned by trusts (lagged one year)	-2.786 (3.378)	-0.202 (0.153)	-0.132 (0.102)
Total fraction of foreign institutional ownership (lagged one year)	4.663* (2.514)	0.082* (0.049)	0.084 (0.088)
log(Board Size) (lagged one year)	-4.738 (3.864)	-0.029 (0.076)	0.011 (0.092)
log(Size) (lagged one year)	-0.321 (1.142)	-0.031 (0.040)	-0.127*** (0.040)
Firm Leverage	0.016 (0.041)	-0.001** (0.000)	-0.003*** (0.001)
Stock volatility	0.003 (0.009)	-0.0004** (0.000)	0,00003 (0.000)
Constant	6.356 (4.007)	0.230 (0.159)	0.723*** (0.179)
Observations	2,152	2,150	2,147
R-squared	0.051	0.043	0.203

(Robust standard errors in parentheses)

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

**Table 7:** Small-cap results for Tobin's Q (Regression 4), ROA (Regression 5) and ROIC (Regression 6)

Explanatory variable	(4) Tobin's Q	(5) ROA	(6) ROIC
Fraction of capital owned by investment companies and asset management (lagged one year)	-2.242 (1.368)	0.232 (0.291)	0.293 (0.356)
Fraction of capital owned by mutual funds (lagged one year)	0.730 (0.759)	-0.414 (0.310)	-0.628*** (0.203)
Fraction of capital owned by pensions and insurance companies (lagged one year)	-3.125*** (1.073)	0.625 (0.956)	0.490 (1.783)
Fraction of capital owned by sovereign wealth fund (lagged one year)	10.923 (8.209)	-0.978 (3.256)	-3.501 (3.756)
Fraction of capital owned by trusts (lagged one year)	0.665 (7.905)	0.661 (5.848)	3.438 (8.707)
Total fraction of foreign institutional ownership (lagged one year)	-0.843* (0.432)	0.114 (0.176)	-0.019 (0.308)
log(Board Size) (lagged one year)	-0.651 (0.529)	-0.102 (0.265)	-0.155 (0.312)
log(Size) (lagged one year)	-0.467 (0.320)	0.095 (0.143)	0.070 (0.228)
Firm Leverage	-0.004 (0.004)	-0.000 (0.001)	-0.001 (0.001)
Stock volatility	-0.002*** (0.001)	-0.003*** (0.001)	-0.005*** (0.001)
Constant	4.069*** (1.017)	-0.129 (0.756)	0.159 (1.046)
Observations	1,854	1,854	1,838
R-squared	0.136	0.227	0.256

(Robust standard errors in parentheses)

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

## Pressure-insensitive and Pressure-sensitive Investors

Table 8 and table 9 present the impact of institutional investors' ownership observed as both pressure-insensitive and pressure-sensitive groups on firm value as measured by Tobin's Q and firm performance as measured by ROA and ROIC in large-cap small-cap companies, respectively.

We find a positive association between the pressure-insensitive group and firm value in our sample regarding large-cap firms. The estimated coefficient is positive and statistically significant at the 5% level. In other words, one percentage point increase in the pressure-insensitive investor group will lead to an increase of 3.416 percent in Tobin's Q. Meanwhile, the impact of the pressure-sensitive group is not identified. However, the R<sup>2</sup> is low for *regression 7*, indicating low explanatory power of the model. The findings support hypothesis 3 which proposes that the positive relationship between pressure-insensitive investors and firm value/ performance is stronger than for the pressure-sensitive group.

However, small-cap companies indicate a contrasting outcome. The test results show that while the impact of the pressure-sensitive group is also not identified, the pressure-insensitive one has a negative impact on ROA with a coefficient value of -0.236 at a 10% level. It should be noted that the explanatory power of *regression 8* is relatively low with a R<sup>2</sup> of only 10%.

The variable *firm leverage* has negative and significant effects on firm performance (ROA and ROIC) in both large firms (-0.001,  $p < 0.01$ ; -0.003,  $p < 0.01$ ) and small firms (-0.004,  $p < 0.01$ ; -0.003,  $p < 0.01$ ). The estimated parameters are close to zero which indicates a low impact for each dependent variable. It can also be noted that *regression 9*, with ROIC as a dependent variable, results in a high R<sup>2</sup> of 20%.

Our study also finds *firm size* to be a significant and negative determinant of firm value in small-cap companies with a coefficient value of -2.059 at a 5% level. Besides, compared to large-cap companies, this variable has no significant impact on Tobin's Q of large-cap companies but has a negative influence on the firm performance indicator (ROIC) at  $p < 0.01$ .

**Table 8:** Large-cap results for Tobin's Q (Regression 7), ROA (Regression 8) and ROIC (Regression 9)

Explanatory variable	(7) Tobin's Q	(8) ROA	(9) ROIC
Fraction of capital owned by pressure-insensitive institutional investors (lagged one year)	3.416** (1.537)	0.035 (0.030)	0.066 (0.052)
Fraction of capital owned by pressure-sensitive institutional investors (lagged one year)	-4.112 (3.451)	-0.021 (0.038)	-0.013 (0.063)
log(Board Size) (lagged one year)	-2.668 (3.617)	-0.042 (0.070)	0.016 (0.074)
log(Size) (lagged one year)	-0.417 (1.019)	-0.028 (0.031)	-0.104*** (0.029)
Firm Leverage	0.006 (0.036)	-0.001*** (0.000)	-0.003*** (0.001)
Stock volatility	0.007 (0.007)	-0.0004** (0.000)	-0.0002 (0.000)
Constant	6.479 (4.078)	0.290** (0.114)	0.661*** (0.133)
Observations	2,428	2,427	2,423
R-squared	0.036	0.105	0.204

(Robust standard errors in parentheses)

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

**Table 9:** Small-cap results for Tobin's Q (Regression 7), ROA (Regression 8) and ROIC (Regression 9)

Explanatory variable	(7) Tobin's Q	(8) ROA	(9) ROIC
Fraction of capital owned by pressure-insensitive institutional investors (lagged one year)	0.314 (1.477)	-0.236* (0.120)	-0.303 (0.241)
Fraction of capital owned by pressure-sensitive institutional investors (lagged one year)	-2.453 (1.785)	-0.103 (0.173)	0.256 (0.393)
log(Board Size) (lagged one year)	0.060 (0.982)	-0.021 (0.109)	-0.046 (0.179)
log(Size) (lagged one year)	-2.059** (0.931)	0.090 (0.054)	0.009 (0.095)
Firm Leverage	0.000 (0.005)	-0.004*** (0.001)	-0.003*** (0.001)
Stock volatility	0.003 (0.004)	-0.0004 (0.000)	-0.002** (0.001)
Constant	7.695*** (2.194)	-0.153 (0.183)	0.153 (0.346)
Observations	1,804	1,804	1,797
R-squared	0.036	0.098	0.020

(Robust standard errors in parentheses)

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

**Table 10:** Large-cap 2SLS IV for Tobin's Q (Regression 1) and ROIC (Regression 3)

Explanatory variable	(1) Tobin's Q	(3) ROIC
Fraction of capital owned by total institutional investors (lagged one year)	-9.748*** (2.831)	-0.130* (0.070)
log(Board Size) (lagged one year)	-2.028 (1.630)	0.032 (0.041)
log(Size) (lagged one year)	3.137*** (0.862)	-0.060*** (0.022)
Firm Leverage	-0.001 (0.008)	-0.004*** (0.001)
Stock volatility	-0.001 (0.006)	-0.0003 (0.000)
Observations	2,384	2,389
R-squared	0.142	0.101
Under identification test (p)	(0.0000)	(0.0000)
Cragg-Donald F-stat	165.247	167.180
(Stock-Yogo critical value for 20% max bias)	6.66	6.66
Sargan (p-value)	(0.0000)	(0.0000)
Endogeneity (p)	(0.0000)	(0.0147)

(Robust standard errors in parentheses)

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

## 6. Discussion

### 6.1 Discussion about Regression Results

The present regressions results contradict and match the presumed hypotheses elaborated from past research and existing theories. Even though the results might be surprising, there are exciting results.

#### **Institutional ownership and firm value and firm performance**

In tables 4 and 5, FE regressions are presented to test whether total institutional ownership is positively related to firm value or firm operating performance. For large-cap firms, no significant evidence is found regarding institutional ownership increasing shareholder value through an increase in Tobin's Q, ROA or ROIC. Contrary, the 2SLS in table 10 shows that total institutional investors impact ROIC negatively. The results prove that institutional ownership decreases shareholder value for small-cap firms through a decrease in ROA and ROIC for large-cap firms. Thus, the results contrast with Cornett et al. (2007) findings, who argue that institutional owners act in the best interest of all shareholders and therefore impact firm valuation positively. This thesis also utilizes market valuation (Tobin's Q) as a measurement. The result suggests no significant relationship between market valuation and total institutional ownership, which does not support hypothesis 1a. Furthermore, the findings contrast several other studies (Shleifer & Vishny, 1986; Cornett et al., 2007; Jiang & Yamada, 2011), which provide evidence of a significant positive relationship between market valuation and firm operating performance with institutional ownership. In light of the significant negative estimated coefficients, institutional investors might not be suitable for delegated monitoring in the Swedish market. Moreover, the overall insignificant results may be a result due to the Nordic corporate governance characteristics (see section 2.4) which potentially increase monitoring costs and results in more passive institutional investors.

Boards are the most concrete example of active monitoring, focused on shareholder value, and based on the exercise of control rights. Boards of directors aim to monitor corporate management on shareholders' behalf. The thesis shows that despite the positive aims, the effect of the level of board members is insignificant. However, it should be noted that there are ways to define board members as management (in)dependent and owner (in)dependent, and their impact might be very

different. For instance, shareholders are likely to view board members' dependence on management as unfavorable for shareholder value due to a lack of independence or conflict avoidance, resulting in boards' imperfect monitoring. In contrast, independent board members are likely to impact shareholder value positively over the long run due to being more challenging relative to dependent board members. Even though this grouping of board members is not considered, the result in the thesis provides evidence that increasing board members for delegated monitoring is insufficient to increase shareholder value.

### **Foreign and individual institutional investors**

Regarding table 6 - large-cap companies, the outcome is consistent with the recent literature documenting the strong influence of foreign investors (Nguyen, 2012; Bjuggren, Eklund, and Wiberg, 2007). It also confirms our prediction that foreign ownership will be related to more manager monitoring and greater firm value and performance. However, the result that mutual funds have no significant impact on the firm value or firm performance is inconsistent with a study by Abidin et al. (2020). The author states that the presence of mutual funds in companies as large shareholders can increase the value for companies, thus providing higher returns for them. Abidin et al. (2020) also suggest that there is evidence of mutual fund managers pursuing short-term returns for their investments without taking an interest in the company's performance since they have no business attachments with the companies. Sovereign wealth funds positively affect both ROA and ROIC, indicating that this specific pressure-sensitive investor group is beneficial for operating performance. However, as noted, all other pressure-sensitive institutional investors are insignificant. One perspective of the finding can be that sovereign wealth funds have fewer existing or potential business relationships with large-cap firms or are more active and willing to challenge management decisions. The findings indicate that sovereign wealth funds are more suitable for delegated monitoring than other pressure-sensitive institutional investors and contrast the initial hypothesis from the literature review.

As seen in table 7 - small-cap firms, the insignificant influence of foreign institutional ownership to firm performance could stem from (Bjuggren et al., 2007) findings that foreign owners have a bias toward shares with lower voting power. The bias would mean that foreign owners are less likely to engage in active monitoring as they have less control rights in the Swedish market. This



could also potentially lead foreign investors free-riding since they have less control rights compared to other institutional investors according to Bjuggren et al. (2007).

Regarding individual investors, both pressure-insensitive and sensitive institutional investors harm shareholder value. Mutual funds, considered pressure-insensitive, have a negative effect on ROIC, and pensions and insurance companies, which are pressure-sensitive, negatively affect Tobin's Q. The results prove that pressure-insensitive investors such as mutual funds are not suitable for delegated monitoring. This can be interpreted as a negative sign, as pressure-insensitive institutional investors are deemed more suitable for monitoring due to having fewer potential business relationships with the firm and more willing to discipline and impose controls on corporate managers. These findings lead to the discussion regarding the pressure-(in)sensitive institutional owners as groups. Additionally, the fraction of capital owned by pensions and insurance companies for small-cap companies experiences a negative impact on firm value. The result is in line with Abidin et al (2020), which suggests that insurance companies normally act as passive monitors, they are likely to be interested in monitoring their own investments and returns, and not company performance.

### **Pressure-sensitive and pressure-insensitive investors**

Regarding the pressure-(in)sensitive ownership, Cornett et al. (2007) provide evidence that pressure-insensitive institutional investors significantly affect firm operating performance. Moreover, Brickley et al. (1988), and Ferreira and Matos (2008) also imply the presence of pressure-insensitive institutional investors has a positive effect on the firm due to the more effective monitoring.

As presented in table 8 and *regression 1*, our findings for large-cap firms match the previous reasoning. The results suggest that pressure-insensitive institutional investors positively affect Tobin's Q, while the result for pressure-sensitive ownership is non-conclusive. This provides evidence for hypothesis 3, and that pressure-insensitive institutional investors are suitable for delegated monitoring. The results follow Cornett et al. (2007) argument that pressure-insensitive acts as a "coalition of value maximizers", which means that pressure-insensitive institutional investors add value by aligning each monitor to act in the best interest of the outsider investors. However, for small-cap firms, this might not be the case. The negative relationship between ROA

and pressure-insensitive institutions could be that active monitors are not cooperating. The situation would worsen the corporate governance mechanism and active monitoring, which does not further positively develop shareholder value.

One possible explanation for the insignificant results for pressure-(in)sensitive investors is that Swedish firms are under strict obligation to treat all shareholders equally. This would lead to more difficulties in extracting information for private benefits. Therefore, monitoring might become less beneficial for shareholders than in other countries. Lastly, the insignificant result can also be because institutional owners in the Swedish market do not have a significant connection with the firms they hold in their portfolios (Sjöström, 2010).

### **Discussion about different results compared to previous research**

From the discussion above, we find several different results between our study and previous literature. To be more clear, the difference and its reasons are discussed in this part. This thesis closely follows Cornett et al. (2007) 's methodology. Cornett et al. (2007) examine the relationship between firm performance (ROA) and institutional investor ownership for the S&P 100 firms. The authors provide evidence of a significant positive relationship between firm operating performance and institutional investor ownership. These thesis results are significantly different from Cornett et al. (2007) results. No significant results can be found for the relationship between operating performance (ROA or ROIC) and total institutional investor ownership for large-cap firms. Furthermore, a significant negative relationship between firm operating performance (ROA) and total institutional investor ownership is presented for small-cap firms. Therefore, the contrasting result could stem from differences between the U.S. and Swedish markets, where Swedish institutional investors are potentially more passive or have limited monitoring powers. As presented in section 2.4, Birgisson et al. (2009) provide evidence that Nordic firms have solid fiduciary obligations, as minority shareholders have the solid legal protection that will enforce limiting power for majority owners. As multiple voting rights are implemented, the monitoring costs increase, which might result in more passive investors. In conclusion, the results suggest that institutional investors are more passive as shareholders. A potential explanation for institutional investors becoming passive can be the increasing popularity of index funds as an investment vehicle that passively seeks to replicate the returns of market indexes.

Where the results shed light on individual categories of institutional investors, the passive institutions' argument is strengthened. Overall, many of the categories known for shareholder activism are insignificant and show little evidence of enhancing shareholder value. However, it should be noted that some categories contribute both negatively and positively. As outlined in section 2.4, the characteristics of the Swedish market and the governance system are unique relative to other regions in the world. These characteristics should be significant and might explain the difference in empirical results from Ferreira and Matos (2008) and Cornett et al. (2007).

### **Discussion about different results between large-cap and small-cap firms**

This study further contributes by observing both Swedish large- and small-cap companies. From our findings, compared to large-cap companies, the impact of institutional investors on small-cap firms is different and likely to be more negative. In detail, while total institutional investors overall have a little significant impact on large-cap firms, they negatively impact the ROA of small-cap firms. Regarding the foreign investor group, it has a positive relationship with Tobin's Q and ROA of large-cap companies. In contrast, a negative relationship with Tobin's Q and no significant influence on ROA of small-cap firms. Similarly, regarding the pressure-insensitive type, this group has a positive impact on Tobin's Q and no significant impact on ROA for large-cap companies. However, it has no significant impact on Tobin's Q and negative impact on ROA for small-cap ones. Overall, the large-cap companies have greater financing advantages and stronger corporate governance. This might result in large-cap and small-cap firms being impacted by institutional investors differently.

### **Discussion about new approach - ROIC**

ROIC is a less common indicator of a firm's performance in previous research. In this study, we expect to discover the impact of institutional investors assessed from more diverse perspectives with ROIC. However, the overall impact of total institutional investors, foreign investors, and pressure-insensitive investors on ROIC is not significant. Only in the 2SLS regression model do total institutional investors impact ROIC negatively, but at a low significance level of 10%. Moreover, we only find a positive impact from the fraction of capital owned by sovereign wealth funds for large-cap firms, and a negative impact from the fraction of capital owned by mutual funds.

## 6.2 Some Implications for Stakeholders

The empirical results highlight some important implications from both managerial and academic points of view regarding the impact of institutional ownership in Sweden for policymakers, managers, and individual investors.

For policymakers: First, the Swedish government should encourage investment from institutional investors, especially foreign and pressure-insensitive groups. This suggestion comes from our finding that these groups have a positive impact on Tobin's Q and ROA of Swedish large-cap firms, which implies foreign and independent institutions are associated with better firm value and performance. Second, regarding corporate governance, the regulators might consider providing more tax or other incentives for institutional investors. On one hand, the active monitoring hypothesis states that the ownership of large investors is associated with their role in monitoring managers. According to the hypothesis, these incentives for large investors may play an important role in boosting their monitoring responsibility in firms. On the other hand, the regulators also might use these incentives as an instrument to attract foreign investment from better governance countries and potentially limit investments from countries with weaker governance standards.

For managers: First, they can adopt measures to enhance corporate governance by encouraging investment from foreign and pressure-insensitive institutional investors for large-cap firms to hold a larger proportion of shares. Second, in order to maximize the firm value and performance, the manager should determine the right type of institutional investor that the firm should attract. This implication results from our finding that different institutional investors, with different investment behaviors and diverse objectives, impact shareholder value differently. Some types of investors have a positive impact on firm operating performance, another one may have a negative influence.

For individual investors: First, information about the impact of institutional ownership on corporate governance and firm value/ performance might assist the individual investors to make better decisions on investments in the Swedish stock market overall. Second, individual investors also may benefit from better information on types of institutional investors' preferences. Institutional investors may have different strategies for the firms that they invest in, therefore, influence the firms' value and performance differently. The impact might be positive or negative for a short-term

or long-term period. Individual investors might optimize their profit at different stages of the investment by having better information about these preferences.

It should be noted that this thesis is subject to several limitations. In the study, the analysis is restricted to institutional investors' holdings. Therefore, unlisted firms are omitted from the sample. This exhibits some limitations as it cannot account for a significant portion of these investors' portfolios, such as investment companies in unlisted firms. However, the ownership of investment companies is likely to impact shareholder value and operating performance long-term. In the absence of observing unlisted firms, the discussion of investment companies' impact on shareholder value is out of the scope of this thesis. Additionally, as this thesis utilizes FE models, the inference can only be supported for the specific samples. The implication is that the results cannot be applied or generalized to a larger population of Swedish firms.

## 7. Conclusion

This thesis aimed to bring new insight into how institutional investors impact shareholder value and firm operating performance. The thesis answers the following questions:

- *Do institutional owners add to shareholder value and firm performance?*
- *Do particular institutional owners contribute to shareholder value and firm performance differently?*
- *If institutional ownership impacts shareholder value and operating performance, what are the implications for stakeholders?*

As explained, institutional investors are disaggregated into five unique groups (investment companies and asset management, mutual funds, pensions and insurance companies, sovereign wealth funds, and trust funds). The thesis contributes to previous literature by: (1) considering more defined groups of institutional investors, (2) investigating the relationship in a sample of both Swedish large- and small-cap companies in the years 2014-2021, and (3) using ROIC as a new approach for firm performance indicator.

The results contrast with previous studies, which have found that total institutional ownership has a statistically significant and positive impact on shareholder value. The thesis results indicate that total institutional ownership has a negative impact on ROIC for large-cap firms and ROA for small-cap firms. Moreover, this thesis did not find any statistically significant impact from total institutional ownership on Tobin's Q. The negative results have led to the discussion that delegated monitoring by institutional investors, and large investors have imperfections. These results are robust in several ways, including the potential concern regarding the endogeneity issue.

In line with previous research results, the findings indicate that the fraction of pressure-insensitive investors positively impacts Tobin's Q for large-cap firms. The results strengthen the argument that pressure-insensitive investors are better positioned for delegated monitoring for large-cap firms than pressure-sensitive. However, pressure-insensitive investors negatively impact ROA for small-cap firms, indicating that active monitors might not cooperate.

Additionally, when observing individual institutional ownership variables, the results indicate that they contribute differently to shareholder value and firm operating performance. The results find

that passive owners (sovereign wealth funds) contribute more to operating performance for large-cap firms. This is contrary to previous research, which suggests that more ownership by active institutions should lead to improved delegated monitoring and therefore increase shareholder value. Contrary, for small-cap firms, the results indicate that both active and passive owners (such as mutual funds and pension and insurance companies) impact shareholder value negatively. This can be interpreted as a negative sign for small-cap firms as mutual funds contribute less to shareholder value creation than they are known for.

Finally, the study points out several practical implications for stakeholders. These suggestions are mainly based on positive relationships between some types of institutional investors and firm value as well as firm performance; and the important role of institutional ownership in corporate governance.

Future research could potentially include all Nordic markets and focus on large- or small-cap companies as the Nordic markets share similar characteristics. A potential comparison between the Nordic companies can then be of interest to investigate whether institutional owners have different impacts depending on countries. Cornett et al. (2007) explain that such studies should use performance metrics such as ROA, ROIC, or cash flow metrics as institutional investors make their investment strategies based on forward-looking performance metrics.

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## Appendix

### Appendix A: Classification of pressure-insensitive and -sensitive institutional investors

Category	Pressure-insensitive	Pressure-sensitive
Investment companies and asset management		•
Mutual funds	•	
Pensions and insurance companies		•
States		•
Trusts funds		•

### Appendix B: Tests for endogeneity and Hausman test

**Table 11:** Large-cap results for test of endogeneity and Hausman tests

	Reg. 1	Reg. 2	Reg. 3	Reg. 4	Reg. 5	Reg. 6	Reg. 7	Reg. 8	Reg. 9
Endogeneity (p) 2SLS	(0.0000)	(0.0535)	(0.0147)						
Hausman test (p)	0,009	0,000	0,000	0,042	0,000	0,000	0,008	0,000	0,000

**Table 12:** Small-cap results for test of endogeneity and Hausman tests

	Reg. 1	Reg. 2	Reg. 3	Reg. 4	Reg. 5	Reg. 6	Reg. 7	Reg. 8	Reg. 9
Endogeneity (p) 2SLS	(0.0641)	(0.3759)	(0.5037)						
Hausman test (p)	0,0182	0,000	0,000	0,0122	0,000	0,0383	0,0209	0,000	0,000

## Appendix C: First stage regression 2SLS

**Table 13:** Large-cap results of first stage regressions for 2SLS of IO\_Total

Explanatory variable	Regression 1	Regression 3
Number of analysts covering the firm	-0.138*** (0.001)	-0.139*** (0.001)
log(Board Size) (lagged one year)	0.129*** (0.043)	0.032*** (0.043)
log(Size) (lagged one year)	0.308*** (0.011)	0.316*** (0.011)
Firm Leverage	-0.001*** (0.008)	-0.001*** (0.000)
Stock volatility	-0.001*** (0.006)	-0.000*** (0.000)
Observations	2389	2384

## Appendix D: Comprehensive list of companies

**Table 14:** Large-cap companies list

AAK	Fabege	Nyfosa
AddLife	Fastpartner	Pandex
Addtech	Getinge	Peab
AFRY	H&M	Platzer Fastigheter Holding
Alfa Laval	Handelsbanken	Saab

Arjo	Hexagon	Sagax
Assa Abloy	Hexatronic Group	Samhällsbyggnadsbolaget i Norden
Atlas Copco	Hexpol	Sandvik
Atrium Ljungberg	HMS Networks	SAS
Avanza Bank Holding	Holmen	SCA
Axfood	Hufvudstaden	Sdiptech
Balder	Husqvarna	SEB
Beijer Ref	Indutrade	Sectra
BHG Group	Instalco	Securitas
BICO Group	Intrum	Sinch
Bilia	JM	Skanska
BillerudKorsnäs	K-Fast Holding	SKF
Biotage	Lagercrantz Group	SSAB
Boliden	Lifco	Stillfront Group
Boozt	Lindab International	Sweco
Bravida Holding	Loomis	Swedbank
Bufab	Lundin Energy	Swedish Match
Castellum	Medicover	Swedish Orphan Biovitrum
Catena	Mips	Systemair
Cint Group	Munters Group	Tele2
Corem Property Group	Mycronic	Telia Company
Dometic Group	NCAB Group	Thule Group
Electrolux	NCC	Trelleborg

Electrolux Professional	NENT Group	Troax Group
Elekta	Nibe Industrier	Vitec Software Group
Epiroc	Nolato	Vitrolife
Ericsson	Nordea	Volvo
Essity	Nordnet	Wallenstam
Evolution	NP3 Fastigheter	Wihlborgs Fastigheter

**Table 15:** Small-cap company list

Abliva	Episurf Medical	Oscar Properties Holding
Actic Group	Ework Group	Poolia
Active Biotech	Formpipe Software	Precise Biometrics
Alligator Bioscience	GHP Specialty Care	Prevas
Anoto Group	HANZA Holding	ProfilGruppen
Arise	Image Systems	Projektengagemang Sweden
Ascelia Pharma	Immunicum	Qliro
Atvexa	Infant Bacterial Therapeutics	Railcare Group
B3 Consulting Group	Infrea	Rizzo Group
BE Group	IRRAS	Saniona
Bergs Timber	KABE Group	Semcon
Björn Borg	Lammhults Design Group	Sensys Gatso Group
Bong	Maha Energy	Senzime
Boule Diagnostics	Malmbergs	Serneke Group
Christian Berner Tech Trade	Medivir	SinterCast
Concejo	Micro Systemation	Softronic
Concordia Maritime	Midway Holding	Starbreeze

C-Rad	Moberg Pharma	Stockwik Förvaltning
Dedicare Group	Moment Group	Strax
Doro	MultiQ International	Studsvik
Duroc	Nelly Group	Svedbergs
Egetis Therapeutics	Net Insight	TradeDoubler
Electra Gruppen	NGS Group	Transtema Group
Empir Group	Nilörngruppen	Vicore Pharma Holding
Endomines	Novotek	Viking Supply Ships
Eniro Group	Ortivus	Wise Group

#### **Appendix E: Short Facts per List**

<b>Stock list</b>	<b>Number of companies</b>	<b>Foreign Ownership</b>	<b>Legal Owners</b>	<b>Free Float</b>	<b>Avg. Mcap SEKm</b>	<b>Total Mcap SEKm</b>
Large Cap	130	38,1%	90%	69%	91 984	11 957 930
Mid Cap	142	26,7%	85%	64%	4 748	674 147
Small Cap	88	23,4%	78%	58%	839	73 821
First North	441	19,7%	76%	60%	1 054	464 846
Spotlight SE	161	7,9%	67%	64%	220	35 467
Nordic SME	75	10,4%	65%	65%	173	12 960



## Appendix F: Correlation matrix

Correlation matrix, large-cap

	IO_TOTAL	FRA_INVOWN	FRA_MFOWN	FRA_PIOWN	FRA_STATEOWN	FRA_TRUSTOWN	IO_FOREIGN	FRA_PRESENSOWN	FRA_PREINSENSOWN	log_BOARD_SIZE	LEV	log(SIZE)	SIGMA
IO_TOTAL	1												
FRA_INVOWN	0,55532	1											
FRA_MFOWN	0,64230	-0,06602	1										
FRA_PIOWN	0,34883	-0,05978	0,12021	1									
FRA_STATEOWN	0,13990	-0,13135	-0,14213	-0,07256	1								
FRA_TRUSTOWN	0,07222	-0,05083	-0,23090	-0,04454	0,04186	1							
IO_FOREIGN	0,34344	-0,08938	0,29793	0,18388	0,20606	0,05378	1						
FRA_PRESENSOWN	0,69855	0,77090	-0,10508	0,33215	0,31209	0,27875	0,14652	1					
FRA_PREINSENSOWN	0,64230	-0,06602	1,00000	0,12021	-0,14213	-0,23090	0,29793	-0,10508	1				
log_BOARD_SIZE	0,38371	0,14652	0,01751	0,27703	0,32479	0,17906	0,32627	0,45670	0,01751	1			
LEV	-0,24665	-0,28896	-0,06999	-0,01238	0,05126	-0,08313	0,00494	-0,24183	-0,06999	-0,24334	1		
log(SIZE)	0,25262	-0,05286	0,05089	0,38161	0,21196	0,11036	0,26828	0,28127	0,05089	0,49754	0,20566	1	
SIGMA	-0,08740	-0,01218	-0,01698	-0,10729	0,01734	-0,03915	-0,01367	-0,08773	-0,01698	-0,15957	-0,09014	-0,29512	1

Correlation matrix, small-cap

	IO_TOTAL	FRA_INVOWN	FRA_MFOWN	FRA_PIOWN	FRA_STATEOWN	FRA_TRUSTOWN	IO_FOREIGN	FRA_PRESENSOWN	FRA_PREINSENSOWN	log_BOARD_SIZE	LEV	log(SIZE)	SIGMA
IO_TOTAL	1												
FRA_INVOWN	0,63937	1											
FRA_MFOWN	0,80141	0,13892	1										
FRA_PIOWN	0,45769	-0,16007	0,24142	1									
FRA_STATEOWN	0,33740	0,02021	0,24878	0,33413	1								
FRA_TRUSTOWN	0,13853	-0,11348	0,03405	-0,01338	-0,06821	1							
IO_FOREIGN	-0,07362	-0,02142	-0,04590	-0,13616	0,15941	0,02739	1						
FRA_PRESENSOWN	0,80733	0,86253	0,29246	0,47372	0,27461	0,19010	-0,07886	1					
FRA_PREINSENSOWN	0,80141	0,13892	1,00000	0,24142	0,24878	0,03405	-0,04590	0,29246	1				
log_BOARD_SIZE	0,09558	-0,06989	0,08495	0,07203	-0,33046	-0,04814	0,01245	0,02638	0,08495	1			
LEV	-0,06328	-0,07727	-0,16607	0,10269	0,21312	0,05658	0,05111	0,04490	-0,16607	0,02887	1		
log(SIZE)	0,23457	0,06811	0,11920	0,15028	0,13178	-0,00827	0,05625	0,21218	0,11920	0,37011	0,36357	1	
SIGMA	-0,16757	-0,15551	-0,17864	-0,04422	-0,16110	0,02287	0,05439	-0,08929	-0,17864	-0,16709	0,09500	-0,08230	1