

Profit-driven vs. purpose-driven?

A study of the prevalence and implications of foundation ownership

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ABSTRACT

Examining the Stockholm Stock Exchange between 1999-2017, we find that foundation-owned firms on average stand for about 50 percent of the total market capitalization and 15 percent of the total number of firms, illustrating the large prevalence and implications foundations have on the Swedish business society. We identify four different categories of foundations; Family, Non-Family, Employee, and Government foundations, where the first is the largest regarding both total firms and total market capitalization. The results on operational performance using t-tests and pooled-OLS regressions, although varying depending on the performed statistical test, are at odds with what would be expected by common corporate governance literature. Despite the lack of residual claim, return on book equity seems to increase with foundation ownership, primarily observed for Non-Family and Employee foundations. Moreover, compared to firms with no foundation ownership, foundation-owned firms have higher payout-ratios in-line with expectations presumably due to charitable commitments. Controlling for firm size, our results also indicate that foundation-owned firms have more conservative capital structures, which could support that foundations are more long-term oriented.

Keywords: Foundation-owned firms, corporate governance, agency theory, intrinsic motives

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EACH YEAR SWEDISH FOUNDATIONS distribute several billion SEK in grants and donations to finance projects that benefit scientific progress, education and other charitable causes. To be able to continuously contribute with these donations, a steady cash flow and

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wealth growth is needed. Some of these foundations thus hold large ownership stakes in Swedish publicly listed firms, where primarily received dividends and share price appreciation contribute to meeting these financial needs.

This paper seeks to analyze the prevalence of foundation ownership and the corporate governance implications on publicly listed firms on the Stockholm Stock Exchange during 1999-2017, and how it compares to firms with no foundation ownership. Foundations' characteristics of having no owner(s), often being able to self-elect its board members, are often tax exempt, and usually have no residual claims are at odds with what is typically thought of as needed for good corporate governance. Examining the Swedish market, we find that a large part of the publicly listed firms on the Stockholm Stock Exchange are owned by foundations. Due to foundations' large market prevalence, they become an important vehicle in the Swedish corporate governance model as they wield significant influence over the Swedish business society and its future development. This creates a great need to analyze what implications these entities have on the firms they own. In our data we identify four different foundation categories: (1) *Non-Family foundations* with focus on distributing wealth to different charitable causes, (2) *Family foundations* created with not only the purpose to distribute wealth to different charitable causes, but also with the purpose of keeping wealth and/or power within a specific family, (3) *Employee foundations* that manage wealth to employees' in the form of pensions, personnel welfare or profit-sharing, and (4) *Government foundations* created by the Swedish government or any other public institution.

Previous research in corporate governance have focused on topics such as agency problems, capital structures, incentivization, and family firms. However, limited research has been devoted to corporate governance of firms owned by foundations. In the Nordics, most research on foundation-owned firms is produced by Steen Thomsen along with other authors, focusing on the Danish market. In Sweden, James Dzansi (2012) further examines foundation-owned firms' investment performance, arguing that intrinsic motivational factors matter in addition to extrinsic factors. Furthermore, Einarsson & Wijkström (2015) elaborates on the landscape and behavior of various categories of foundations in Sweden, but have excluded the corporate governance perspective. Thus, no previous research has been produced on how specific foundation categories impact corporate governance and characteristics of the firms they own, a gap in academic research our paper seeks to contribute with.

Containing a non-exhaustive data sample of 80 foundation-owned firms during the studied time-period, foundations have control or considerable influence in 15.0 percent of the

number of firms on the Stockholm Stock Exchange, where firms owned by Family foundations constitute the largest part at 7.9 percent, followed by Employee (3.5 percent), Non-Family (2.3 percent), and Government (1.2 percent). The most common sector that foundation-owned firms operate in is the industrial sector. Furthermore, our data shows that these firms sum up to 50.9 percent of the total market capitalization of the Stockholm Stock Exchange. Moreover, in-line with previous research, our results indicate that foundation-owned firms perform at least on par to firms without foundations ownership in terms of return on book equity, although with slight variations among foundation categories dependent on performed statistical test. The findings contradict traditional agency theory that the residual claim is of outmost importance for good corporate governance. Plausible explanations to our findings include that foundations are more long-term oriented, have intrinsic motivational drivers, and that their firms invest more in capital expenditures, which are attributes that arguably increase return on book equity. The excess operational performance can foremost be seen among Employee foundations and Non-Family foundations. However, the results on firms owned by Family foundations are ambiguous. Depending on the performed statistical test, Family foundations display varying return on book equity, somewhat tilted towards lower compared to firms with no foundation ownership, although still higher than Government foundations. Regarding E/A, the results are not coherent as we find foundation-owned firms both having higher and lower E/A compared to firms with no foundation ownership. Arguments for and against the different results include foundations limited ability to raise additional equity, contradicted by a more long-term philosophy and conservative capital structure to mitigate risk. Nevertheless, previous research finds that foundation-owned firms have higher E/A than firms with no foundation ownership. Furthermore, in contrast with previous research, our results show that foundation-owned firms have higher payout-ratios compared to firms with no foundation ownership. The foundation category that have the biggest impact on the payout-ratio varies depending on statistical test, albeit Employee foundations seem to be associated with the highest payout-ratio, whereas firms owned by Government foundations do not pay dividends. Potential reasons to the findings regarding the often higher payout-ratio may include a requirement and need to pursue charitable commitments and other obligations, urging them to demand high dividends from their holding firms as this is one foundations' primary income sources. Moreover, the higher payout-ratio could also be a tool to mitigate potential agency problems.

Our paper contributes to previous research on corporate governance as it strengthens the perspective that residual claims must not necessarily be of outmost importance regarding

incentivization in corporate governance. We also show how large the market prevalence of foundations on the Stockholm Stock Exchange is, and contribute with additional insights on different foundation categories, e.g. how they act, what their potential motives are, and how this ultimately affect their corporate governance. The primary limitations of our paper include the possible differentiation in active ownerships both between and within foundation categories, as well as potential idiosyncratic risk the data sample may pertain given cross-holdings by large foundation entities such as KAW through Investor and FAM. Future research may include a more thorough understanding of the different foundation categories' motivational drivers by conducting in-depth interviews, or examining foundations' attitude to environmental, social and governance aspects as foundations have attributes similar to non-profit organizations.

I. Institutional background

A. Description of Foundations

Foundations are broadly viewed as “not-for-profit organizations”, which are organizations that internationally are characterized in several different ways. Salamon et. al. (1999) elaborates on five key characteristics of non-profits: (1) they have an actual organization and structure, (2) the organization is private, (3) no distribution of profits to managers or “owners”, (4). the organization is self-governing, (5) membership or employment is not legally required, and (6) that they have voluntary contributions. Regarding foundations, the Donors and Foundations Networks in Europe (n.d.) states that “*A Foundation exists only when an asset or property has been set aside from the donor(s) to be administrated separately and permanently with the aim of a specific purpose*”. The purpose or aim of a foundation can differ, but common areas include research, education, health and the preservation of a certain groups' wealth. A paper concerning Danish foundations by Thomsen & Hansmann (2018) uses the classification *industrial foundations* which are not-for-profit organizations, that have little to no incentivization payment, are often self-appointing in terms of members of the board of directors, have large ownership stakes in publicly listed firms in Denmark, and are created by the firm's founder (e.g. the brewery firm Carlsberg). This paper however, unlike its predecessors, investigates only the Swedish market and is not limited to foundations created by founders, thus having a broader scope. The characteristics of the foundations in this paper are more in accordance with that of the Swedish Tax Authority and Länsstyrelsen, stating that: “*(1) a foundation has neither owners nor members but a board of directors, (2) the consignee or consignees are predetermined, and it is not possible without the consent of authorities to alter the purpose and/or dissolve the*

foundation, (3) a foundation must be active for a long time-horizon, and (4) a foundation is considered a legal entity.” (Skatteverket, 2019; Länsstyrelsen Stockholm, 2019). In addition, below is a detailed description of characteristics that distinguishes foundations in this paper from each other.

B. Non-Family Foundations

The creation of a Non-Family foundation can be done by any private individual(s) or organization(s), that set aside a certain wealth to contribute to different charitable causes, where neither a relative or descendent is active in the management of the foundation, nor target for its distributable funds. These foundations’ commonly make charitable contributions to the society in fields such as cultural activities, healthcare, education, and scientific research. Furthermore, to be tax exempt, they must distribute a significant amount of their profits and wealth each year (approximately 80 percent) to different causes, and these grants cannot be directed to specific individuals or families. Furthermore, a foundation needs to sufficiently uphold the criteria of going concern without the insertion of new capital (Skatteverket, 2019). Rules concerning asset management is to be determined by each foundation charter, but with the guidelines that the capital should be allocated with as low risk as possible without running the risk of being caved out by inflation.

Example 1: The Foundation ÅForsk (“Stiftelsen ÅForsk”) is the largest owner of the listed firm ÅF (previously Ångpanneföreningen), controlling 37.2 percent (2017-12-31) of the votes (although only 14.1 percent of the capital). The foundation was created in 1985 by Kungl. Ingenjörsvetenskaps-akademien, IVA, Skogsindustrierna, Energiföretagen Sverige as well as ÅF, with the purpose of distributing its received dividend and wealth to research and development in industries such as infrastructure, sustainability and security. Since the creation of the foundation in 1985, the foundation has distributed SEK 460 million (Stiftelsen ÅForsk, n.d.; Holdings, 2019).

C. Family Foundations

There are several reasons to create a Family foundation, including: (1) to remove or limit tax effects, (2) preserving the legacy of a firm, (3) smoothing generational transitions within families, (4) eliminate the risk of a diluted ownership structure several generations into the future, and (5) minimize the risk of a hostile takeover. There are usually two types of Family

foundations; the first is active within charitable causes, and usually (but not always) have family members active in the Board of Directors of the foundation and the holding firm(s). The charitable characteristics are similar to Non-Family foundations, where common charitable commitments include research and education due to historical reasons (foundations historically had to distribute wealth to the aforementioned charitable fields in order to be tax exempt). The second type of Family foundations is also usually active in the Board of Directors of the foundation and the holding firm(s), but what distinguishes the second type from the first is that these foundations do not necessarily have a charitable cause and instead primarily act in the best interest of its family members or other specific predetermined consignees. This second type of Family foundations are not tax exempt as the first one and are most often free to distribute as much capital as it wishes to its consignees.

Example 2: The KAW foundation (“Knut & Alice Wallenbergs Stiftelse”) is the largest owner of the listed firm Investor, controlling 43.0 percent (2017-12-31) of the votes (although only 20.0 percent of the capital). The foundation was created in 1917 by Knut and Alice Wallenberg through the donation of primarily stocks in SEB and Investor at a value of SEK 20 million. The foundation’s primary purpose at inception was to distribute funds to research and education, but also to promote trade, forestry, industry and similar businesses areas. Later, the charter was specified more clearly that the foundation should focus on research and education in Sweden (during 2018, KAW donated SEK 1.8 billion to different projects and causes). Examining the historical development of the foundation, it can be seen that the foundation and the descendants of the Wallenberg family are very intertwined. Since its inception in 1917, the Wallenberg family have held positions in the foundation board and many of its listed holdings. As of 2019-04-27, four out of eight board members within the foundation are family members. These along with other family members hold notable positions in portfolio firms, e.g. chairman in Investor, SEB and ABB, as well as board members in Ericsson and Atlas Copco (Knut och Alice Wallenbergs Stiftelse, n.d.; Wallenberg Foundations AB, n.d.; Holdings, 2019).

Example 3: The Ragnar Söderberg Foundation (“Ragnar Söderbergs Stiftelse”) is the largest owner of the listed firm Ratos, controlling 17.3 percent (2017-12-31) of the votes (although only 9.6 percent of the capital). The foundation was created in 1960 by Ragnar Söderberg, that donated 20,000 shares (value of SEK 6.5 million) of Ratos shares to the foundation, with the purpose of promoting research preferably within medicine, economics and law, as well as creating a sustainable and stable ownership in Ratos (the Ragnar Söderberg foundation donated SEK 82.8 million to different projects and causes in 2018). Similar to KAW, the Söderberg family have several board seats in the foundation (as of 2019-04-27, two out of four board members held the Söderberg family name). Worth noting though is that the Söderberg family does not to the same extent take active board or management positions in their portfolio firms as opposed to KAW (Ragnar Söderbergs Stiftelse, n.d.; Stiftelsemedel, n.d.; Holdings, 2019).

Example 4: Hjalmar Svenfelt’s foundation (“Hjalmar Svenfelts Stiftelse”) is through its subsidiary Malfors Promotor AB the largest owner of the listed firm Cloetta (previously Cloetta Fazer), controlling 36.7 percent (2017-12-31) of the votes (although only 25.4 percent of the capital). The foundation was created in 1947 by Hjalmar Svenfelt, with the purpose of acquiring, owning and managing shares in “Svenska Chokladfabriks Aktiebolag” (today Cloetta), and to hold a majority position in the firm. Descendants of the founder is still active in the foundation and currently have two family members on the Cloetta Board of Directors (as of 2019-04-27). The foundation is very similar in terms of corporate governance to KAW (but with a more concentrated holding), however unlike both KAW and the Söderberg foundation, Hjalmar Svenfelts foundation has no mandatory charitable commitments (Stiftelsemedel, n.d.; Holdings, 2019)

D. Government Foundations

Government foundations includes all foundations that have been created by a government, municipality, or the likes. In general, Government foundations work for, or are active in, projects or business areas that benefit society or contribute to societal development. Similar to Non-Family and Family foundations, a wealth needs to have been set aside at its inception and/or the foundation should not be dependent on a current stream of liquidity inflows.

Example 5: Östersjöstiftelsen is the largest owner of the listed firm Moberg Pharma, controlling 13.0 percent (2017-12-31) of the votes and capital. The foundation was created in 1994 by the Swedish government through a donation of SEK 1.3 billion, for the purpose of promoting and accommodating research and education concerning the Baltic sea and the eastern Europe area at the Swedish institution Södertörns Högskola (Södertörn University). The government selects two board of directors and the foundation itself selects the seven remaining board members. The foundation charter dictates that only surplus capital (not the initial wealth) is allowed to be distributed, creating a sustainable long-term wealth. In 2017, the foundation distributed SEK 181 million (Stiftelsen för forskning inom områden med anknytning till Östersjöregionen och Östeuropa, n.d.; Holdings, 2019).

Example 6: The foundation Industrifonden (“Stiftelsen Industrifonden”) is the largest owner of the listed firm Oncopeptides, controlling 29.2 percent (2017-12-31) of the votes and capital. The foundation was created in 1979 by the Swedish government, for the purpose of promoting and working with industrial development in Sweden, today focusing on life science and technology. Industrifonden is classified as a Government foundation, but is very different from other Government foundations (such as Östersjöstiftelsen) as it is created as a venture capital fund, actively working with its portfolio holdings similar to regular venture capital firms. As such, it holds multiple firms, both listed and unlisted, with an active exit strategy (Stiftelsen Industrifonden, n.d.; Holdings, 2019).

E. Employee Foundations

The foundations are created to benefit the employees of a firm. The reasons for creating Employee foundations include safeguard of future pension commitments (pension foundations), promote the welfare of the firm’s employees (personnel foundations), and to motivate and reward employees for their work done (profit-sharing foundations). Employee foundations are either created by the employer or an employee organization. No exclusion of Employee foundations has been made based on the origin of the funds. Furthermore, Employee foundations can be controlled by management, employee representatives or outsourced to independent entities. Mutual for these Employee foundations is that capital should be allocated in a satisfactory manner, i.e. low risk without the risk of being caved out by inflation. Unlike

other foundation categories however, the funding of Employee foundations can be both historical wealth and continuous inflow of capital.

Example 7: The foundations SLK-anställda and VBG-SLK are the second and third largest owners of the listed firm VBG Group, controlling 23.6 percent and 10.2 percent (2017-12-31) of the votes respectively (although only 4.3 percent and 1.92 percent of the capital). The largest owner of VBG Group at 27.6 percent of the votes is also a VBG created foundation, Herman Krefting Foundation for Allergy & Asthma Research, but is categorized as a Non-Family foundation. The three foundations were created by the founder of VBG Group Herman Krefting in the 1980s, with the purpose of securing and developing employment within the firm. The two foundations SLK-anställda and VBG-SLK both state in their charter their long-term purpose of promoting the welfare of the employees, and doing this by holding and acquiring shares in the VBG Group to secure the firm's long-term prosperity. The shares are furthermore not allowed to be sold, distributed or pledged by the foundations (VBG, n.d.; Stiftelsemedel, n.d.; Holdings, 2019).

Example 8: The foundation Oktogonen ("Stiftelsen Oktogonen") is the second largest owner of the listed firm Handelsbanken, controlling 10.2 percent (2017-12-31) of the votes (10.1 percent of the capital). The foundation was created in 1973 by Handelsbanken at the initiative of the CEO Jan Wallander. The foundation was created through a donation of SEK 10 million to its wealth, with the purpose of distributing its wealth to employees of Handelsbanken through a profit-sharing constellation. Based on Handelsbanken's performance, the foundation receives proceeds from the firm (Svenska Handelsbanken, 2019; Holdings, 2019)

F. The Swedish code in Corporate Governance

In Sweden, the largest shareholders in a firm play an important role. According to Swedish Corporate Governance Code from 2004 (rev. 2016), the largest shareholders have a seat (if not declined) in the nomination committee that proposes the board constellation to the annual general meeting ("AGM"). This creates an opportunity for the largest shareholders to influence a firm's strategy going forward. The chair of the nomination committee is usually the largest shareholder, and is considered to have the strongest influence. At the AGM, the nomination committee's appointed candidates are presented to the rest of the shareholders and are either

approved or disapproved through a voting process. As shown in La Porta et al (1999), Sweden has a very concentrated ownership base in its listed entities. This implies that small shareholders could find it difficult to mobilize against the largest shareholders and the candidates appointed by the nomination committees' can therefore often be approved without drama. Theoretically, if the largest shareholder has more than 50 percent of the voting rights it has absolute control of the firm, and thus decides on the whole board composition and its members. If a shareholder has at least 20 percent of the voting rights it is said to have decisive influence, given that there is no bigger shareholder (La Porta et al., 1999; Nachemson-Ekwall & Mayer, 2018). Due to the presence of dual class systems (A, B, C shares etc.) the capital allocation might differ to that of the voting power as over 50 percent the listed firms on the Stockholm Stock Exchange have more than one share class (Nachemson-Ekwall & Mayer, 2018; Lekvall, 2014). As focus in our paper is on corporate governance of foundations, and not the actual financial gains, the distribution of voting rights becomes the primary measure to examine. Worth mentioning though is the possible implications deviations between voting and capital rights might have on corporate governance and shareholder behavior. Gompers et al. (2010) found that firm value is positively affected when insiders possess stronger cash flow rights (capital votes), whereas firm value decreases if they hold relatively more voting rights.

II. Theoretical Review

A central theory in corporate governance which deals with the separation of control and ownership is the agency theory, e.g. the principal-agent problem. Agency cost arises from the issue that the agent does not act in the best interest of the firm's shareholders, but rather in its own interest. The principal's primary goal is to maximize its own welfare, which is said to only be possible through increased cashflows, that is financial gains (Jensen and Meckling, 1976; Shleifer and Vishny, 1986; Grossman & Hart, 1982). This is in contrast with agents that will work for its own utilization, e.g. higher compensation, better reputation and more control. This agency cost risk to destroy firm value, and to minimize this the agent is monitored by the principal through different information, capital and incentive structures (Grossman & Hart, 1982). Some research argues that a concentrated ownership structure decreases agency costs as the owner will have more influence and insight into the actions of the firm, reducing information asymmetry, while a dispersed ownership structure has the opposite consequence (Shleifer & Vishny, 1986; Grossman & Hart, 1982). Nevertheless, research also points in the direction that a concentrated ownership structure could have the opposite effect. Morek & Yeung (2003) suggest that although the agency cost between management and shareholders might be

mitigated by concentrated ownership, a new agency problem between controlling and minority shareholders might arise that is equally destructive. Other factors that arguable can reduce agency costs are different capital structures. Jensen (1986) suggest that management's access to excess free cash flows could lead to e.g. empire building and unjustified high salaries. Jensen argues that management should be monitored by leverage that put pressure on the free cash flows and/or distributing large dividends to shareholders. Grossman & Hart (1982) further elaborates that by increasing the debt-to-equity ratio and increase the risk of bankruptcy, management will be forced to work for profit maximization and in the shareholders interest unless risk running their firm into financial difficulties. Similar to Jensen (1986), Rozeff (1982) argue that dividend policy is affected by agency costs and that it is also a tool to mitigate this with. The higher the probable agency cost, the higher the dividend payout-ratio should be. In alignment with Grossman & Hart, Rozeff also argues that with higher debt levels, the increased interest costs can act as a substitute for dividend payments. Glaeser & Shleifer (2001) further discusses non-profit entities and how this ownership concept might lead to more business. They acknowledge the importance of the trustfulness and long-term relationships that a non-profit can benefit from. Due to their often less pure financial incentives, these firms can be seen as more reliable, trade more fairly and thus be preferred to deal with in the long-run, reducing agency issues between business partners. Anderson et al. (2003) further elaborates on this by discussing the implications of long-term relationships between family firms and financial institutions, creating trustworthiness between the parties and enabling a lower cost of debt.

From a foundation perspective, the lack of a residual claim should limit the foundation's motivation to perform good corporate governance and consequently lead to foundation-owned firms having sub-optimal operational performance compared to firms with no foundation ownership

Research that combines psychology and finance have sought explanatory factors for firms' performance, and have found that managers' motivation often can be split into primarily two components: extrinsic motivation and intrinsic motivation (Sansone & Harackiewicz, 2000; Pritchard et al., 1977; Dermer, 1975; Kasser & Ryan, 1996). Extrinsic motivations can broadly be defined as financial and performance related benefits, e.g. salary and bonuses that are tied to the firm's or an individual's performance (Lepper et al., 1973; Grossman & Hart, 1982), whereas intrinsic motivation on the other hand concerns intangible and psychological motives such as self-fulfillment, happiness, work-life balance, and that the task itself motivates. The

general conclusion is that there is a trade-off between extrinsic motivation and intrinsic motivation, i.e. if too much emphasis is put on financial rewards it can reduce the self-fulfillment of doing the task (Frey & Jegen, 2001; Lepper et al., 1973; Pritchard et al., 1977; Deci, 1971). On the other hand, there are also research that questions the trade-off between extrinsic motivation and intrinsic motivation, arguing that they act independently of each other and does not experience a crowding out effect (Sansone & Harackiewicz, 2000; Dermer 1975). Regardless of philosophy though, the idea of intrinsic motivation should be an important factor in effective corporate governance, and consequently impact shareholder returns. Constructing a model where an employee's identity is associated with the firm they work for, Akerlof & Cranton (2005) argued that if employees feel like the firm is a part of them and their goals, they will embrace success and performance as their own, work harder than they otherwise would had done, without the need for an alteration in compensation. Furthermore, Besley & Gathak (2005) discusses that if an employee's motives match with the interests of the firm's, it will increase firm productivity. Miller & Le Breton-Miller (2009) strengthen this by arguing that family firm members (having similar characteristics as agents of foundations), identify themselves with the firm and are prepared to go to great lengths to secure the long-term value of the firm. Granovetter (1985 & 2005) further discusses the concept of social embeddedness, and how economic activity is linked and affected by non-economic factors such as culture, politics and religion. Through networks and social institutions, a higher efficiency and cost reduction can be expected as certain costly interactions and tasks can be eliminated or reduced, aligning with the findings of Anderson et al. (2003) regarding a lower cost of debt.

From a foundation perspective, the presence of intrinsic factors could compensate for the lack of residual claim and consequently lead to good corporate governance and operational performance which is at least on par with firms with no foundation ownership

Another theoretical perspective that has caught significant attention during recent years is the implications of short-termism and long-termism, and how the pressure from the stock market forces management and other elected representatives to perform every quarter unless face the risk of being replaced. Sampson & Shi (2018) elaborates that equity investors are increasingly discounting future earnings and cash flows at a higher rate. This in turn leads to alterations by the firm in terms of incentive structures, capital expenditure initiatives and other similar changes that affect financial and operating metrics, indicating a more intense short-term investment trend among investors. A market report provided by McKinsey (2017) in a US

setting indicated that the revenue of firms with a long-term perspective grew on average with 47 percent more than that of other firms. From an earnings perspective, the difference was 36 percent, also indicating the benefits of a long-term philosophy. The report further suggests that long-term firms spend on average 50 percent more on R&D and was less sensitive to R&D costs during the financial crisis. A contradiction to this is a paper written by Lins et al. in 2013, arguing that family firms (that are often seen as long-term owners) reduces their capital expenditures during financial crises as a way to mitigate risk, and that this is done across their entire portfolio of subsidiaries, and is associated with underperformance. They discuss that family firm features grow in proportion in crises, stating that family firms are able to transfer wealth and liquidity between portfolio firms. On the other hand, they are also very tied to their firms and a disruption might eliminate the “family empire”. This makes family firms more sensitive, and similar to the reasoning of Morck & Yeung (2003), making them take actions that are in the interest of the family rather than the total shareholder base. A paper written by Souder et al. (2016) analyzes the effect of short-termism on firm capital expenditure and long-term performance, also finding that firms with longer investment horizons of their various investments achieve higher operational performance. They further suggest that alignment between investor patience and investment horizon contribute positively to return on total assets.

From a foundation perspective, the mandate to manage its wealth in perpetuity should pursue foundations to act more long-term, invest more in capital expenditure and hence lead to excess operational performance compared to firms with no foundation ownership

III. Previous Literature on Foundations

The papers written on foundation corporate governance are produced by a small number of researchers. A frequent contributor is Steen Thomsen (often together with other researchers such as Borsting and Hansmann), focusing on the Danish market. He calls foundations in his data sample for industrial foundations, which in most cases control more than 50 percent of the votes in their respective holdings. These foundations stand for 70 percent of the market capitalization in Denmark and half of the country’s R&D (Borsting & Thomsen, 2017; Thomsen & Hansmann, 2018). The common theme of relevance that Thomsen refers to seems to be that the characteristics of foundations – non-profit entities, no members or owners, and that they cannot be dissolved (Thomsen & Rose, 2004) – violate the institutionalized view of effective corporate governance, i.e. agency theory. Nevertheless, assessing their data through

risk-adjusted stock returns, accounting returns and Tobin's Q, Thomsen & Rose find that firms owned by industrial foundations are as successful as other firms. Borsting & Thomsen (2017) further argues that firms owned by industrial foundations are based on their characteristic of being non-profits likely to act more responsibly in their engagement with different stakeholders. The paper finds that firms owned by industrial foundations are viewed more socially responsible and have better labor relations (Borsting & Thomsen, 2017), aligning with previous research by Granovetter (1985) and Anderson et al. (2003) that analyzes social embeddedness and long-term relationships of firms. Furthermore, a more recently published paper on this matter find that foundation-owned firms in Denmark promote long-termism (Thomsen et al., 2018). They further state that firms owned by industrial foundations have more stable ownership, i.e. that they own firms for longer periods, have more conservative capital structures with less financial leverage, and that they replace managers less frequently. The authors also find that firms owned by industrial foundations survive longer. Thomsen et al. (2018) further discusses that foundation-ownership might be a mitigator within corporations to the perceived problem of short-termism in many countries. A paper produced by Thomsen & Hansmann (2018) finds that the profitability of firms owned by industrial foundations depend on the governance structures. They find support that less overlap between the foundations' directors and the foundation-owned firms' management increases the financial performance, contradicting previous research by Anderson & Reeb (2003) examining family firms.

There are two studies produced in Germany on foundation-owned firms, and similar to most of the previously discussed papers on the Danish market, both examine foundation-owned firms through the agency theory framework. The first paper written by Herrmann & Franke in 2002 has some consistent findings with previous research, finding that foundation-owned firms in Germany have slightly better return on book equity and more stable earnings. Another consistent finding is the relationship to its employees (e.g. that they practise policies that promote job security). In terms of payout-ratio, Thomsen & Hansmann (2018) finds no significant difference between foundation-owned firms and firms with no foundation ownership, but does not distinguish between dividend and share appreciation. This in contrast with Herrmann & Franke (2002), finding lower payout-ratios for foundation-owned firms with the motivation of difficulties in raising new capital. In 2015, Draheim & Franke produced a paper on foundation-owned firms in Germany, which compares family firms with Family foundations and charitable foundations. They find consistent results with Borsting & Thomsen (2017) that foundation-owned firms have better labor relations than other firms as they for

instance use less outsourcing to protect jobs and have more powerful employees (Draheim & Franke, 2015). In addition, they find that foundation-owned firms have more conservative capital structures, which is consistent with the aforementioned research. Similar to Herrmann & Franke (2002), Draheim & Franke (2015) find that German firms owned by foundations pay smaller dividends. Draheim & Franke however find that German firms have lower return on book equity and return on total assets, which is inconsistent with previous research on Danish industrial foundations and Herrman & Franke (2002). The paper argues that the explanation for the weaker profitability is due to the stronger role of employees that increases when a firm goes from family-owned to Family foundation-owned.

The German and Danish research comprising foundations perform extensive analysis on the implications of foundation-ownership on their respective geographical markets, but give little attention to Sweden or other northern European countries. One interesting paper on the Swedish market is produced by Dzansi (2012), that examines the investment performance of foundation-owned firms during 1999-2005 using Tobin's Q. Dzansi extends his theoretical framework compared to previously discussed research to incorporate more extensively both extrinsic and intrinsic motives to understand the investment performance differences. The results state that foundation-owned firms show much better investment performance than dispersedly-owned firms, and slightly better than institution-controlled firms, but worse compared to family-owned firms. He argues that although foundations have no residual claim, their investment performance measured by Tobin's Q contradict common agency theory and theories concerning incentivization. Furthermore, he states that the results indicate that extrinsic motives are not enough as corporate governance tools alone, but that instead a large part is driven by social embeddedness and intrinsic motivations such as those elaborated on by Granovetter (1985 & 2005) and Akerlof & Cranton (2005). Furthermore, Stefan Einarsson and Filip Wijkström have also made contributions to understand foundations in Sweden. They do not take a corporate governance perspective similar to that of other researchers previously discussed, but their findings still offer important insights. In a country report of Sweden, they state that, *"Swedish research foundations have historically played an important role in the Swedish research field, and they most probably still have an important role to fill."* ... *"The dominating source of income is a return on endowed capital"* ... *"foundations were created in perpetuity, and that they could therefore only use the proceeds in order to maintain their endowment"* (Einarsson & Wijkström, 2015). The findings strengthen the assumption that the return on a foundation's holding firm(s) is of outmost importance for a foundation.

Additionally, the classification Wijkström & Einarsson (2018) make into different categories of foundations adds valuable perspective. Incorporating foundations with both listed and unlisted holdings, they split Swedish foundations into five different categories; (1) Government-related foundations, (2) Civil society foundations, (3) Corporate foundations, (4) Community foundations and (5) Independent foundations. The total sample includes 14,500 foundations, with an estimated total asset under management of EUR 31 billion, displaying the size and embeddedness foundations have on the Swedish society.

IV. Data Sampling & Methodology

The time-horizon studied in this paper is 31 December 1999 – 31 December 2017, which should capture fluctuations in performance due to business cycles and avoid potential bias in favor of any kind of firm. In addition, only annual data has been gathered due to the limited availability of ownership-data and the trustworthiness of financial statements as only annual reports are usually audited.

A. Categorization of Foundations

The categorization used to classify foundations are inspired by information provided by the foundations themselves, the Swedish Tax Authority, Länsstyrelsen, and previous research on foundations. The rationale is that these foundation categories are interpreted to have different incentives among each other. The four categories are: Non-Family foundations, Family foundations, Government foundations and Employee foundations (see I. Institutional Background Section B.-G. for detailed description of the characteristics of the foundation categories). For simplification, it is assumed that all foundations act in their own interest, and therefore do not collaborate between and within different foundation categories.

B. Ownership and Firms

As the paper examines corporate governance, ownership data has only been gathered on percentage of votes and not capital. When different share classes have been present, we have gathered data on the total ownership of votes, thus largest shareholders refer to largest shareholder in terms of number of votes. The exception is year 2014 where data also is gathered on capital shares to obtain information regarding foundations inclination to hold voting rights compared to capital rights. The top 25 largest owners of all firms on the Stockholm Stock Exchange, i.e. Large, Mid, and Small Cap have been examined to find foundations among the

shareholders. A list of all foundations with noticeable ownerships was compiled (see Table A1 in appendix). Some of the foundations hold small positions within the data set and have thus been assumed to possess limited impact on their holdings, whereof a new list was compiled with foundations holding top 5 positions in listed firms (see Table A2 in appendix). The rationale why only the top 5 shareholders have been examined regarding corporate governance is due to The Swedish Code of Corporate Governance (see I. Institutional Background Section F.). When a firm with a foundation among its top 5 largest shareholders was identified, the other top 5 largest shareholders were also gathered. Some foundation ownerships have not been direct in the sense that a foundation has owned a listed firm through a subsidiary or another entity, often an investment firm. If the investment firm or similar has been deemed to be controlled by a foundation, the investment firm has been set as a proxy for foundation ownership (e.g. Investor, Nordstjernan and Ratos). To avoid a survival ship bias in the data sample, firms that have been delisted have also been included in the data sample. For the time-period 31 December 1999 – 31 December 2014 ownership data have been gathered from a book called “Ägarna och Makten” that was released annually until the year 2015, after which the digital database Holdings.se owned by Modular Finance² was used for the time-period 31 December 2015 – 31 December 2017. Total market capitalization of the Stockholm Stock Exchange as well as the individual firms for the time-period 31 December 1999 – 31 December 2014 have been gathered from the database FinBas which is provided by the Swedish House of Finance³. Data on market capitalization is not included after 31 December 2014 for coherency and reliability reasons. In the case of existence of different share classes, the total market capitalization is the combined value. The data sample is limited to listed firms, disregarding any private holdings the foundations might have. In addition, the data sample should only contain Swedish firms listed on the Stockholm Stock Exchange. The paper does not include listed firms that are domiciled abroad (e.g. ABB, Stora Enso and AstraZeneca). Furthermore, to remove duplication and data distortion, investment firms and similar firms where most of their holdings are listed entities was eliminated from the data sample. No adjustments were made to foreign foundation ownership. During the studied time-period, 110 firms were identified as having noticeable presence of foundations among its top 25 shareholders during at least 1 year. However, as the paper examines corporate governance, it is important that a

² Holdings.se is a database containing ownership information on Swedish listed firms, provided by Modular Finance; www.holdings.se/

³ FinBas is a Swedish database provided by the Swedish House of Finance, containing historical firm specific information regarding selected financials and market capitalization; www.data.houseoffinance.se/

foundation should have had enough time to impact a firm's operational performance. Thus, for a firm to be categorized as a foundation-owned firm, we have set a threshold such that the firm needs to have had a foundation among its top 5 largest shareholders for at least three consecutive years. However, if a firm that was subject to an initial public offering during the data sample period was owned by a foundation (top 5 shareholder) at the time it was listed, the firm have been included as foundation-owned due to the foundation's presumable historical ownership implications on the firm's operational performance. The aforementioned criteria eliminated 30 firms out of the data sample, reducing the data sample to 80 firms in total.

The foundations' firm ownership impact has been divided into (1) control, (2) considerable influence, (3) empty votes, and (4) no foundation ownership.⁴ Empty votes is only separated for illustrative purposes in V. Results & Analysis section A, however not in Section B and C where it is included into the no foundation ownership category. The rationale why illustrating the empty votes category is based on the number of firms that would be included within control or the considerable influence category should the largest shareholder reduce or sell all their shares, all else equal. The percentage ownership cut-offs have been inspired by La Porta et al. (1999) and Nachemson-Ekwall & Mayer (2018). Furthermore, when we use the terms control, considerable influence, empty votes, and no foundation ownership in the context of market capitalization we define it as *effective*. This implies that although a foundation would control a firm through only 30 percent of the firm's total votes, it effectively controls 100 percent of the firm's total market capitalization and operational performance. Moreover, firms are only classified as foundation-owned during years the foundation fulfil the criteria control or considerable influence. A firm can therefore be classified as both foundation-owned and as a firm with no foundation ownership during the studied time-period.

4

(1) *control* is set if the foundation either has >50 percent ownership, or if the foundation is the largest shareholder with at least 20 percent ownership at the same time as and the second largest shareholder of the same firm has less than 50 percent of the foundation's percentage ownership.

(2) *considerable influence* is set if a foundation cannot fulfil the control criterion, the foundation's ownership is among the top 5 largest shareholders, and there is no other shareholder that fulfils the control criterion. If there are more than one foundation among the top five largest shareholders and the considerable influence criterion is fulfilled, the largest foundation is deemed to have considerable influence. The only firms in the data sample where that simplification is cumbersome are SEB and VBG where a subjective assessment was made.

(3) *empty votes* is set if control or considerable influence would had been fulfilled if not there was another shareholder that has fulfilled the control criterion.

(4) In section A. in the Results & Analysis, *no foundation ownership* comprises all firms on the Stockholm Stock Exchange where foundations are not among the top 5 shareholders, while in section B. and C. in the Results & Analysis *no foundation ownership* comprises all firms on the Stockholm Stock Exchange where foundations do not fulfil criteria (1) or (2).

C. Selected Financial Metrics and Computations

The selected financial metrics are inspired by Thomsen & Hansmann (2013), Herrman & Franke (2002) and Draheim & Franke (2015), but also other research within the areas of corporate governance and operational performance (e.g. Kaplan, 1989; Wright et al., 1996; Barber & Lyon, 1996). Furthermore, as our paper focuses on agency theory and incentives, much inspiration has been drawn from Jensen & Meckling (1976), Modigliani & Miller (1958), Shleifer & Vishny (1986), Rozeff (1982), and Grossman & Hart (1982) when selecting the financial metrics. The financial metrics seek to explain foundation-owned firms' operational performance and key characteristics such as long-term philosophy, view on leverage, as well as foundations' cash flow needs, ability to work with different governance tools and what the presumable implications for the firms other shareholders might be. The following metrics have been examined in this paper; (1) return on book equity ("*RoE*"), (2) return on total assets ("*RoA*"), (3) earnings before interest expenses and tax divided by sales ("*EBIT-margin*"), (4) dividend divided by net income (*payout-ratio*), (5) total equity divided by total assets ("*E/A*"), (6) sales divided by total assets ("*total asset turnover*"), and (7) capital expenditure divided by sales ("*capex/sales*"). Primary focus and emphasis is put on return on book equity, payout-ratio, and E/A as these are frequently occurring financial metrics in academic research concerning agency problems.

The data for the financial metrics is computed using the database Eikon⁵, which also includes historical financials for firms that have been delisted during the last 18 years. All financial metrics are manually calculated according to made specification (see Table A3 in appendix) from the raw data. The rationale for manual calculations is to increase the reliability of the data and to have full insight into the computation of the financial metrics as databases differ in their procedures and views on these. To make sure the data is accurate and without error, a random sample of the firms were compared to annual reports.

D. Peer group selection

The financial data has been adjusted based on peer groups to adjust for sector specific variations that might be prevailing and could distort the analysis. The peer group consist of all listed firms between 1999-2017 on the Stockholm Stock Exchange that are classified as firms with no foundation ownership. The peer group could have been widened to include other Nordic

⁵ Eikon is a database provided by Thomson Reuters, containing financial information on all listed firms as well as certain qualitative firm specific information; www.eikon.thomsonreuters.com/

countries based on the similarities pertaining between the countries to increase the number of observations, but as the paper seeks to examine differences on the Swedish market, using Swedish firms gives more consistency.

A common sector categorization used in research papers is that of the SIC or NACE code system⁶ (and its Swedish version SNI codes). Barber & Lyon (1996) suggests using a two-digit SIC code when making a performance analysis, however using this narrower classification reduces the number of observations in each category and would have led to difficulties in creating peer groups. Thus, a modified industry classification of 12 sectors (see appendix Table A4) similar to that of one-digit NACE code classification have been used for the analysis. To classify the different firms into respective sectors, we use the database Retriever⁷. However, some of the firms due to their nature (firms with multiple subsidiaries) only have broad classifications such as “operations carried out by head office”. In these cases, the firms were manually given a sector by reviewing the firms’ annual reports, their subsidiaries and other relevant information. Given the sample size and number of firms owned by foundations, 10 out of 12 sectors contained foundation-owned firms. No foundation ownership exists within the sectors media & entertainment, and natural resources & energy, and were thus removed from the analysis.

D. Statistical tests

The data sample is a panel data where i = firm, t = year. The panel data is unbalanced due to the inclusion of delisted firms, that it was not possible to retrieve all financial data on some firms, and that outliers were excluded from the data sample⁸. T-tests are used to determine different characteristics among the foundation categories of foundation-owned firms and compare their financial metrics to firms with no foundation ownership (i.e. the peer group). Thus, the t-tests separate on foundation category (i.e. Family, Non-Family, Employee, and

⁶ SIC (Standard Industrial Classification) code is an American created system for industry classification; NACE code is a European classification system; www.siccode.com/

⁷ Retriever is a database containing financial information and annual reports on all Swedish firms; www.retriever.se/

⁸ Outliers that were excluded were observations that should be temporary to their extreme nature and the inclusion of such would skew the results. The following criteria is used:

- $-1 < \text{Return on Book Equity} < 1$
- $0 < E/A \leq 1$
- $-2 < \text{Payout-ratio} < 2$
- $-1 < \text{Net Margin} < 1$
- $-1 < \text{EBIT-margin} < 1$

Government) but combine control and considerable influence into one group, i.e. foundation-owned. The financial metrics are tested on a full sample basis and on one separate sector (industrials). The rationale for analyzing the industrial sector separately is the ease of comparability and that the industrial sector has many observations in all four foundation categories. Firms within the sectors Bank & Finance, and Real Estate are included in the full sample calculation of RoE, payout-ratio, and E/A, but excluded from the other financial metrics. The rationale is that the financial statements in these sectors differ fundamentally, and the inclusion of these sectors would therefore distort the financial metrics and the t-tests. Furthermore, to understand whether operational performance differences between foundation-owned firms are due to selection (foundations choose to own firms that have higher return on book equity) or causality (foundations presumed involvement in the corporate governance of firms' affect their return on book equity), we also conduct a t-test on return on book equity on identified firms that during the data sample period have been both foundation-owned and not foundation-owned to see if there is a statistically significant difference in their return on book equity. All conducted t-tests are two-sided, unpaired with Welch approximation to the degrees of freedom.

Although the t-tests can conclude whether the different groups' averages are statistically different from each other, they cannot control for other factors that would affect the financial metrics. Therefore, to avoid drawing incomplete conclusions and as an alternative to determine whether our results are robust, we also perform pooled-OLS regressions. We perform regressions to examine if foundation ownership affects return on book equity, payout-ratio, and E/A. First, we regress all three dependent variables (RoE, payout-ratio, and E/A) on the foundation categories, and next we regress the dependent variables (RoE, payout-ratio, and E/A) on control and considerable influence. We use the natural logarithm of annual sales in SEK thousand as a control variable in all regressions as firm size can affect the financial metrics due to for instance economies of scale. Furthermore, all regressions are clustered on firm-level inspired by Petersen (2009) to control for correlated standard errors. In addition, we include time fixed effects in all regressions to control for specific year(s) affecting the used variables in the regressions. Furthermore, to control for the selection and causality issue on the dependent variables we include firm fixed effects in all regressions. We observe in our data sample that firms experience changes in their status of being classified as foundation-owned, which should provide variations on the dependent variables. Due to the inclusion of firm fixed effects we run

all regressions on the full sample. In total, six regressions are performed (see Table A5 in appendix for regression specifications).

E. Limitations

Even though the Swedish Code in Corporate Governance creates opportunities for shareholders to impact firms through the election of board members, one could question how active role shareholders take. In addition, the usage of proxies for foundations in this paper (foundations owning a listed firm through another firm e.g. an investment firm), can also raise questions on the actual impact and involvement that foundations have on the corporate governance of the indirectly owned firms. Furthermore, some foundations such as KAW through FAM and Investor stand for a large part of the total market capitalization, arguably creating a potential idiosyncratic bias in the analysis.

V. Results & Analysis

A. The Prevalence of Foundations on the Stockholm Stock Exchange

A1. Total Number of Firms

In Denmark, 70 percent of the market capitalization is controlled by industrial foundations (Thomsen & Hansmann, 2018), making foundations an important part of the Danish business society. We find similar market structures on the Stockholm Stock Exchange. In terms of number of firms, foundations are a common feature among the top 5 largest shareholders, as one can discern from Figure 1. On average between 1999-2014, foundations have control of 6.1 percent and considerable influence of 8.9 percent of the total number of firms (in total 15.0 percent). Furthermore, the category empty votes stood on average for 4.0 percent of the index. The results in Figure 1 is after excluding 30 firms based on criteria mentioned in IV. Data Sampling & Methodology, indicating that the prevalence of foundations among the top 5 largest shareholders is even larger. Looking at Figure 1, the total number of firms seem to be relatively stable over time, however, that is not necessarily the case when considering ownership stability in specific firms. In the data sample, one can observe that; (1) foundations sell their shares in firms they have either control or considerable influence in and purchase shares in other firms instead, and (2) foundation-owned firms get delisted while other foundation-owned firms get listed, keeping the total number of foundation-owned firms relatively stable. The data sample also includes foundations that have owned the same firms during the whole sample period.

Figure 1 – Total Number of Firms

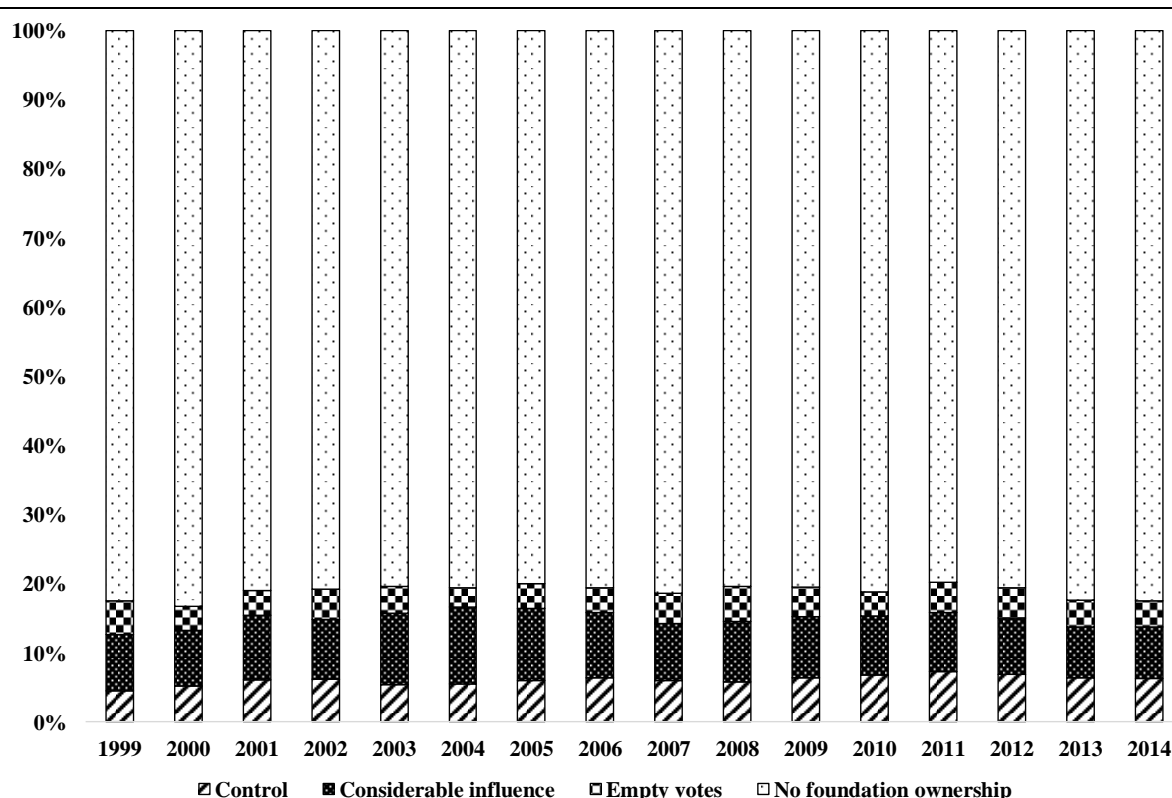


Figure 1 displays the number of foundation-owned firms and the number of firms with no foundation ownership as a share of total firms on the Stockholm Stock Exchange. **Control** is set if the foundation either has >50 percent ownership, or if the foundation is the largest shareholder with at least 20 percent ownership at the same time as and the second largest shareholder of the same firm has less than 50 percent of the foundation's percentage ownership. **Considerable influence** is set if a foundation cannot fulfil the control criterion, the foundation's ownership is among the top 5 largest shareholders, and there is no other shareholder that fulfils the control criterion. **Empty votes** is set if control or considerable influence would had been fulfilled if not there was another shareholder that has fulfilled the control criterion. **No foundation ownership** comprises all firms on the Stockholm Stock Exchange where foundations are not among the top 5 shareholders.

A2. Total Number of Firms per Foundation Category

In terms of number of firms where foundation categories have either control or considerable influence, Family foundations is the largest foundation category comprising 7.9 percent on average of the total number of firms on the Stockholm Stock Exchange during the studied time-period. This in comparison to Employee foundations at 3.5 percent, Non-Family foundations at 2.3 percent, and Government foundations at 1.2 percent. As displayed in Figure 1, the total ownership in terms of number of firms have historically been relatively stable, however, in Figure 2 we can observe certain changes within Family foundations and Government foundations. The decrease in empty votes within the Family foundations category post the financial crisis is explained by one delisting (Firefly) and the divestment by the largest shareholders in two firms (Active Biotech and Beijer Alma). Potential explanations for the large increase in the Government foundation category during the Dot-com bubble in 2000-2002

(growing to 2.9 percent), only to slowly decrease thereafter to around 1 percent of the overall firms on the stock market, include less financial sensitivity to market fluctuations.

Figure 2 – Total Number of Firms per Foundation Category

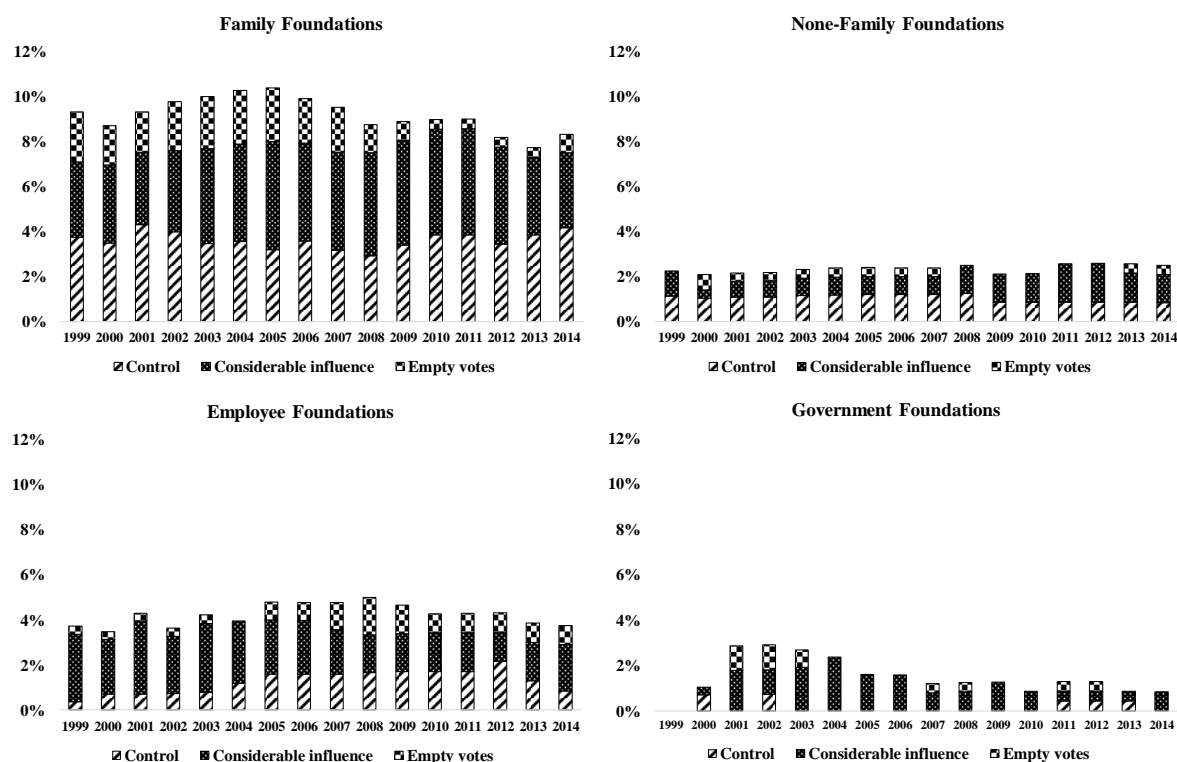


Figure 2 displays the number of foundation-owned firms and the number of firms with no foundation ownership as a share of total firms on the Stockholm Stock Exchange. **Control** is set if the foundation either has >50 percent ownership, or if the foundation is the largest shareholder with at least 20 percent ownership at the same time as and the second largest shareholder of the same firm has less than 50 percent of the foundation's percentage ownership. **Considerable influence** is set if a foundation cannot fulfil the control criterion, the foundation's ownership is among the top 5 largest shareholders, and there is no other shareholder that fulfils the control criterion. If there are more than one foundation among the top five largest shareholders and the considerable influence criterion is fulfilled, the largest foundation is deemed to have considerable influence. The only firms in the data sample where that simplification is cumbersome are SEB and VBG where a subjective assessment was made. **Empty votes** is set if control or considerable influence would had been fulfilled if not there was another shareholder that has fulfilled the control criterion. **No foundation ownership** comprises all firms on the Stockholm Stock Exchange where foundations are not among the top 5 shareholders.

A3. Effective Ownership of Total Market Capitalization

Based on Figure 3, one can observe that foundations between 1999-2014 on average have effective control of 19.0 percent and considerable influence of 31.9 percent of the Stockholm Stock Exchange, clearly displaying the importance and magnitude of foundations' prevalence within Swedish business society. The empty votes category comprises 4.5 percent of the index. The share split between control, considerable influence, empty votes and firms with no foundation ownership is relatively stable during the studied time-period, excluding 1999, 2000, and 2001, which is explained by the Dot-com bubble (the large decrease in market capitalization

is a result of the decrease in Ericsson's stock value, which prior to the Dot-com bubble stood for a large part of the Stockholm Stock Exchange and was under considerable influence by the foundation proxies Investor and Industrivärden).

Figure 3 – Effective Ownership of Total Market Capitalization

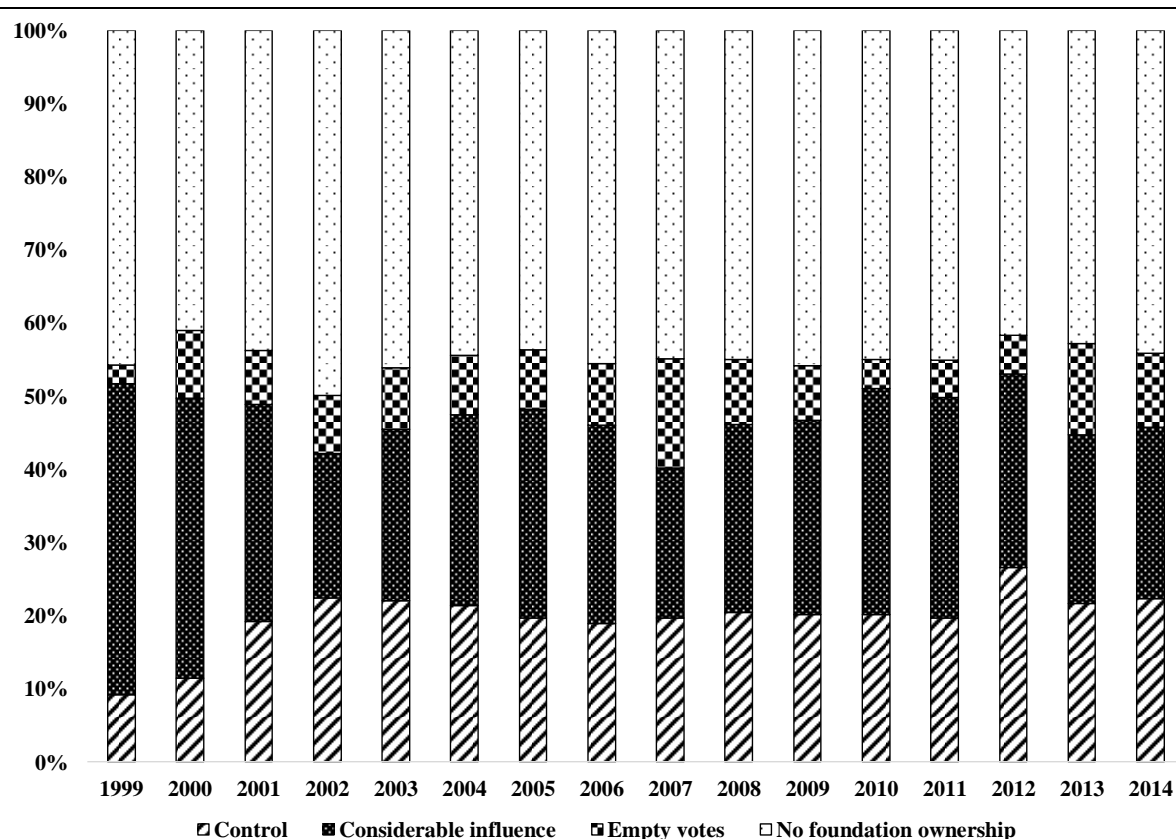


Figure 3 displays the market capitalization of foundation-owned firms and the market capitalization of firms with no foundation ownership as a share of the total Stockholm Stock Exchange market capitalization. **Control** is set if the foundation either has >50 percent ownership, or if the foundation is the largest shareholder with at least 20 percent ownership at the same time as the second largest shareholder of the same firm has less than 50 percent of the foundation's percentage ownership. **Considerable influence** is set if a foundation cannot fulfil the control criterion, the foundation's ownership is among the top 5 largest shareholders, and there is no other shareholder that fulfils the control criterion. **Empty votes** is set if control or considerable influence would have been fulfilled if not there was another shareholder that has fulfilled the control criterion. **No foundation ownership** comprises all firms on the Stockholm Stock Exchange where foundations are not among the top 5 shareholders.

Comparing Figure 1 to Figure 3, we can see that although only 15.0 percent of the listed firms on the Stockholm Stock Exchange are owned by foundations, these firms effectively own 50.9 percent of the total market capitalization, implying that foundations on average hold relatively large firms. This is confirmed when examining the data sample and comparing it to firms with no foundation ownership. Furthermore, the data sample provides ample evidence of cross-sectional ownership, confirming previous studies by La Porta et al., (1999). Examples include the Family foundations KAW (through Investor & FAM), the Söderberg foundations (through

Ratos), and Axel and Margaret Ax:son Johnson's foundations (through Nordstjernan), from which large effective ownership is managed over multiple firms, which differs from previous research made on the Danish market, where usually foundations hold only one firm (Thomsen & Hansmann, 2018).

A4. Effective Ownership of Total Market Capitalization per Foundation Category

Family foundations (control and considerable influence) have been stable since 2007, on average 23.9 percent of the Stockholm Stock Exchange market capitalization. Prior to that the category experienced high fluctuation, foremost between 1999 and 2002. As mentioned earlier, this can largely be explained by the stock value decrease of Ericsson. It is possible to discern a trend within effective control during the time-period. Excluding the first two years of the studied time-period, the effective control in 2001 was 12.4 percent, growing to 17.8 percent in 2014. The development is driven primarily by SEB, Electrolux and Atlas Copco. It can further be seen that considerable influence has decreased, which is mostly explained by market capitalization fluctuations in Ericsson, rather than a transition in ownership from considerable influence to control.

The Non-Family foundation category has experienced large volatility during the studied time-period; initially composed of control and empty votes, transitioning to considerable influence, to finally being foremost composed of considerable influence and empty votes. The large decrease in terms of control and the large transition between empty votes and considerable influence is explained by ownership changes in Swedbank and Nordea, which constitute a large part of the Non-Family total market capitalization (see Figure 4).

Employee foundations have grown during the studied time-period, from a total of 9.4 percent (excluding empty votes) to 15.1 percent, where effective control and considerable influence have grown with 3.0 and 2.7 percentage points respectively. This development is foremost driven by growth in Volvo, Handelsbanken, Sandvik and SCA.

In Figure 2 one can observe that Government foundations own 1.2 percent on average of the Stockholm Stock Exchange during the studied time-period, whereas referring to Figure 4 (excluding empty votes) Government foundations have on average 0.1 percent effective control and considerable influence over the Stockholm Stock Exchange, partially explained by the small size of the firms that are controlled by Government foundations. From a corporate governance perspective, these firms impact on the Stockholm Stock Exchange is negligible.

Furthermore, Government foundations often hold small positions in many firms and are thus often not included among the top 5 shareholders and usually excluded from the analysis. The primary exception is the foundation Industrifonden which is very different from other Government foundations as it has a venture capital business model.

Figure 4 – Effective Ownership of Total Market Capitalization per Foundation Category

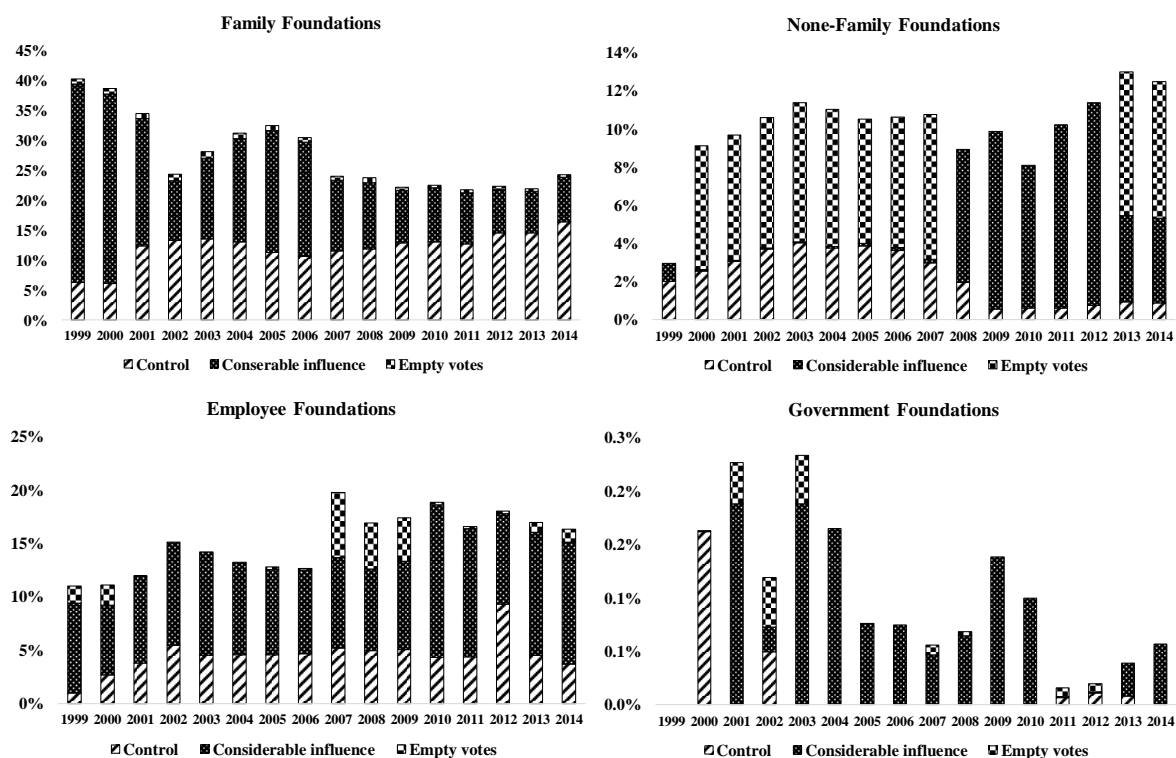


Figure 4 displays the market capitalization of foundation-owned firms and the market capitalization of firms with no foundation ownership as a share of the total Stockholm Stock Exchange market capitalization. **Control** is set if the foundation either has >50 percent ownership, or if the foundation is the largest shareholder with at least 20 percent ownership at the same time as and the second largest shareholder of the same firm has less than 50 percent of the foundation's percentage ownership. **Considerable influence** is set if a foundation cannot fulfil the control criterion, the foundation's ownership is among the top 5 largest shareholders, and there is no other shareholder that fulfils the control criterion. If there are more than one foundation among the top five largest shareholders and the considerable influence criterion is fulfilled, the largest foundation is deemed to have considerable influence. The only firms in the data sample where that simplification is cumbersome are SEB and VBG where a subjective assessment was made. **Empty votes** is set if control or considerable influence would had been fulfilled if not there was another shareholder that has fulfilled the control criterion. **No foundation ownership** comprises all firms on the Stockholm Stock Exchange where foundations are not among the top 5 shareholders.

A5. Foundation Industry and Ownership Structure Classification

Table 1 – Descriptive overview of the sectors per foundation category in the data sample

| | Total number of companies within each sector and foundation category | | | | Total |
|-----------------------|----------------------------------------------------------------------|------------------------|----------------------|------------------------|-----------|
| | Family foundations | Non-family foundations | Employee foundations | Government foundations | |
| Bank & Finance | 1 | 2 | 1 | 1 | 5 |
| Consumer | 8 | 0 | 3 | 1 | 12 |
| Healthcare | 8 | 1 | 0 | 3 | 12 |
| Industrials | 16 | 6 | 10 | 0 | 32 |
| IT & Technology | 3 | 0 | 1 | 4 | 8 |
| Raw Materials | 1 | 0 | 2 | 0 | 3 |
| Real Estate | 2 | 0 | 0 | 0 | 2 |
| Services | 0 | 1 | 1 | 0 | 2 |
| Telecom | 1 | 0 | 0 | 0 | 1 |
| Transport & Logistics | 3 | 0 | 0 | 0 | 3 |
| Total | 43 | 10 | 18 | 9 | 80 |

Table 1 presents an overview of the foundation-owned firms in the data sample, separated on sector and foundation category. The data contains only the firms that during the studied time-period at some point have been classified as "foundation-owned".

In Table 1, examining the data sample of 80 foundation-owned firms, we confirm that Family foundation-owned firms constitute the largest portion of the data sample during the studied time-period (53.8 percent), followed by Employee foundations (22.5 percent), Non-Family foundations (12.5 percent) and Government foundations (11.3 percent). Furthermore, it is possible to observe that foundation-owned firms are concentrated to the industrials sector, comprising 40.0 percent of the foundation-owned firms.

The number of foundation-owned firms within each sector is limited if examining different foundation categories (excluding Family foundations). However, Family, Non-Family and Employee foundations share many similarities when it comes to what type of sectors their holding firms operate in. Explanations include heritage and age of holdings, as certain sectors have been more common historically in Sweden. On the contrary, Government foundation-owned firms have very different characteristics and tend to be active within the healthcare and IT & Technology sector. Furthermore, these are often newly listed growth stage firms, foremost explained by Industrifonden's venture capital business model.

Moreover, in our data sample it is possible to see indications that foundations have a preference in holding share classes with higher voting rights. Randomly selecting year 2014, we find that 79.0 percent of the foundation-owned firms have more than one share class, in comparison to the total index where 51.5 percent of all firms have more than one share class. Additionally, we also observe that among the foundation-owned firms that have more than one share class, the ratio between voting rights and capital rights is 2.4 (average) and 1.8 (median), illustrating the inclination foundations have towards higher voting rights. Potential explanations could be historical reasons such as keeping the control within the founding family, mitigating the risk of dilution over generations, and protecting the firm from hostile-takeovers. Referring

to the paper Gompers et al. (2010), this discrepancy between votes and capital rights should decrease firm value.

B. Firm Operational Performance and Characteristics

B1. Return on Book Equity

Table 2 – t-tests performed on Return on Book Equity

| | Return on Book Equity | | | | | | | | | |
|------------------------|-----------------------|-------------|------------|------------|-------------------|-------------|-------------|------------|------------|-------------------|
| | Full Sample | | | | | Industrials | | | | |
| | N | Raw | Diff | t-stat | Stat. Significant | N | Raw | Diff | t-stat | Stat. Significant |
| All Foundations | 503 | 11.1 | 1.4 | 1.6 | | 213 | 17.4 | 5.9 | 6.3 | *** |
| Family Foundations | 262 | 10.0 | 0.3 | 0.3 | | 100 | 17.3 | 5.9 | 4.5 | *** |
| Non-family Foundations | 95 | 15.6 | 5.9 | 5.3 | *** | 51 | 15.8 | 4.4 | 3.0 | *** |
| Employee Foundations | 127 | 12.4 | 2.7 | 1.6 | | 62 | 18.8 | 7.4 | 5.5 | *** |
| Government Foundations | 19 | -4.6 | -14.4 | -2.8 | ** | n/a | n/a | n/a | n/a | n/a |

Table 2 provides descriptive statistics for the variables used in the estimation, using a sample of Swedish firms on the Stockholm Stock Exchange between 1999-2017. The sample has in total 3662 firm years (N), where 503 and 213 refers to foundation-owned firm years (combined control and considerable influence) on the full sample and industrials sector, respectively. All Foundations is the average financial metric (RoE*100) across the foundation categories (Family foundations, Non-Family foundations, Employee foundations, and Government foundations). Raw is average net income divided by average total equity multiplied by 100, whereas Diff is the deviation to the peer groups' corresponding financial metric. Next column displays the test statistics obtained using t-tests that are two-sided, unpaired with Welch approximation to the degrees of freedom. The Stat. Significant column displays the significance levels, where *******, ******, and ***** denote the statistical significance at the 1 percent, 5 percent, and 10 percent, respectively. Full sample includes all sectors.

Return on book equity is from a shareholder's perspective one of the primary considerations to evaluate for operational performance and successful corporate governance. In Table 2, the full sample of foundations performed on average 1.4 percentage points better than firms with no foundation ownership. Looking at the industrials sector, foundation-owned firms have on average return on book equity of 17.4 percent, which is 5.9 percentage points higher than firms with no foundation ownership, statistically significant at 1 percent level. These results are in-line with the work of Thomsen & Hansmann (2013) and Herrmann & Franke (2002). On the other hand, the findings contradict the results of Draheim & Franke (2015), albeit they used a different peer group. In terms of the different foundation categories, examining the full sample, we find that all categories except Government foundations have on average higher return on book equity than the peer group. Non-Family foundations have the highest average return on book equity at 15.6 percent, followed by Employee foundations (12.4 percent) and Family foundations (10.0 percent). Looking at the industrials sector, all categories perform better than the peer group, where the largest difference corresponds to Employee foundations having 7.4 percentage points better return on book equity compared to the peer group, followed by Family foundations (5.9 percentage points) and Non-Family foundations (4.4 percentage points), all significant at the 1 percent level. The result for both the full sample and the industrial sector gives an indication that agency theory by itself is not able to explain good corporate governance and operational performance, instead factors such as legacy, social embeddedness, self-

fulfillment or other intrinsic factors can play an important role explaining operational performance in terms of return on book equity.

Table 3 – Selection vs Causality

| Full Sample | | | | | |
|--------------------|-----|------|------------------|--------|-------------------|
| | N | Raw | Diff. FoF - FnoF | t-stat | Stat. Significant |
| FoF | 55 | 19.1 | 1.4 | 0.9 | |
| FnoF | 103 | 17.7 | | | |

Table 3 provides descriptive statistics for the variables used in the estimation, using a sample of 11 industrial Swedish firms on the Stockholm Stock Exchange between 1999-2017. The sample has in total 158 firm years (N), where 55 is FoF (foundation-owned firms, combined control and considerable influence), and 103 is FnoF (firms not owned by foundations). Thus, all firms in the test have both been FoF and FnoF during the sample period, to be able to test for the causality and selection issue. Raw is average net income divided by average total equity multiplied by 100, whereas Diff. FoF - FnoF is the deviation between the two groups' corresponding financial metric. Next column displays the test statistics obtained using t-tests that are two-sided, unpaired with Welch approximation to the degrees of freedom. The Stat. Significant column displays the significance levels, where ***, **, and * denote the statistical significance at the 1 percent, 5 percent, and 10 percent, respectively.

Table 3 includes only industrial firms and aims to provide an indication on whether the relationship of the higher return on book equity of foundation-owned firms is due to causality or selection. One can observe that although not statistically significant, the results point to the direction that foundations have a positive impact on the return on book equity.

B2. Return on Total Assets, Total Asset Turnover and EBIT-margin

Table 4 – Return on Total Assets

| Return on Total Assets | | | | | | | | | | |
|-------------------------------|--------------------|------------|------------|------------|-------------------|--------------------|-------------|------------|------------|-------------------|
| | Full Sample | | | | | Industrials | | | | |
| | N | Raw | Diff | t-stat | Stat. Significant | N | Raw | Diff | t-stat | Stat. Significant |
| All Foundations | 431 | 7.6 | 0.1 | 0.3 | | 213 | 10.5 | 2.4 | 4.8 | *** |
| Family Foundations | 237 | 6.7 | -0.8 | -1.3 | | 100 | 10.5 | 2.3 | 3.4 | *** |
| Non-family Foundations | 69 | 10.7 | 3.3 | 4.2 | *** | 51 | 10.9 | 2.7 | 3.4 | *** |
| Employee Foundations | 109 | 8.8 | 1.3 | 1.5 | | 62 | 10.3 | 2.2 | 2.9 | *** |
| Government Foundations | 16 | 0.3 | -7.2 | -2.4 | ** | n/a | n/a | n/a | n/a | n/a |

Table 4 provides descriptive statistics for the variables used in the estimation, using a sample of Swedish firms on the Stockholm Stock Exchange between 1999-2017. The sample has in total 3253 firm years (N), where 431 and 213 refers to foundation-owned firm years (combined control and considerable influence) on the full sample and industrials sector, respectively. All Foundations is the average financial metric (RoA*100) across the foundation categories (Family foundations, Non-Family foundations, Employee foundations, and Government foundations). Raw is average EBIT divided by average total assets multiplied by 100, whereas Diff is the deviation to the peer groups' corresponding financial metric. Next column displays the test statistics obtained using t-tests that are two-sided, unpaired with Welch approximation to the degrees of freedom. The Stat. Significant column displays the significance levels, where ***, **, and * denote the statistical significance at the 1 percent, 5 percent, and 10 percent, respectively. Full sample includes all sectors but Bank & Finance, and Real Estate.

Table 5 – Total Asset Turnover

| | Total Assets Turnover | | | | | | | | | |
|------------------------|-----------------------|-------------|--------------|-------------|-------------------|-------------|-------------|--------------|-------------|-------------------|
| | Full Sample | | | | | Industrials | | | | |
| | N | Raw | Diff | t-stat | Stat. Significant | N | Raw | Diff | t-stat | Stat. Significant |
| All Foundations | 431 | 1.20 | -0.20 | -6.5 | *** | 213 | 1.23 | -0.13 | -4.0 | *** |
| Family Foundations | 237 | 1.10 | -0.30 | -10.7 | *** | 100 | 1.11 | -0.24 | -6.8 | *** |
| Non-family Foundations | 69 | 1.33 | -0.05 | -1.0 | | 51 | 1.31 | -0.05 | -0.8 | |
| Employee Foundations | 109 | 1.30 | -0.10 | -0.8 | | 62 | 1.35 | -0.01 | -0.1 | |
| Government Foundations | 16 | 0.80 | -0.60 | -4.9 | *** | n/a | n/a | n/a | n/a | n/a |

Table 5 provides descriptive statistics for the variables used in the estimation, using a sample of Swedish firms on the Stockholm Stock Exchange between 1999-2017. The sample has in total 3253 firm years (N), where 431 and 213 refers to foundation-owned firm years (combined control and considerable influence) on the full sample and industrials sector, respectively. All Foundations is the average financial metric (Total Asset Turnover*100) across the foundation categories (Family foundations, Non-Family foundations, Employee foundations, and Government foundations). Raw is average sales divided by average total assets multiplied by 100, whereas Diff is the deviation to the peer groups' corresponding financial metric. Next column displays the test statistics obtained using t-tests that are two-sided, unpaired with Welch approximation to the degrees of freedom. The Stat. Significant column displays the significance levels, where ***, **, and * denote the statistical significance at the 1 percent, 5 percent, and 10 percent, respectively. Full sample includes all sectors but Bank & Finance, and Real Estate.

Table 6 – EBIT-margin

| | EBIT-margin | | | | | | | | | |
|------------------------|-------------|------------|------------|------------|-------------------|-------------|------------|------------|------------|-------------------|
| | Full Sample | | | | | Industrials | | | | |
| | N | Raw | Diff | t-stat | Stat. Significant | N | Raw | Diff | t-stat | Stat. Significant |
| All Foundations | 431 | 5.8 | 0.8 | 1.2 | | 213 | 9.0 | 3.4 | 6.9 | *** |
| Family Foundations | 237 | 4.9 | -0.1 | -0.1 | | 100 | 9.8 | 4.2 | 6.3 | *** |
| Non-family Foundations | 69 | 8.2 | 3.2 | 5.4 | *** | 51 | 8.4 | 2.8 | 4.5 | *** |
| Employee Foundations | 109 | 7.5 | 2.4 | 3.8 | *** | 62 | 8.1 | 2.5 | 3.7 | *** |
| Government Foundations | 16 | -2.5 | -7.5 | -1.4 | | n/a | n/a | n/a | n/a | n/a |

Table 6 provides descriptive statistics for the variables used in the estimation, using a sample of Swedish firms on the Stockholm Stock Exchange between 1999-2017. The sample has in total 3253 firm years (N), where 431 and 213 refers to foundation-owned firm years (combined control and considerable influence) on the full sample and industrials sector, respectively. All Foundations is the average financial metric (EBIT-margin*100) across the foundation categories (Family foundations, Non-Family foundations, Employee foundations, and Government foundations). Raw is average EBIT divided by sales multiplied by 100, whereas Diff is the deviation to the peer groups' corresponding financial metric. Next column displays the test statistics obtained using t-tests that are two-sided, unpaired with Welch approximation to the degrees of freedom. The Stat. Significant column displays the significance levels, where ***, **, and * denote the statistical significance at the 1 percent, 5 percent, and 10 percent, respectively. Full sample includes all sectors but Bank & Finance, and Real Estate.

In Table 4, the full sample shows that foundation-owned firms on average have similar return on total assets as firms with no foundation ownership, although not statistically significant. Looking at industrial firms owned by foundations however, these firms have on average higher return on total assets, statistically significant at 1 percent level. The findings on the industrials sector are in accordance with previous research made by Thomsen & Hansmann (2013), whereas it differs from research made by Draheim & Franke (2015). We find higher return on total assets compared to the respective peer groups for all foundation categories within the industrial sector, statistically significant at the 1 percent level. The highest return of assets is achieved by Non-Family foundations at 10.9 percent (2.7 percentage points above the peer group), followed by Family foundations at 10.5 percent and Employee foundations at 10.3 percent in return on total assets. The overall results on return on total assets, combined with the results on return on book equity, are in-line with previous literature developed by Anderson & Reeb (2003), contradicting the theories of Morck & Yeung (2003).

In Table 5, firms owned by any foundation category have lower total asset turnover compared to their peer groups in both the full sample and the industrial sectors. The results on total asset turnover vary in statistical significance, but the results indicate that irrespective of foundation category, foundations tend to hold more capital-intensive firms, and/or these firms in general have lower efficiency and utilization of their total assets. The results could be explained by the arguments outlined by Draheim & Franke (2015) and Borsting & Thomsen (2017) that foundation-owned firms are more socially responsible, such as being vertically integrated with less outsourced production compared to peer firms to protect jobs. The results in Table 5 and Table 6 suggest that the higher return on total assets that foundation-owned industrial firms perform should be explained by a higher EBIT-margin.

In terms of EBIT-margin, foundation-owned firms are particularly strong within the industrial sector where all foundation categories outperform the peer group, excluding Government foundations. Furthermore, the results are statistically significant at the 1 percent level. The strongest margins are found within Family foundations, having an EBIT-margin of 9.8 percent. The results could be explained by the fact that most of these firms tend to be mature and of relatively large size, thus have had time to improve EBIT-margins during a long period of time and achieve economies of scale. Although higher EBIT-margins compared to the peer group but not as profound difference as for Family foundations, Employee and Non-Family foundations firms have similar characteristics as firms owned by Family foundations. However, firms owned by Government foundations on the contrary are often loss-making growth stage firms within the healthcare and IT & Technology sectors, which should explain the low EBIT-margin of this foundation category on the full sample and lack of observations within the industrial sector.

B3. Payout-ratio

Table 7 – Payout-ratio

| | Payout-ratio | | | | | | | | | |
|------------------------|--------------|-------------|-------------|------------|-------------------|-------------|-------------|-------------|------------|-------------------|
| | Full Sample | | | | | Industrials | | | | |
| | N | Raw | Diff | t-stat | Stat. Significant | N | Raw | Diff | t-stat | Stat. Significant |
| All Foundations | 503 | 42.4 | 10.5 | 5.5 | *** | 213 | 50.8 | 16.5 | 5.7 | *** |
| Family Foundations | 262 | 40.7 | 8.9 | 3.2 | *** | 100 | 48.5 | 14.3 | 3.8 | *** |
| Non-family Foundations | 95 | 49.1 | 17.2 | 5.5 | *** | 51 | 51.6 | 17.3 | 3.5 | *** |
| Employee Foundations | 127 | 47.2 | 15.4 | 4.4 | *** | 62 | 53.8 | 19.6 | 3.5 | *** |
| Government Foundations | 19 | 0.0 | -31.8 | -44.4 | *** | n/a | n/a | n/a | n/a | n/a |

Table 7 provides descriptive statistics for the variables used in the estimation, using a sample of Swedish firms on the Stockholm Stock Exchange between 1999-2017. The sample has in total 3662 firm years (N), where 503 and 213 refers to foundation-owned firm years (combined control and considerable influence) on the full sample and industrials sector, respectively. All Foundations is the average financial metric (payout-ratio*100) across the foundation categories (Family foundations, Non-Family foundations, Employee foundations, and Government foundations). Raw is average dividend divided by net income multiplied by 100, whereas Diff is the deviation to the peer groups' corresponding financial metric. Next column displays the test statistics obtained using t-tests that are two-sided, unpaired with Welch approximation to the degrees of freedom. The Stat. Significant column displays the significance levels, where ***, **, and * denote the statistical significance at the 1 percent, 5 percent, and 10 percent, respectively. Full sample includes all sectors.

Dividends are a fundamental part of a foundation's wealth and income. Examining the work of Thomsen & Hansmann (2018) and Draheim & Franke (2015), the former found no difference in total shareholder return (not examining dividend separately from share appreciation) whereas the latter found lower payout-ratio arguing that firms owned by foundations have more conservative financing policy. In appendix, Table A6 show that on average 59 percent of the firms with no foundation ownership pay dividends each year, whereas on average 97 percent of Non-Family, 88 percent of Employee, and 79 percent of Family pay dividends each year.

Furthermore, all results in Table 7, statistically significant at 1 percent level, contradict both previous papers regarding the payout-ratio. The results indicate that foundation-owned firms have on average 10.5 percentage points higher payout-ratio compared to the peer group (full sample). Firms owned by Government foundations are not applicable on the payout analysis as they are growth stage firms that do not pay dividends. For the industrials sector, the average payout-ratio is 50.8 percent, 16.5 percentage points above firms with no foundation ownership. Employee foundations have the highest payout policy at 53.8 percent, followed by Non-Family foundations at 51.6 percent and Family foundations at 48.5 percent. The results of the industrials sector are in-line with expectations that foundation-owned firms should have higher payout-ratios as most foundations are dependent on continuous financing to secure funding to their charitable commitments.

Examining the full sample in greater detail, Non-Family foundations have the highest payout-ratio. Similar to Family and Employee foundations, Non-Family foundations usually have a historical connection to their primary holdings. Given the need for funding to fulfill their

charitable commitments, the result aligns with the assumption that Non-Family foundations will demand a high dividend. However, DeAngelo & DeAngelo (2000) argues that the need for higher payout-ratio might be at the expense of long-term sustainability; these actions might be firm value destructive in the long-term by removing funds from future investments. Another plausible explanation could be that Non-Family foundations take a less active ownership role compared to for instance some Family foundations, which could make a high dividend a tool to compensate for potential information asymmetry and limit management's ability to use excess funds in their own interest (Jensen, 1986).

Similarly, Employee foundations have a high payout-ratio relatively to the peer group. Employee foundations share many attributes with pension funds as they have no philanthropic links, and are responsible for managing the wealth to their consignees. These attributes put Employee foundations closer to Jensen & Meckling's (1976) and Shleifer & Vishny's (1986) definition of a principal (compared to other foundation categories). However, unlike pension funds, Employee foundations are not as inclined or able to achieve this through trading shares, leaving dividend to be the primary option for safeguarding pensions and increasing wealth to employees, a potential explanation to the high payout-ratio.

Family foundations have the lowest payout-ratio among the foundations (excluding Government foundations), on average 40.7 percent (8.9 percentage points above that of the peer group). Family foundations have a stronger tendency to be active owners, working actively with strategic decision-making through board and management positions in their holding firms. Therefore, the Family foundation category arguably has a wider range of extrinsic and intrinsic motivations compared to other foundation categories; although dividend and financial compensation is of great importance, there are multiple other factors in play (Akerlof & Cranton, 2005; Morck & Yeung, 2003; Besley & Gathak, 2005; Dzansi, 2012; Anderson et al., 2003). Their often closer relationship with the holding firms should reduce agency problems, increasing the trust that the firm will work in the shareholders interest and reducing the need to limit management by enforcing high dividends (relative to the other foundation categories). However, as elaborated on by Morck & Yeung (2003), Anderson et al. (2003) as well as DeAngelo & DeAngelo (2000) and Lin et al. (2013), a different kind of agency problem might arise between different shareholders as the family might have other incentives such as preserving legacy, status and similar at the expense of other shareholders and firm value. This makes the motives of a Family foundation less predictable for other shareholders.

B4. Equity-to-Assets ratio

Table 8 – E/A

| | E/A | | | | | | | | | |
|------------------------|-------------|-------------|-------------|-------------|-------------------|-------------|-------------|-------------|-------------|-------------------|
| | Full Sample | | | | | Industrials | | | | |
| | N | Raw | Diff | t-stat | Stat. Significant | N | Raw | Diff | t-stat | Stat. Significant |
| All Foundations | 503 | 38.6 | -8.9 | -9.4 | *** | 213 | 39.6 | -3.2 | -3.3 | *** |
| Family Foundations | 262 | 40.2 | -7.3 | -5.9 | *** | 100 | 38.0 | -4.8 | -3.6 | *** |
| Non-family Foundations | 95 | 35.8 | -11.8 | -5.4 | *** | 51 | 48.0 | 5.3 | 3.4 | *** |
| Employee Foundations | 127 | 34.6 | -12.9 | -8.3 | *** | 62 | 35.2 | -7.6 | -5.5 | *** |
| Government Foundations | 19 | 57.2 | 9.7 | 1.7 | | n/a | n/a | n/a | n/a | n/a |

Table 8 provides descriptive statistics for the variables used in the estimation, using a sample of Swedish firms on the Stockholm Stock Exchange between 1999-2017. The sample has in total 3662 firm years (N), where 503 and 213 refers to foundation-owned firm years (combined control and considerable influence) on the full sample and industrials sector, respectively. All Foundations is the average financial metric (E/A*100) across the foundation categories (Family foundations, Non-Family foundations, Employee foundations, and Government foundations). Raw is average total equity divided by total assets multiplied by 100, whereas Diff is the deviation to the peer groups' corresponding financial metric. Next column displays the test statistics obtained using t-tests that are two-sided, unpaired with Welch approximation to the degrees of freedom. The Stat. Significant column displays the significance levels, where ***, **, and * denote the statistical significance at the 1 percent, 5 percent, and 10 percent, respectively. Full sample includes all sectors.

In Table 8, looking at the full sample it is possible to discern that all results are statistically significant at the 1 percent level and that, regardless of foundation category, foundation-owned firms have lower E/A compared to their peer group (excluding Government foundations). In the industrials sector the results are also statistically significant at 1 percent level. Furthermore, the results for the full sample and the industrials sector are similar except for Non-Family foundations that within the Industrials sector have higher E/A compared to its peer group. The findings on E/A are inconsistent with the findings of Thomsen & Hansmann (2013), Herrmann & Franke (2002), and Draheim & Franke (2015), finding that foundation-owned firms have a more conservative capital structure (i.e. higher E/A) compared to their peer group. They argue that foundations are more risk-averse, have long-term commitments to different causes and that they are strongly tied to their portfolio firms. Albeit many of these aspects are relevant and applicable on the foundations in our data sample, there are multiple reasons why foundation-owned firms could have lower E/A as well. For instance, foundations need dividend to fulfill their charitable commitments, they are only able to keep a small amount of their income received each year, thus less able to participate in new equity issues, and consequently their holding firms are forced to use leverage to finance capital expenditures and other investments. Figure 5 could serve as another explanation to why foundation-owned firms in Sweden have lower E/A; some of the foundations own multiple firms which might reduce their risk-aversion and illiquidity issues compared to foundation-owned firms in previous research. Furthermore, the relatively high payout-ratio impact the foundation-owned firms' capital structures as it

reduces retained equity in the firms. In addition, the lower E/A might be used (to a larger extent) as a tool to mitigate agency problems in Sweden compared to Denmark and Germany.

Figure 5 – Average E/A dependent on foundation portfolio constellation

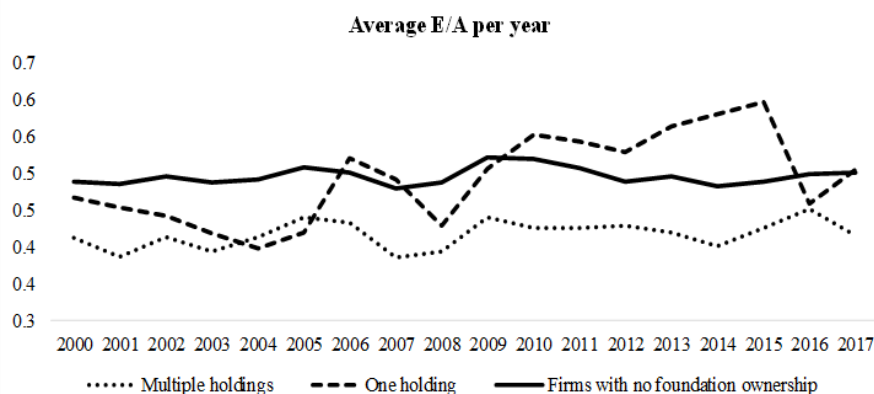


Figure 5 displays average E/A per year for each respective group using a sample of Swedish firms on the Stockholm Stock Exchange between 1999-2017. The sample has in total 3253 firm years and has excluded the sectors Banks & Finance, and Real Estate have been excluded from the computation. The figure separate foundation-owned firms in three distinctive groups: (1) firms owned by foundations that hold multiple firms at the same time, (2) firms owned by foundations that only hold one firm at a time, and (3) firms not owned by foundations.

Examining the capital structure of specific foundation categories (full sample), we can see that all foundations have lower E/A compared to the peer group except for Government foundations. Employee foundations have on average 34.6 percent E/A, Non-Family foundations 35.8 percent and Family foundations 40.2 percent. Government foundations have an average of 57.2 percent, 9.7 percentage points lower leverage than the peer group.

Employee foundations are constrained in terms of capital as they have pension and personnel commitments, which makes them less able to use their wealth to finance holding firms' investment needs through e.g. participating in equity issues. In addition, Employee foundations are sometimes restricted to divest shares in their holdings as they are required to hold a controlling position in the firm they are tied to (e.g. the VBG foundations). This implies that Employee foundations' sometimes restricted access to capital forces their holding firms to rely on lower E/A by using debt instead of taking in additional capital through an equity issue. Furthermore, the relatively high payout-ratio (see Table 7) reduces the equity within the firm and further lowers the E/A. As Employee foundations may not always be active shareholders, the lower E/A should also be a tool to mitigate any agency problems.

Non-Family foundations have the second lowest E/A of 35.8 percent (11.8 percentage points lower than the peer group). Many of the Non-Family foundations are also required to hold a controlling position in a specific firm, which often ties up a large portion (or all) of the

foundation's assets. Thus, like the Employee foundations, the Non-Family foundations capital might be restricted in how it can be used and consequently puts their holding firms in a position to rely on debt to finance investment needs. Furthermore, Non-Family foundations charitable commitments create a need of cashflows depicted through the relatively high payout-ratio (see Table 7), which reduces the firm's retained equity. However, the low E/A can also be viewed as a tool to mitigate potential agency problems.

Looking into Family foundations, a small discrepancy arises in the results. Although having lower E/A than the peer group, the results compared to other foundation categories contradict certain findings by Anderson et al. (2003). They argue that family firms due to their connectiveness to society and long-term relationships with financial institutions are more careful in their workings so as not to ruin relationships, making banks aware of this and trusting the firms more, lowering their cost of debt. The paper doesn't elaborate on the implications on E/A, but a lower cost of debt would allow family firms to have a lower E/A compared to other entities, which is a finding that arguably should be applicable on Family foundation-owned firms too. Ellul et al. in 2009 also finds that family firms in countries with high investor protection (such as Sweden) have lower cost of debt. However, Anderson et al. (2003) also discuss that Family firms (foundations) are likely more inclined to focus on survival (less risk) than value maximization, implying a higher E/A. Nevertheless, the higher E/A compared to Employee and Non-Family foundations-owned firms should also be explained by less need to mitigate agency problems as well as being a consequence of the relatively conservative payout policy.

B5. Capital Expenditures to Total Sales

Table 9 – Capital Expenditures to Total Sales

| | Capex/Sales | | | | | | | | | |
|------------------------|-------------|------------|------------|------------|-------------------|-------------|------------|------------|------------|-------------------|
| | Full Sample | | | | | Industrials | | | | |
| | N | Raw | Diff | t-stat | Stat. Significant | N | Raw | Diff | t-stat | Stat. Significant |
| All Foundations | 431 | 3.6 | 0.2 | 0.8 | | 213 | 3.3 | 0.3 | 1.3 | |
| Family Foundations | 237 | 3.7 | 0.2 | 0.9 | | 100 | 3.4 | 0.5 | 1.4 | |
| Non-family Foundations | 69 | 2.3 | -1.1 | -5.7 | *** | 51 | 2.6 | -0.3 | -1.4 | |
| Employee Foundations | 109 | 4.0 | 0.6 | 1.9 | * | 62 | 3.5 | 0.6 | 1.8 | * |
| Government Foundations | 16 | 5.0 | 1.5 | 1.1 | | n/a | n/a | n/a | n/a | n/a |

Table 9 provides descriptive statistics for the variables used in the estimation, using a sample of Swedish firms on the Stockholm Stock Exchange between 1999-2017. The sample has in total 3253 firm years (N), where 431 and 213 refers to foundation-owned firm years (combined control and considerable influence) on the full sample and industrials sector, respectively. All Foundations is the average financial metric (capex/sales*100) across the foundation categories (Family foundations, Non-Family foundations, Employee foundations, and Government foundations). Raw is average capital expenditure divided by sales multiplied by 100, whereas Diff is the deviation to the peer groups' corresponding financial metric. Next column displays the test statistics obtained using t-tests that are two-sided, unpaired with Welch approximation to the degrees of freedom. The Stat. Significant column displays the significance levels, where ***, **, and * denote the statistical significance at the 1 percent, 5 percent, and 10 percent, respectively. Full sample includes all sectors but Bank & Finance, and Real Estate.

In Table 9, from a statistical point of view, no clear conclusion can be drawn regarding the differences in how much foundation-owned firms and firms with no foundation ownership on average invest in capital expenditure. The data is only statistically significant for Non-Family and Employee foundations on the full sample; Non-Family have 1.1 percentage points less capital expenditure than the peer group statistically significant at 1 percent level, while Employee foundations have 0.6 percentage points higher capital expenditure statistically significant at 10 percent level. The result from Non-Family foundations are reasonable given the high payout-ratio, and the relatively low E/A examining the full sample, which should reduce the available capital expenditure resources.

Although many of the ratios are statistically insignificant, Table 11 gives an indication that foundation-owned firms on average spend slightly more on capital expenditure than the peer group. This data would be in accordance with the study made by McKinsey (2017) and Souder et al. (2016), finding that higher capital expenditure and long-termism have a positive correlation with profitability, contradicting that of Morck (2000), arguing that family firm conglomerates and legacy entities (such as Family foundations and the likes) have lower R&D and are often value destructive for society as a whole.

C. Regressions

As depicted in Figure 1 and 3, foundation-owned firms are on average larger compared to firms with no foundation ownership, which is a factor not controlled for in the t-tests. However, even though the regressions in Tables 10-13 include the natural logarithm of annual sales to control for the firm size aspect, and that the adjusted R-squared is between 32.7 percent and 73.8 percent, there could still be a risk for an omitted variable bias. In-line with expectations, the natural logarithm of annual sales increases return on book equity and payout-ratio, while decreasing E/A, statistically significant at 1 percent level in all regressions. Although foundations tend not to trade their holdings, in Table 3 we can observe that 11 industrial firms changed their status of being classified as foundation-owned firms during the studied time-period. That should imply that using firm fixed effects is an appropriate methodology to test for the causality or selection issue. The number of changes in foundation ownership status is lowest for Non-Family foundations, thus the results for that foundation category is less reliable. What is more, the data sample's time-period is only 18 years, which is important to consider in the causality and selection issue, i.e. the data sample does not capture that some firms have been

owned by the same foundations longer than 18 years, arguably a factor that could affect the variables too.

Table 10 – Return on Book Equity regressed on Foundation Categories and Annual Sales

| | Return on book equity |
|-----------------------------------|-----------------------|
| Family foundations | -0.029 (0.030) |
| Non-Family foundations | 0.062* (0.037) |
| Employee foundations | 0.114 (0.086) |
| Government foundations | -0.112 (0.119) |
| Natural logarithm of annual sales | 0.042*** (0.015) |
| N | 3662 |
| Adjusted R-squared | 0.399 |

Note: * p<0.1; ** p<0.05; ***p<0.01

Table 10 shows the result from a pooled-OLS regression clustered on firm-level, with both time and firm fixed effects. The sample consists of 3662 firm years of Swedish firms listed on the Stockholm Stock Exchange between 1999-2017. All sectors in the data sample are included. The dependent variable return on book equity is in percentage where 0.01 refers to 1 percent. Family foundations, Non-Family foundations, Employee foundations, and Government foundations are dummy variables taking the value of one if the respective foundation category have control or considerable influence of the firm. The natural logarithm of annual sales, measured in SEK thousands, is a control variable.

In Table 10, considering return on book equity, the estimated coefficients of Family and Government foundations are negative, however not statistically significant. Employee foundations and Non-Family foundations seem to have a positive impact on return on book equity as the estimated coefficients on these variables are positive, where the latter is statistically significant at 10 percent level. The results are similar to the results in the t-test in Table 2, except for Family foundations. Building on the result by Dzansi (2012), one could argue that intrinsic factors such as social embeddedness should provide explanatory value to the excess operational performance compared to firms with no foundation ownership. However, similar intrinsic factors should also be applicable on Family foundations, yet Family foundations seem to impact return on book equity somewhat negatively compared to firms with no foundation ownership. Morck & Yeung (2003) argues that firms where families are the largest shareholders might have other incentives at the expense of other shareholders,

decreasing firm value, which could serve as an explanation to the sub-optimal operational performance. Furthermore, in Family foundations there are more commonly overlap between the members of foundations and the board of directors of the holding firms, which according to Thomsen & Hansmann (2018) leads to worse financial performance, contradicting Anderson & Reeb (2003) stating that family firms have higher performance when family members are operationally active.

Table 11 – Payout-ratio regressed on Foundation Categories and Annual Sales

| | Payout-ratio |
|-----------------------------------|----------------------|
| Family foundations | 0.052 (0.072) |
| Non-Family foundations | -0.021 (0.145) |
| Employee foundations | 0.097 (0.088) |
| Government foundations | -0.131*** (0.049) |
| Natural logarithm of annual sales | 0.044*** (0.017) |
| N | 3662 |
| Adjusted R-squared | 0.328 |

Note: * p<0.1; ** p<0.05; ***p<0.01

Table 11 shows the result from a pooled-OLS regression clustered on firm-level, with both time and firm fixed effects. The sample consists of 3662 firm years of Swedish firms listed on the Stockholm Stock Exchange between 1999-2017. All sectors in the data sample are included. The dependent variable payout-ratio is in percentage where 0.01 refers to 1 percent. Family foundations, Non-Family foundations, Employee foundations, and Government foundations are dummy variables taking the value of one if the respective foundation category have control or considerable influence of the firm. The natural logarithm of annual sales, measured in SEK thousands, is a control variable.

In Table 11, the estimated coefficients of Family foundations and Employee foundations are positive, while the estimated coefficients of Non-Family foundations and Government foundations are negative, which indicate that Employee foundations followed by Family foundations demand higher dividends, which is a slight deviation from the results obtained in the t-test. The results can possibly be explained by Employee foundations' mandate to safeguard wealth to employees, commonly obtained through dividends and to mitigate agency problems. However, only the estimated coefficient of Government foundations is statistically significant. Nevertheless, one could interpret the result as Family foundations increasing dividends more

than what should be viewed as optimal in terms of capital allocation. Consequently, this behavior could be at the expense of funds appropriated to long-term investments, adding explanatory value to the lower return on book equity that firms owned by Family foundations have. However, the results on Government foundation-owned firms are reasonable as these firms tend to be growth stage healthcare and IT & Technology firms with no dividends.

Table 12 – E/A regressed on Foundation Categories and Annual Sales

| | E/A |
|-----------------------------------|----------------------|
| Family foundations | 0.008 (0.024) |
| Non-Family foundations | 0.048* (0.026) |
| Employee foundations | 0.033 (0.034) |
| Government foundations | -0.070 (0.068) |
| Natural logarithm of annual sales | -0.035*** (0.009) |
| N | 3662 |
| Adjusted R-squared | 0.738 |

Note: * p<0.1; ** p<0.05; ***p<0.01

Table 12 shows the result from a pooled-OLS regression clustered on firm-level, with both time and firm fixed effects. The sample consists of 3662 firm years of Swedish firms listed on the Stockholm Stock Exchange between 1999-2017. All sectors in the data sample are included. The dependent variable E/A is in percentage where 0.01 refers to 1 percent. Family foundations, Non-Family foundations, Employee foundations, and Government foundations are dummy variables taking the value of one if the respective foundation category have control or considerable influence of the firm. The natural logarithm of annual sales, measured in SEK thousands, is a control variable.

In Table 12 examining E/A, the results show that all foundation-owned firms except for firms owned by Government foundations have higher E/A compared to firms with no foundation ownership. However, only the estimated coefficient of Non-Family foundation is statistically significant. The result contradicts the results from the t-tests on E/A, but is on the other hand in-line with previous research on foundation-owned firms arguing that the conservative capital structures are due to risk aversion as they need to be able to fulfill their charitable commitments on a going concern, and that foundations are more long-term oriented which the t-tests in Table 9 indicated by the higher capex/sales ratios in the t-tests.

Table 13 – Return on Book Equity, Payout-ratio, and E/A regressed on Control and Considerable Influence and Annual Sales, respectively

| | Return on book equity | Payout-ratio | E/A |
|-----------------------------------|------------------------------|---------------------|----------------------|
| Control | 0.030 (0.023) | 0.043 (0.056) | 0.007 (0.023) |
| Considerable influence | -0.005 (0.037) | 0.032 (0.057) | 0.012* (0.020) |
| Natural logarithm of annual sales | 0.043*** (0.015) | 0.042*** (0.017) | -0.036*** (0.009) |
| N | 3662 | 3662 | 3662 |
| Adjusted R-squared | 0.398 | 0.327 | 0.738 |

Note: * p<0.1; ** p<0.05; ***p<0.01

Table 13 shows the results from three pooled-OLS regressions clustered on firm-level, with both time and firm fixed effects. The sample consists of 3662 firm years of Swedish firms listed on the Stockholm Stock Exchange between 1999-2017. All sectors in the data sample are included. The dependent variables (1) return on book equity, (2) Payout-ratio, and (3) E/A are in percentage where 0.01 refers to 1 percent. Control and Considerable Influence are dummy variables taking the value of one if any foundation category have control or considerable influence of the firm. The natural logarithm of annual sales, measured in SEK thousands, is a control variable.

In Table 13, we use control and considerable influence as independent variables instead of foundation categories, which is another approach to analyze whether foundation ownership have causality on the financial metrics of their holding firms. Regarding the regression on return on book equity in Table 13, the estimated coefficient of considerable influence is negative, whereas the estimated coefficient of control is positive. The difference of 0.035 between these variables, although statistically insignificant, indicate that firms in which foundations take control leads to higher return on book equity, even though foundations do not have a residual claim, and according to agency theory thus should have limited incentives to perform good corporate governance. Furthermore, this result contradicts literature by Morck & Yeung (2003), Anderson et al. (2003) and DeAngelo & DeAngelo (2000), arguing that concentrated ownership structures could destroy firm value. Regarding the regressions on E/A and payout-ratio in Table 13, the independent variables are not statistically significant, and the estimated coefficients' (control and considerable influence) impact on E/A is almost zero. Hence, it is cumbersome to draw any inferences. However, regarding the payout-ratio, one can observe that in-line with the t-tests and in contrast with previous research, foundation ownership seems to be associated with a higher payout-ratio. Interestingly, the payout-ratio seems to increase even more when a foundation becomes the controlling shareholder. The findings considering payout-ratios should

align with the reasoning of Einarsson & Wijkström (2015) that foundations' most important income is dividends. Moreover, the result could at the same time be viewed as the preferred tool for foundations to mitigate potential agency problems.

VI. Conclusion

This paper seeks to provide insights on the prevalence of foundation ownership on the Stockholm Stock Exchange, and to analyze the operational performance of these firms through a corporate governance perspective. The topic is of relevance due to the nature of foundations being non-profit and self-governing entities, which according to common literature on corporate governance, e.g. agency theory, should lead to sub-optimal operational performance.

Our results show that foundations have control or considerable influence of about 15.0 percent of the total number of firms on the Stockholm Stock Exchange, where the most common sector is industrials. Furthermore, these firms sum up to about 50 percent of the total market capitalization on the Stockholm Stock Exchange, implying that foundation-owned firms tend to be relatively large compared to firms with no foundation ownership. This shows that foundations are an important factor within Swedish business society and welfare. Previous research on the Danish market finds similar results as foundations stand for about 70 percent of the market capitalization. We further find that the largest foundation category in terms of market capitalization are Family foundations, followed by Employee foundations, Non-Family foundations, and Government foundations, respectively. Plausible explanations to Family foundations being the largest category include age and heritage. Influential families such as Wallenberg, Söderberg and Ax:son Johnsons have developed their firms during the last century, comprising a large share of the Family foundation category's total market capitalization. Moreover, our results indicate that foundations tend to own firms that have more than one share class, and that they have an inclination to own share classes with more voting than capital rights. Potential reasons include historical connection to the firm, keeping the control within the founding family, mitigating the risk of dilution over generations, and protecting the firm from hostile-takeovers. However, according to Gompers et al. (2010), foundations inclination to hold higher share classes should lead to decrease in firm value.

In-line with previous research on foundation-owned firms, our results contradict the institutionalized literature of good corporate governance as foundation-owned firms in Sweden seem to perform at least on par to firms with no foundations ownership in terms of return on book equity, although with variations among foundation categories depending on the performed

statistical test. Outlined explanations in previous research on foundation-owned firms argue that foundations are more long-term oriented, have intrinsic motivational drivers that make up for the lack of residual claims, and invest more in capital expenditures, attributes that should increase return on book equity. The excess operational performance in terms of return on book equity can foremost be seen among Employee foundations and Non-Family foundations. Previous research regarding how the overlap between holding firms' board of directors and representatives of the foundations might impact operational performance finds that more involvement leads to worse operational performance (Thomsen & Hansmann, 2018). With that said, our results show similar indications as firms owned by Family foundations display slightly lower returns than other foundation categories. Regarding E/A, the different statistical tests do not display coherent results. On the one hand, foundations limited ability to raise additional equity for equity insertion in their holding firms forces their holding firms to use more debt, hence lowering the E/A. On the other hand, the long-term nature of foundations with the mandate to manage their wealth in perpetuity would indicate a preference towards a more conservative capital structure to mitigate risk exposure. Previous research find that foundation-owned firms have higher E/A compared to firms with no foundation ownership. Furthermore, in contrast with previous research our results show that foundation-owned firms have higher payout-ratios compared to firms with no foundation ownership. Reasons should include that the return on endowed capital is the primary income source to Swedish foundations (Einarsson & Wijkström, 2015). In addition, the requirement and need to pursue charitable commitments and other obligations in Sweden might differ compared to Denmark and Germany, which possibly can explain the higher payout-ratios in our data sample. Moreover, one could also argue that the higher payout-ratios foundation-owned firms in Sweden have should be a tool to mitigate potential agency problems (Jensen, 1986; Rozeff, 1982).

Our results strengthen the view that residual claims are not the only motivational factor in terms of good corporate governance. Previous research on corporate governance on foundations have primarily been produced in Denmark and Germany, while this paper adds value by examining the Swedish market. In addition, this paper provides additional insights to how different foundation categories act, what their potential motivational drivers are, and how this ultimately affect firms owned by foundations. The primary limitations of our results include the possible differentiation in active ownerships both between and within foundation categories, as well as potential idiosyncratic risk the data sample may pertain given cross-holdings by large foundation entities such as KAW through Investor and FAM. Future research to be added to

this field of corporate governance include the following: (1) conduct in-depth interviews with representatives from different foundation categories to increase explanatory value regarding foundation's motivational drivers. (2) Compare Family foundations to family firms due to their presumed similarities in origin, but with different incentives and residual claims. (3) Examine foundations' attitude to environmental, social and governance factors as foundations have attributes similar to non-profit organizations. (4) Analyze foundations' inclination to own share classes with more voting than capital rights. (5) Perform a similar corporate governance analysis on private firms owned by foundations rather than publicly listed firms.

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VIII. Appendix

Table A1 – Total list of all examined foundations

| # | Namn | # | Namn | # | Namn |
|----|-----------------------------------------|----|---------------------------------------------------|-----|----------------------------------------|
| 1 | ABB Pensionsstiftelse | 47 | Kempe Minnesstiftelse | 93 | Skagsudde AB Pensionsstiftelser |
| 2 | Apotekets Pensionsstiftelse | 48 | Kempe stiftelser | 94 | Skanska Pensionsstiftelse |
| 3 | Ax:son Johnson Helge Stiftelse | 49 | KK-Stiftelsen | 95 | Skanska Resultatandelsstiftelse |
| 4 | Beijer Kell o Märta stiftelse | 50 | Kooperationens pensionsstiftelse | 96 | SLK-anställda stiftelse |
| 5 | Beijer Kjell 80 årsstiftelse | 51 | Krefting Herman Stiftelse | 97 | Sparbanksstiftelserna |
| 6 | Bergendahls stiftesler | 52 | Kronprinsessan Margareta Stiftelse | 98 | Stenbeck Hugo Stiftelse |
| 7 | Bjerkens Karl Stiftelse | 53 | Kärven resultatandelsstiftelse | 99 | Stiftelse för främjande & Utveckling |
| 8 | Björkman Johan Stiftelse | 54 | Linnea & Josef Carlsson Stiftelse | 100 | Stiftelsen för Rättsvetenskap |
| 9 | Brio AB:s intressefond | 55 | LMK stiftelsen | 101 | Stiftelsen för Strategisk Forskning |
| 10 | Brio AB:s Personalstiftelse | 56 | Makarnas Mannviks minnesfond | 102 | Stiftelsen Guldeken |
| 11 | Brio AB:s Veteranfond | 57 | Malfors Promotor AB (Hjalmar Svenfelts stiftelse) | 103 | Stig och Ragna Gorthons Stiftelse |
| 12 | Browaldh Tore stiftelse | 58 | Margaretagården Stiftelse | 104 | Stohnes Gun o Bertil stiftelse |
| 13 | Bruksfondens stiftelse | 59 | Mälarenergi resultatandelsstiftelse | 105 | Swedbank Personalstiftelser |
| 14 | Carl-Olof och Jenz Hamrins stiftelse | 60 | Nicolin Curt stiftelse | 106 | Sydow Frans von Stiftelse |
| 15 | Chalmers Tekniska Högskola | 61 | Nordbankens Pensionsstiftelse | 107 | Söderberg Johan & Jakob Stiftelse |
| 16 | Crafoordska Stiftelsen | 62 | Nordea Danmark Fond | 108 | Söderbergstiftelserna |
| 17 | Dahlströmska stiftelsen | 63 | Nordea Pensionsstiftelse | 109 | Teknikbrostift i Lund |
| 18 | Dickson Robert Stiftelse | 64 | Nordea vinstandelsstiftelse | 110 | Teknikbrostift i Uppsala |
| 19 | Dunkersstiftelserna | 65 | Nordstjärnan | 111 | Teknikbrostiftelsen i Linköping |
| 20 | EB-Stiftelsen | 66 | Oktogonen | 112 | Telias Pensionsstiftelser |
| 21 | Engvist Olle Stiftelse | 67 | Posten Pensionsstiftelser | 113 | Traction Nouveau AB pensionsstiftelse |
| 22 | Enfors Familjestiftelse | 68 | Praktikertjänst Pensionsstiftelser | 114 | Traction Stiftelse |
| 23 | FAM | 69 | Ratos | 115 | Trygg stiftelsen |
| 24 | Familjen Kamprads Stiftelse | 70 | Resultatandelsstiftelsen Kärven | 116 | Trygger Stiftelser |
| 25 | Francke Nils Stiftelse | 71 | Richerts J Gust stiftelse | 117 | Uppsala Universitets Stiftelseförening |
| 26 | Försäkringsbranschens Pensionsstiftelse | 72 | Riksbankens Jubileumsfond | 118 | Wallander & Hedelius stiftelse |
| 27 | GCF stiftelse | 73 | Robertsfors personalstiftelse | 119 | Wallenberg Elsa Stiftelse |
| 28 | Godmarksstiftelsen | 74 | Rosenblad Lott & Nils stiftelse | 120 | Wallenberg Jacob Stiftelser |
| 29 | Gustafsson Göransson stiftelser | 75 | Rosenblad M Stiftelse | 121 | Wallenberg M Häradsövding stiftelse |
| 30 | Gälöstiftelsen | 76 | Rydin Bo Stiftelse | 122 | Wallenberg Marcus Stiftelse |
| 31 | Göteborgs Barnhus Stiftelse | 77 | Sager-Wallenberg Peder Stiftelse | 123 | Wallenberg Peter Stiftelse |
| 32 | H&Q Pensionsstiftelse | 78 | Sandvik Personalstiftelse | 124 | Wallenberg Tekn Dr M Fond |
| 33 | Handelshögskoleföreningen | 79 | Sandvik resultatandelsstiftelse | 125 | Wallenbergstiftelserna |
| 34 | Henriksson kyrkoherde stiftelse | 80 | Sapere Aude Trust | 126 | Wallstiftelsen |
| 35 | Håkansson Dr P Stiftelse | 81 | SB-Stiftelsen | 127 | Vattenfall pensionsstiftelse |
| 36 | Håkansson Ulla Stiftelse | 82 | SCA pensionsstiftelser | 128 | VBG-SLK stiftelse |
| 37 | Ikano | 83 | SCA personalstiftelse | 129 | Vin & Sprit stiftelse |
| 38 | Ikea Investment | 84 | Scania Resultatbonusstiftelse | 130 | Volvo Pensionsstiftelse |
| 39 | Industrifonden | 85 | Scans Pensionsstiftelse | 131 | Volvo PV resultatstiftelse |
| 40 | Industrivärden | 86 | Scribona vinstandelsstiftelse | 132 | Volvo resultatstiftelse |
| 41 | Industrivärdens pensionsstiftelse | 87 | SEB utvecklingsstiftelse | 133 | Vårdalstiftelsen |
| 42 | Intentia Vinstandelsstiftelse | 88 | SEB-Stiftelsen | 134 | ÅF Stiftelse för forskning |
| 43 | Inter Ikea Investment AB | 89 | SHB Pensionsstiftelse | 135 | ÅFOND Stiftelse |
| 44 | Investor | 90 | SHB Personalstiftelse | 136 | Östersjöstiftelsen |
| 45 | John och Claire Arnold stiftelse | 91 | Sigtunastiftelsen | | |
| 46 | Julin Ruth & Richard Stiftelse | 92 | Sjöbergstiftelsen | | |

Table A1 depicts an exhaustive list of all foundations examined in this paper. Many of the foundation names in the list does not represent the true legal name, but is often an abbreviation. Furthermore, certain foundations have been merged, e.g. Söderbergstiftelserna and Wallenbergstiftelserna, therefore the original list of examined foundations is more extensive.

Table A2 – Total list of foundations with top 5 shareholding positions used in the analysis

| # | Namn | # | Namn |
|----|------------------------------------------|----|-----------------------------------------|
| 1 | ÅF forskningsstiftelse | 35 | Malfors Promotor AB |
| 2 | ÅF-Gruppens Fondstiftelse | 36 | Marianne & Marcus Wallenberg Stiftelse |
| 3 | ÅFOND stiftelse | 37 | Nordea Danmark fonden |
| 4 | Anders Wall Stiftelser | 38 | Nordstjernan |
| 5 | Apotekets pensionsstiftelse | 39 | Östersjöstiftelsen |
| 6 | Arnold John & Claire stiftelse | 40 | Ragnar Söderbergs stiftelse |
| 7 | Beijer Kjell & Märta stiftelse | 41 | Ratos |
| 8 | Bergendahls Stiftelser | 42 | Richerts J Gust minne stiftelse |
| 9 | Brio AB:s Intressefond | 43 | Riksbankens Jubileumsfond |
| 10 | Brio AB:s Personalstiftelse | 44 | Rosenblad Lott & Nils stift |
| 11 | Brio AB:s Veteranfond | 45 | Sager-Wallenberg Peder st |
| 12 | Carl-Olof och Jenz Hamrins Stiftelse | 46 | SCA pensionsstiftelse |
| 13 | Crafoordska Stiftelsen | 47 | SEB-Stiftelsen |
| 14 | Dunker Henry Förvaltning AB | 48 | SHB pensionsstiftelse |
| 15 | Dunkersintressen | 49 | Sparbanksstiftelserna |
| 16 | EB-stiftelsen | 50 | Stiftelsen ÅForsk |
| 17 | Försäkringsbranschens pensionsstiftelse | 51 | Stiftelsen Marcus och Amalia Wallenberg |
| 18 | Gålöstiftelsen | 52 | Stiftelsen Oktogonen |
| 19 | Göranssons stiftelser | 53 | Stiftelsen Olle Engkvist Byggmästare |
| 20 | Henry Dunkers Donationsfond & stiftelser | 54 | Stiftelsen SLK-anställda |
| 21 | Herman Kreftings stiftelse | 55 | Stiftelsen VBG-SLK |
| 22 | Hevea AB | 56 | Stohne Gun & Bertil stiftelse |
| 23 | Ikano Investments Ltd | 57 | Sydow Frans von stiftelse |
| 24 | Ikea Investment AB | 58 | Teknikbrostift i Linköping |
| 25 | Industrifonden | 59 | Torsten Söderbergs stiftelse |
| 26 | Industrivärden | 60 | Trygg Stiftelsen |
| 27 | Industrivärdens pensionsstiftelse | 61 | Trygger stiftelser |
| 28 | Intentia Vinstandelsstiftelse | 62 | Unidanmark Trust |
| 29 | Inter Ikea Investment AB | 63 | Volvo pensionsstiftelser |
| 30 | Investor | 64 | Volvo resultatstiftelse |
| 31 | Julin Ruth & Richard stift | 65 | Wallander & Hedelius stiftelse |
| 32 | Kempestiftelserna | 66 | Wallenberg Marcus fond |
| 33 | KK-stiftelsen | 67 | Wallenberg-Stiftelser |
| 34 | LMK-bolagen & Stiftelse | | |

Table A2 comprises all foundations that have at some point between 1999-2017 been among the top 5 shareholders of a firm classified as “foundation-owned” in the data sample. The names in the table represent the ones used by the book series “Ägarna och Makten” as well as the database Holdings.se. Some of the foundation names represent the same foundation, but in order to be able to reproduce the analysis, all names have been included. Proxies used such as Investor, Ratos and Nordstjernan are also displayed.

Table A3 – Calculations of used financial metrics

$$RoE = \frac{Net\ Income}{Average\ Book\ Equity} = \frac{Net\ Income_t}{\frac{Total\ Book\ Equity_{t-1} + Total\ Book\ Equity_t}{2}}$$

$$RoA = \frac{EBIT}{Average\ Total\ Assets} = \frac{EBIT_t}{\frac{Total\ Assets_{t-1} + Total\ Assets_t}{2}}$$

$$EBIT\ Margin = \frac{EBIT_t}{Total\ Sales_t}$$

$$Payout\ Ratio = \frac{Cash\ Dividend_{t+1}}{Net\ Income_t}$$

$$Equity\ to\ Asset\ Ratio = \frac{Year\ End\ Book\ Equity_t}{Year\ End\ Book\ Assets_t}$$

$$Total\ Asset\ Turnover = \frac{Total\ Sales}{Average\ Total\ Assets} = \frac{Total\ Sales_t}{\frac{Total\ Assets_{t-1} + Total\ Assets_t}{2}}$$

$$Capex\ Ratio = \frac{Capital\ Expenditures_t}{Total\ Sales_t}$$

Table A3 depicts component specifications of made calculations in this paper.

Table A4 – Number of foundation-owned firms within each sector

| Sector Classification | Total # of Firms |
|------------------------------|-------------------------|
| Bank & Finance | 5 |
| Consumer | 12 |
| Healthcare | 12 |
| Industrials | 32 |
| IT & Technology | 8 |
| Raw Materials | 3 |
| Real Estate | 2 |
| Services | 2 |
| Telecom | 1 |
| Transport & Logistics | 3 |
| Media & Entertainment | 0 |
| Natural Resources & Energy | 0 |
| Total | 80 |

Table A4 presents an overview of the sector classification used in the paper, as well as the distribution of foundation-owned firms.

Table A5 – Regression specifications

$$RoE_i = \beta_1 \text{Family foundation}_i + \beta_2 \text{Non – Family foundation}_i + \beta_3 \text{Employee foundation}_i + \beta_4 \text{Government foundation}_i + \beta_5 \ln(\text{annual sales})_i + \sum_{t=1999}^{2017} \beta_t \text{Year}_{i,t} + \sum_{i=1}^{405} \beta_i \text{Firm}_{i,t}$$

$$\text{Payout – ratio}_i = \beta_1 \text{Family foundation}_i + \beta_2 \text{Non – Family foundation}_i + \beta_3 \text{Employee foundation}_i + \beta_4 \text{Government foundation}_i + \beta_5 \ln(\text{annual sales})_i + \sum_{t=1999}^{2017} \beta_t \text{Year}_{i,t} + \sum_{i=1}^{405} \beta_i \text{Firm}_{i,t}$$

$$E/A_i = \beta_1 \text{Family foundation}_i + \beta_2 \text{Non – Family foundation}_i + \beta_3 \text{Employee foundation}_i + \beta_4 \text{Government foundation}_i + \beta_5 \ln(\text{annual sales})_i + \sum_{t=1999}^{2017} \beta_t \text{Year}_{i,t} + \sum_{i=1}^{405} \beta_i \text{Firm}_{i,t}$$

$$RoE_i = \beta_1 \text{Control}_i + \beta_2 \text{Considerable influence}_i + \beta_3 \ln(\text{annual sales})_i + \sum_{t=1999}^{2017} \beta_t \text{Year}_{i,t} + \sum_{i=1}^{405} \beta_i \text{Firm}_{i,t}$$

$$\text{Payout – ratio}_i = \beta_1 \text{Control}_i + \beta_2 \text{Considerable influence}_i + \beta_3 \ln(\text{annual sales})_i + \sum_{t=1999}^{2017} \beta_t \text{Year}_{i,t} + \sum_{i=1}^{405} \beta_i \text{Firm}_{i,t}$$

$$E/A_i = \beta_1 \text{Control}_i + \beta_2 \text{Considerable influence}_i + \beta_3 \ln(\text{annual sales})_i + \sum_{t=1999}^{2017} \beta_t \text{Year}_{i,t} + \sum_{i=1}^{405} \beta_i \text{Firm}_{i,t}$$

Table A5 presents the specifications of the performed regressions in the paper

Table A6 – Percentage of foundation-owned firms distributing dividend

| Year | Family | Non-Family | Employee | Government | Other |
|----------------|---------------|-------------------|-----------------|-------------------|--------------|
| 1999 | 93% | 100% | 89% | n/a | 53% |
| 2000 | 93% | 100% | 75% | 0% | 54% |
| 2001 | 93% | 80% | 67% | 0% | 50% |
| 2002 | 88% | 100% | 75% | 0% | 51% |
| 2003 | 93% | 100% | 75% | 0% | 51% |
| 2004 | 88% | 100% | 86% | 0% | 54% |
| 2005 | 80% | 100% | 86% | 0% | 61% |
| 2006 | 80% | 100% | 100% | 0% | 62% |
| 2007 | 80% | 100% | 100% | 0% | 61% |
| 2008 | 64% | 67% | 100% | 0% | 57% |
| 2009 | 60% | 100% | 100% | n/a | 55% |
| 2010 | 71% | 100% | 100% | n/a | 64% |
| 2011 | 63% | 100% | 100% | 0% | 66% |
| 2012 | 71% | 100% | 100% | 0% | 60% |
| 2013 | 73% | 100% | 83% | 0% | 57% |
| 2014 | 75% | 100% | 80% | 0% | 64% |
| 2015 | 80% | 100% | 83% | 0% | 69% |
| 2016 | 75% | 100% | 86% | 0% | 71% |
| Average | 79% | 97% | 88% | 0% | 59% |

Table A6 depicts the percentage of foundation-owned firms within each foundation category as well as firms with no foundation ownership (i.e. other) that pay dividends. 100% means that all firms within a category pay dividend, whereas 0% means no firm within the category pay dividend.