Interactions between non-profit finance, governance and investment style

Eeva Ahdekivi

Aalto University

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Abstract

This book studies the economic and investment behavior of foundations, as well as the general environment of non-profit governance and of equity investments by non-profit foundations. The book is structured as follows. The Introduction presents the rationale for non-profits, some basic characteristics of non-profits and especially of foundations, and compares the economic motivation of non-profit foundations with that of for-profit companies. Essay 1 examines the root causes of governance choices in foundations, and the consequences of such governance choices. Essay 2 empirically investigates the equity portfolios of foundation investors and confirms typical characteristics of foundations as investors.

The governance in foundations, a wealth-endowed subset of non-profits, differs fundamentally from the governance principles of for-profit corporates on three dimensions: (1) foundations do not have legal owners who could exert external control over the foundation; (2) without universal measures, such as profitability or stock market valuation, the efficient economic behavior of foundations is difficult to assess; and (3) most foundations are established to exist in perpetuity and are not subjected to any market for control.

Thus, Essay 1 focuses on the following questions. Firstly, (1) which foundation-specific characteristics explain the accumulation of power at the board level in the governance of foundations? A sample of 891 foundations in Finland is empirically investigated using data on the foundations' detailed rules, financials, and other characteristics. A new index measure for the concentration of control in foundations is constructed. Secondly, (2), the first Essay examines whether governance choices may have any consequences on foundations' grant-making or other charitable spending.

One of the possible drivers for governance choices include a foundation's financiers. In absence of owners, the regular financiers such as donors, customers or the public sector may exert power over how the foundation is administered. In order to investigate the effect of financing, Essay 1 classifies sample foundations into four categories, based on their main source of finance. The empirical results suggest that a foundation's source of finance is associated with the concentration of decision powers.

Foundations that have to regularly approach outside sources of finance– donors, public sector or customers– show less concentration of power on the board level than foundations that can finance their missions with capital income from an endowment. We also find that foundations with a less concentrated governance model spend more on charitable *operations* than foundations with concentrated governance. However, in *grantmaking* foundations this association does not emerge: governance is not related to the level of grantmaking.

In our second Essay, we argue for the need to understand the investment behaviour of various investor types, and present empirical evidence of non-profits' equity investment style, based on data on portfolios of listed equity owned by 530 foundations during the years 2000-2013. Overall, foundations are active risk-takers: they can carry concentrated equity risk by not diversifying their portfolios towards the industry breakdown of the general market index. Foundations are shown to be infrequent traders, with relatively low equity portfolio turnover. If they decide to own a stock for longer than one year, they remain owner for 3.6 years on average (in the 13-year sample period). In addition, the majority of their single shareholdings stay intact from year to year. Foundations do not adjust their positions frequently.

Foundation age and size are related to the equity allocation of foundations' portfolios: older and larger foundations diversify more along the lines of the market index breakdown. We also find that older foundations trade less frequently than younger ones.

Essays in this book present new insights into non-profit economic behavior. Concerning governance, Essay 1 suggests a measure (Foundation Governance Index) and a determinant (the source of finance of a foundation) for governance in non-profits. Concerning investments, Essay 2 confirms empirically that non-profits have a distinct equity investment style.

Keywords: Non-profit, foundation, charity, governance, foundation governance index, investment style, investor activity, allocation, diversification, trading, long-term ownership.

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Eeva Ahdekivi

Contents

List of Concepts, Abbreviations and Symbols

Active Share   Measure of deviation from market index weights in an investor's portfolio, based on the Cremers & Petäjistö (2009) article.

Change-in-ownership –indicator or Change indicator

Measure of an investor's trading activity that detects if a single stock holding has changed by more than 10 percent in one year.

Donative foundation

Foundation that is mainly financed through donations from the general public.

Endowed foundation

Foundation that is mainly financed through investment income from an endowment.

Endowment   An accumulation of donations of money or property to a non-profit organization for the ongoing support of that organization. Often the endowment is structured so that the principal amount is kept intact while the investment income generated by the endowment is available for use, or part of the principal is released each year, which allows for donations to have an impact over a longer period. The total value of an institution's assets is often referred to as the institution's endowment.

FGI   Foundation Governance Index, defined in first chapter, section 4.1. FGI is the number of provisions in a foundation's rules that concentrate decision powers to the foundation board.

Grantmaking foundation

                       Foundation which carries out its charitable work by granting money to charitable or societal causes. The opposite of operational foundation (see below).

ICNPO   International Classification of Non-Profit Organizations, by the United Nations

MLR   Multinomial Logistic Regression

OLR   Ordinal Logistic Regression

OLS   Ordinary Least Squares Regression

Operative foundation

                       Foundation that is mainly financed through its own business operations, the proceeds of which go to a charitable mission.

Operational foundation

                       Foundation that carries out its charitable work by its own employees, programs and presence among beneficiaries. Operational foundation is the opposite of a grant-making foundation that does not employ charity workers, researchers or the like, but gives grants to carry out such work.

INTRODUCTION TO NON-PROFITS AND CHARITABLE FOUNDATIONS

1. Non-profits as economic agents

The non-profit sector has dramatically grown in the developed world. Foundations controlled up to USD 715bn of the wealth in the U.S. and EUR 494bn in Europe by the year 2012.[1] Furthermore, the wealth controlled by non-profit foundations has been steadily increasing over the past decades. The accumulation of private wealth makes it possible to donate increasing sums to altruistic causes. Inefficiency and the scarcity of money in the public sector frustrate citizens and motivate philanthropists to seek quick solutions to current problems. Successful businessmen offer their management skills to the use of the third sector by setting up foundations. Unlike companies, non-profits seldom go bankrupt or restructure - many are meant to live forever. Their growth is facilitated by tax exempt status which accelerates the wealth accumulation in periods of high investment or operational returns. The third sector is growing and is by nature perpetual (see, e.g., Hansmann (1980), Rose-Ackerman (1996), Lakdawalla and Philipson (2006) and Thomsen (2013)).

Non-profits own quoted companies, hospitals, universities and cultural institutions. Through their investment and ownership, they represent an important economic agent. Hence, it is in the general interest to see that the third sector is reasonably well governed.

Regulators have noted that the third sector lacks the vital controlling element of shareholders, and that there are genuine risks of inefficiency, fraud or criminal activity. A lack of owners creates inherent moral hazards in non-profits (see, e.g., Fama and Jensen (1983)) because foundations possess wealth and management efforts are not observable. For this reason, we need to look into governance issues in non-profits, but the elements to do so are radically different from those in corporate governance. This research aims to clarify those fundamental moral hazard situations typical to a non-distribution, non-risk-taking world. This then allows us to identify plausible factors accentuating or mitigating moral hazard.

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1   Grantmaking foundations for the US. Foundations data for Europe estimated from EFC data center.

2. Rationale for non-profits

Information deficiencies, agency theory and the trust between economic agents explains much of the existence of the third sector. The pathfinding understanding originated from Weisbrod (1964), who first recognized the economics of "collective consumption vs. individual consumption goods", referring to non-chargeable goods that have positive value for the individual and society. The option to use a garden or a hospital has value, though an individual may not be willing to pay for it. It is beneficial to subsidize such production, especially when starting costs are high and the probability of use is relatively low (e.g., national parks). The Public Goods Theory suggests that if a firm produces a service with public-good attributes (positive externalities), a for-profit will produce an amount satisfying demand but not necessarily the socially optimal amount. Customers will typically pay one uniform price, whereas consumers' marginal benefit from the public good varies. The amount produced will only cater for market-clearing priced production and not the rest[2]. Moreover, consumers may not fully appreciate their own marginal benefit from the public good. They only evaluate their own, current benefit and not the positive externality (e.g., value of option to use national parks, or the benefit of education to the society).

Weisbrod (1997) later argued along similar lines that the government only provides services needed to satisfy the median voter. Rare or unique needs are not provided for with public money, leaving part of the demand unsupplied. Rare needs do not represent enough voting power for the politicians. However, Weisbrod's theory does not provide an answer to why non-profits should fill the gap in demand, and not the for-profit firms. This theory, as described above, is best suited for commercial non-profits: they operate marginal businesses that are not offered by the public or private sector. Examples of this would include a museum for avant-garde art or a hospital for rare diseases. Weisbrod concluded that non-profits fill the heterogeneous demand gaps not filled by government. The more heterogeneous the demand, the more there is room for non-profits. This

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2   Lindahl-pricing is not used.

would predict, for example, that many European countries with their relatively homogenous populations would cover most of the demand with uniform public supply, whereas diverse nations would need more non-profit production.

Price discrimination theories discuss the ability to accept different prices for the same goods as a motive for the non-profit sector. Extracting consumer surplus helps keep alive producers that could otherwise not produce profitably (Malani, Philipson, and David (2003)).

More generally, asymmetric information has been identified as a reason for non-profits. This line of thinking is also called Contract Failure Theory (Hansmann (1980)). If consumers[3] cannot verify and control the quality of goods or services and cannot contractually protect themselves, they prefer to buy from someone who cannot distribute profits[4]. The non-distribution constraint offers consumers some protection against fraud and poor quality. Even if this suspicion is not shared by all consumers, it has been shown to exist with many. Consequently, for-profit and non-profit providers may co-exist and share a customer base with different attitudes to the agency problem[5].

This agency theoretic rationale has many advocates. Arrow (1963) recognized that uncertainty about a doctor's motivations may be the reason why so many hospitals in the USA operate on a non-profit base: there is no motivation for the hospital to order excess examinations or expensive drugs. Hansmann (1980) suggests that non-profits appear in sectors where quality cannot be verified, or is difficult to verify, such as nurseries or elderly care. Fama and Jensen (1983) consider the agency problem between donors and residual claimants of an organization. They consider the wish to bequeath money to specified causes as given, and ponder on the problem of how to ensure the donor's money is not claimed by residual claimants. As "money has no ear-mark", this is impossible to verify[6]. This leads non-profit organizations - without residual claimants (owners) – to being the organization form best suited for charity, as they do not strive for profits. Rising interest in corporate responsibility has contributed to the popularity of non-profits. Earlier, the information asymmetry between

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3   For non-profits a "consumer" can also mean the donor to a charity, or a patron or member of a society. This could refer to anyone providing money to an organization, hoping to achieve an objective. "Help to the poor in Africa" may be the product, as well as "playing golf as cheaply as is feasible".

4   It is also important that the information asymmetry is often not resolved ex post, as in cases, such as the "lemons" dilemma. Thus, sanctions do not help. Hines, Horwitz, and Nichols (2010).

5   Among others, Ben-Ner (2002) and Glaeser and Shleifer (2001).

6   A similar moral hazard problem also arises inside non-profits. An example is given by Weisbrod and Asch (2010). If one donates a sum to a specific department of a hospital or a university, the administrators might reduce the general budget of that department by a corresponding amount. The donor should be assured that his donation is "on top of anything that would have been given in absence of donation". Such assurance seldom takes place in real life.

consumer and company was maybe too abstract to motivate consumer behavior, but this asymmetry has now become mainstream – consumers want to trust societies with which they deal. This has brought an important advantage to non-profits, which are not able to distribute profits. From the workers' perspective, non-profits may appear to be more stable and their purpose more motivating. In addition, non-profits offer both volunteer and paid work, leaving ample possibilities to choose either part-time or other flexible means of working (Ghatak and Mueller (2011), Glaeser (2002)).

We conclude that the defining characteristic of non-profits, the absence of owners and the non-distribution of funds, is vital for the existence of non-profits. Societies have created the foundation-form to avoid certain moral hazard problems (as discussed above). However, the lack of owners causes foundations to have one control element less in their governance (compared to corporates) and as a result, a new moral hazard in their management[7]. This lack of control may affect the behavior of non-profits as economic agents: they may hoard endowment capital and/or spend too little money inefficiently on their charitable mission. We develop this proposition further in Section 3.1 and in the first essay, Section 2.

In the following two essays, we shall investigate the forming of non-profit governance and its effect on non-profit economic behavior. To provide background to the essays, we shall first examine the general environment of non-profit governance.

2.1 Foundations

The main focus of our study is charitable foundations. They represent a sub-group of non-profits. The other non-profit forms include associations, unions, churches and trusts, as coded in the local legislation. The defining characteristic of a foundation is that capital is set aside to form the foundation[8]. Associations are a collections of members, whereas foundations represent chests of money that cannot be distributed to other causes than their specific mission[9]. Thus, foundations are of prime interest as economic agents, since they must make economic decisions. The terms "non-profit" and "foundation" are used interchangeably in this

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7   In order to avoid the agency costs due to information asymmetry about quality (the contract failure theory) by denying distribution of profits from the foundation, foundations forego the possibility of having a body that would have material interest to control the foundation. This is the paradox of foundations' governance.

8   Legislators do not consider the requirement of an *initial* capital outlay for a foundation to be necessary. Rather, it is the ongoing necessity to finance charitable work, combined with the non-distribution prohibition that causes foundations to accumulate funds. On the other hand, Anheier (2001) defines: "A separate, identifiable asset donated to a particular purpose, usually public in nature."

9   Hopt and Hippel (2010), page 539.

book[10]. However, the reader should note that not all results or observations on foundations can be generalized to other types of non-profits that do not possess wealth and as a consequence whose motivations clearly differ from those of foundations

All foundations do not possess an abundance of money. Many have a small endowment to begin with and have to seek financing by operative work, such as selling T-shirts and sports services, or through donations. The endowment of some foundations is a fixed asset that can be used to earn money – consequently, the foundation's financial reporting shows that the foundation lives off the operative income, not the endowment yield. Hospital or theater buildings are examples of such assets. However, foundations that have either accumulated a large financial endowment over the years, or received one from a philanthropist-entrepreneur, tend to be the best-known foundations.

Foundations can be eternal[11] or of determinate life. In our understanding most of the foundations are eternal in most countries, although global statistics on this are not available. The eternal nature is considered one of the defining characteristics of the foundation sector[12], even if examples of determinate lifetime foundations have emerged in recent years[13]. In this, foundations differ markedly from the first sector economic agents who are exposed to changes brought on by the market for control.

Foundations have a *mission statement* that is the equivalent of the profit-making rationale in the corporate world. The mission statement is not the strategy or the method for financing the non-profit, but the reason why the foundation exists. The mission is defined by the founder(s), and it is important that the mission carefully follows the stipulations of the founder[14]. Note the difference between operations conducted in order to finance the mission versus those conducted to realize the charitable

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10　This vocabulary choice was adapted because much of the research literature uses the term non-profit. This may be for two reasons: foundations can carry different names in different legislations, e.g., charity, trust, endowment, and a more generic term is needed. Another reason may be that the word "foundation" has several meanings, leading to confusion with topics such as "foundations of finance" vs. "financing of foundations". Non-profit has thus become the leading key-word in economic research of foundations.

11　Founded to exist for an undefined time period. Closing of a foundation is strictly controlled in most countries, and motivation for closing is typically scarce, especially if the foundation possesses an endowment.

12　A characteristic commonly mentioned by foundation administrators and lobbyists, and often considered an absolute virtue. We interviewed 16 largest foundations, the regulator, a lobbying organisation and public authorities. See Ahdekivi (2014) for further details.

13　Bill and Melinda Gates Foundation is an example. The foundation ceases to exist 20 years after the founders' death.

14　Our understanding is that changing a foundation's mission or rules is made difficult by the authorities in order to prevent the abuse of tax exemptions. If foundations were a flexible tool for ever-changing operations, they might be more easily used for dubious purposes, with a tax benefit and almost no public reporting. Thus they have to be strictly followed. Furthermore, keeping strictly to the founder's rules entices new founders to create new foundations, as they feel that their legacy is eternally safe.

mission. These may look alike or even merge, for example, in the case of charitable hospitals that charge low service fees. Still, the difference does exist in the case of a commercial hospital (operations=financing) whose profits are used to care for the homeless (=mission).

When assessing what is a "successful" or "large" foundation, financials do not provide a suitable measure. An operative foundation may employ thousands of persons but make zero profits, thereby accumulating a slim balance sheet. "Successful" must thus be assessed qualitatively: how well and efficiently the mission is achieved. "Large" can be measured by the size of the foundation's personnel or grant-making. However, success and size are often confused with the size of the endowment, as argued by Weisbrod and Asch (2010), which accentuates the moral hazard in endowment building[15].

The rules of foundations correspond to the articles of association of a corporate. They define what the governing bodies of a foundation are, how these are composed and what the powers of each organ are. In this aspect, the rules of foundations are similar to corporate articles. However, of particular interest to governance researchers are the provisions that set out the procedures for choosing an auditor, changing the rules or dissolving the foundation. These three activities are strictly the business of a general meeting of owners in a corporate setting. In the non-profit world, they fall within the powers of the administrative organs, since there are no owners.

As a result, the rules of foundations can be considered more important in foundations than they are in corporates[16]. They set all the powers that be, due to the absence of owners. In this kind of a setting, the board of a foundation becomes the dominant part of the governance. But, who nominates the board? Who controls the board after that? And what kind of economic decisions do these boards tend to make? These are the salient questions of foundation governance.

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15   Weisbrod and Asch (2010) describe this phenomenon, but also note that the endowment size does tell positive things, too. A large and growing endowment is a signal of successful selling of a non-profit cause.

16   See, e.g., Hopt and Hippel (2010) page 216 discussion about supervision in Germany, page 243 about foundations in the Netherlands, page 324 about shortcomings of supervision of foundations in France, or page 946 about lack of monitoring in non-profits in Europe in general.

3. Governance of non-profits

The governance of non-profit organizations, such as foundations, is attracting increasing interest among scholars, practitioners, and regulators alike (Fack and Landais (2012), Watros and Weinstock (2013)). The governance of foundations differs fundamentally from the governance principles of for-profit corporates on three dimensions: (1) foundations do not have legal owners who could exert external control over the foundation; (2) without universal measures, such as profitability or stock market valuation, the efficiency of foundations is difficult to assess and compare externally; and (3) most foundations are established to exist in perpetuity[17] and are not subjected to any market for control. As noted in previous economic research (e.g., Hansmann (1990), Core, Guay, and Verdi (2006)), these dimensions create obvious governance questions, as the guardians of a non-profit foundation will inevitably lack part of the external control, as well as checks and balances, that are enjoyed by for-profit corporates with legal owners. This is the source of moral hazard in foundation governance[18].

However, although previous economic research has noted these inherent governance problems, little empirical research has focused on the governance of non-profit foundations, especially concerning the issue of what factors (if any) can mitigate the inherent lack of external control on foundation leadership or substitute for this control. Indeed, previous research on non-profit foundation governance has concentrated on studying the mode of governance as a predictor of foundations' behavioral or financial outcomes (e.g., the foundation's charitable giving, or the amount of donations it receives), rather than focusing on the mode of governance per se, or the factors predicting the mode of governance. For instance, Fisman and Hubbard (2003) studied US state-level regulation of foundations as a predictor of higher donations to foundations; Desai and Yetman (2005

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17   For one seasoned view on foundation lifespan, see Bill Gates' interview at Harvard University in 2012. https://www.youtube.com/watch?v=cBHJ-8Bch4E, at 34-minute mark about life span. At 35.20 comment on extended lifespans: "…There would be some weird board, God knows what they would do."

18   See also similar justification in Hansmann and Thomsen (2013).

and 2015) explored government regulation as a predictor of foundations' higher charitable giving and lower management compensation; and Core, Guay, and Verdi (2006) examined the size of a foundation's endowment capital as a predictor of growth of charitable work or higher management compensation. These studies focused on the mode of governance as an independent variable, while less attention has been given to the root causes for non-profit foundations' governance choices. These root causes or factors will be the focus of our first essay.

Consequently, the first essay focuses on the following questions. Firstly, (1) which foundation-specific characteristics explain the accumulation of power at the board level in the governance of foundations? Addressing this question, an extensive sample of 891 foundations in Finland is empirically investigated using data on the foundations' detailed rules, financials, and other characteristics. A new index measure for the concentration of control in foundations, based on our data of the foundation rules, is constructed. Secondly, (2), the essay examines whether governance choices may have any consequences on foundations' grant-making or other charitable spending.

3.1 Non-profit characteristics, governance and moral hazard

The defining characteristic of a non-profit organization is that it has no claimants to profits or assets. For governance researchers, it is exotic to consider governance without owners or stock market valuation. Ownership provides control and motivation for monitoring (Alchian and Demsetz (1973), Grossman and Hart (1986)). Yet, this lack of owners is the starting point for governance in non-profits. Furthermore, non-profits do not have equity which would reflect the value of operations. Profitability is not a goal in itself, thus corporate profitability measures are pointless. Across continents and legislations, the *non-distribution of income*[19] is the defining feature in non-profits. The imperative of not distributing profits limits possibilities of materially benefiting from a non-profit operation. There seems to be no direct material benefit available from non-profits, except for grantees and aid receivers.

Until recent decades there has been little interest in the virtues of non-profit governance. Non-profits are frugal and pay much attention to their mission; they carefully consider the wishes of the founders and are reluctant to spend on administration. Building up many layers of administration is admittedly not worth the expense in a small charity (net assets of, say, 50,000 euros). Generally, non-profit governance is streamlined to only one

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19   E.g., Hansmann (1987).

governance organ, the board[20]. However, in large non-profits this leaves room for moral hazard – and ownerless fortunes do attract moral hazard.

We base our agency setting on earlier economic literature that explores agency problems related to cash holdings in for-profit firms. Jensen (1986) posits that moral hazard is severe in firms with large free cash flows— where there is more cash than profitable investment opportunities. In for-profits, the agency costs may arise in form of, e.g., suboptimal investments caused by the hubris brought on by capital. The agency costs are thus not necessarily or even mainly related to an opportunity for the management to benefit materially from the company. In foundations, agency costs stem from 1) less effort in the daily work of the management[21], 2) tunneling of funds[22], and benefits[23] to the management and 3) less effort to seek efficiencies[24]. This last cost is especially relevant as there is no market for control for non-profits[25]. Agency problems can be potentially larger in non-profits than in for-profits because there is no viable method to return excess cash to donors or other financiers[26].

Furthermore, corporates face three levels of control or corrective measures to inefficient operations: first, the internal controls of the firm; second, the market for control; and third, bankruptcy. Foundations lack the

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20 In many countries, very small companies are excused from some company obligations. The legislators are pondering if the same approach should be used in the third sector: very large non-profits should abide by stricter standards than very small ones. These standards to large non-profits could be introduced in a "soft law" form, meaning recommendations and guidelines instead of binding, uniform legislation.

21 We include the board of directors into the overall management of a foundation.

22 The moral hazard related to money may be less significant in non-profits as the sector operates with altruistic motives and many work without compensation, including the boards of directors.

23 The benefits may include a standing in society which may be as significant as in corporate world. Belonging to a board of trustees of a New York museum is a case in point.

24 The risks of fraud or inefficiency are fundamentally different in corporates and foundations. In corporates, efficiency is constantly measured through profitability, by customer surveys and the like. In foundations, profitability is not a stringent condition and efficiency is hardly measured. Non-profit beneficiaries are understandably not very vocal about the efficiency of received charity. As a consequence, non-profit efficiency is difficult to assess. On the other hand, the non-profit market is altruistic by nature and foundations' administrators tend to have high integrity. Thus it could be said that fraud is a more genuine risk in corporates, whereas inefficiency is a genuine worry in non-profits.

25 In other words, foundations do not restructure or merge, which are important tools for seeking efficiency in companies.

26 This has not been evidenced by comparative tests between non-profits and for-profits. On balance, it is fair to note that for-profits probably face no less agency problems than non-profits. The absence of ownership rights in non-profits affects only the motivation of agents in the moral hazard setting.

second level: there are few foundation takeovers[27]. The third level seems a very distant possibility, as foundations can scale down their operations to match their means. Given these differences between foundations and corporates, we maintain that the possibilities to mitigate moral hazard in foundations can be more limited than in corporates.

The endowment of a foundation can be considered similar to "excess cash" in corporates. Generalizing further from the corporate setting, we posit that the availability of cash, i.e., finance, can affect foundation governance decisions, similarly to Jensen's (1986) hypothesis that excess cash affects corporate decisions.

It should be noted, however, that an endowment is not entirely a choice variable for foundations. The cash cannot be eliminated by paying it to shareholders. The endowment is (at least in the early years of a foundation) determined by the legacy and the rules imposed by the founder.[28] In addition, the local legislation may limit the use or the reduction of the endowment, and foundations cannot flexibly seek new capital by means of issuing securities, which necessitates building up financial buffer. As a consequence, the existence of an endowment, and/or its size, may not be fully interpreted as a sign of some peculiar motivation, or indeed a consequence of foundation management alone.

In spite of this ambiguity about endowment exogeneity, the size of an endowment has mostly been considered the consequence of governance in earlier research. A large endowment has been assumed to result from meager spending on charitable mission, which the prevailing governance allows. State regulation has served as a proxy for foundation governance, instead of genuine foundation-level governance data. In other words, the endowment is summarily assumed to be determined by the state-level regulation of non-profits: poor oversight by the regulator is associated with excess endowments, pointing to moral hazard in capital spending (note, however, that the concept of "excess endowment" relates the size of the endowment to the scope of the foundation and its spending. A large endowment is not necessarily an excess endowment). The use of the quality of the state-level regulation as a governance measure leaves the finer details of governance, such as the board and auditing, out of the analysis, and the causality between finance (and the accumulation of the endowment) and

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27 Ikäheimo, Puttonen, and Ratilainen (2011) argue for two types of control settings: 1) The company management has a strong power position. The market for corporate control has a disciplinary effect on a company's management, though a company's management may protect itself against this takeover threat by using provisions in the company's bylaws; and 2) In case of long-term ownership that is concentrated, company provisions are set by the current major shareholders to protect themselves against takeover activities by outside investors. Thus the market for control is not a simple control mechanism for corporates, either.

28 In Finland, where our data originates, the change of foundation rules is feasible and stipulated by the law. The regulator comments that rules changes do happen, although at longer intervals than, e.g., in corporates.

governance remains elusive. Foundations' excess endowments have not been empirically shown to have been associated with the rational reasons for endowment building, such as building up a buffer for growth or economic distress (see, e.g., Brown et al. (2014), Fisman and Hubbard (2005), Core, Guay, and Verdi (2006)). This would suggest a moral hazard in endowment accumulation.

On the other hand, endowment building can be a result of savvy financial management by the foundation, or of an excellent reputation among donors or customers. These factors do not hint to a moral hazard, but to a successful foundation (see, e.g., Weisbrod and Asch (2010)). We could also easily formulate a hypothesis that agency problems lead to a *shrinking* endowment while a good governance leads to a successful foundation – and to a growing endowment. Finally, there is also a survivorship bias in foundation data: mismanaged foundations disappear from the data in the long term, leaving no evidence about probable associations between some suboptimal governance model and a shrinking endowment.

Generally, we note that the assumed moral hazard in large endowments remains polemical. The existence of large free cash flow, or endowment, does not cause agency problems but creates an environment where they are more likely to materialize.[29]

In summary: foundations are by definition chests of funds. They do not have owners and hence no owner control. This creates an environment where the foundation management[30] may seek to benefit from the endowment in other ways than through distribution. Immaterial benefits for the management may include increased power and standing in business life, perks or "quiet-life"[31] . These moral hazards can lead to costs of suboptimal management, e.g., the inefficiency of work. However, we posit that a non-profit's financiers may anticipate this, and they may seek to steer the non-profit towards a governance structure that mitigates such moral hazard.

Several points for further research arise from earlier non-profit governance studies: we need detailed agent-level information about individual non-profits in order to make stronger inferences about how they organize their governance. Based on such conclusions, we can better understand a possible source of moral hazard in non-profits. Our data provides foundation-level information about governance, which is, to our knowledge, the first large data set of individual foundations' rules and provisions. Non-profit research also lacks a measure for non-profit competition to compare outside "market" control with internal governance

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29 Glaeser (2002) observes: "Indeed, given the weak nature of corporate control in non-profits, perhaps the most surprising thing about non-profits is that they function as well as they do. Widespread looting of endowments is almost unheard of."

30 We include a foundation's board of directors in the overall management.

31 The notion of "quiet-life" was first presented by Bertrand and Mullainathan (2003) in the context of motivation of a company's management. See also Giroud and Mueller (2010).

control. In our study, we use the number of foundations operating in the same mission market as a proxy of competition for various resources. Finally, we need a plausible measure for governance quality to better understand if and how the quality of governance is associated with the financing and the societal performance of a foundation. For this, we develop a non-profit governance index that measures the concentration of power to the foundation board.

There are two relations of interest: What determines governance quality, and where does it matter? We clarify the difference between these two in Figure 1.

| Determinants of governance (1) | ⇒ | Governance quality (2) | ⇒ | Consequences of governance quality (3) |

Figure 1. The assumed flow of causality stemming from determinants of governance choices (1) to actual governance and its quality (2), and on to the consequences of governance and its quality (3).

We proceed to develop our understanding of what constitutes a governance model and its quality in non-profits, in particular foundations.

4. Foundation Governance Index and foundation source of finance

Information about non-profits has remained scarce in economic research. In many countries the rationale for establishing a foundation is to have less reporting obligations and more privacy. Regulators do not collect financial information on all non-profits, or collect it haphazardly[32] and produce few aggregates of the whole sector. To our knowledge about different legislations, non-profits are not obligated to follow IFRS-accounting, so their books may show historical, and not market, values of assets. Furthermore, in many countries the rules of non-profits may be available only by request from the non-profit, whereas in most countries corporate articles of association tend to be publicly collected and available. Finally, the data about investments of non-profits is almost universally unavailable. To study non-profits' governance (rules), ant to it to financial or investment outcome is cumbersome and rare.

We benefit from a unique dataset of foundations and set out to assess governance in foundations. For that purpose we develop a governance index for foundations (FGI, Foundation Governance Index throughout this book). The index applies the logic of Gompers, Ishii, and Metrick's (2003) Governance Index for companies. FGI is a sum of foundation rules' provisions that concentrate power to the foundation board of directors. Presence of such power-concentrating clauses is noted by 1 and absence by 0. Accordingly, the higher the FGI score, the more concentrated the decision power is at the board level in the foundation. The FGI measures the overall quality of governance in foundations because in our consideration, efforts to divide decision and oversight powers to more than one body create a surrounding that is more conducive to good governance. Fama and Jensen (1983) call for a similar division on powers: decision management

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32   Non-profit accounting differs from the general corporate accounting. This causes bona fide confusions and mistakes if collection and storing of non-profit financials is done in company registrars.

and decision control should be in separate hands in corporates. Gompers et al. (2003) nominate the extreme corporate governance models the "Dictatorship" vs. "Democracy" ends of the spectrum[33]. Similarly, we call governance in foundations that have concentrated decisions powers to the board as the "All-in-one-hands" governance, as opposed to the "Open governance" of a foundation.

One of the possible drivers for governance choices include a foundation's financiers. In absence of owners, the regular financiers, be they donors, customers or the public sector, may exert power over how the foundation is administered. In order to investigate the effect of financing, we categorize foundations into four categories, based on their main source of finance: endowment income, donations, profit from operations, and support from the public sector.

An endowment is the capital legacied or accumulated in the foundation. It may consist of tangible or financial assets that yield a regular return. This investment income is the main source of finance in many foundations. Donations are a commonly recognized source of finance for foundations. Donations may come from small streams of continuous campaigns or from substantial long-term donors. Some foundations operate a business to finance the mission[34]. They may sell sports club T-shirts, food in soup kitchens, operate a country club restaurant or a hospital. The public sector (state, municipality, city or such) financially supports some foundations. This phenomenon, a mixture of the second and the third sector, is explained by foundations' non-dependence of civil service legislation and their resulting flexibility to carry out quasi-public tasks, compared to the often inflexible or politically supervised civil service. Another explanation for public sector foundations may be the need to secure long-term public financing to long-term projects, or to encourage private donations with matching public support[35]. Finally, many foundations finance their mission work with a combination of these sources.

Our main assumption is that a *repeated contact with outside financiers affects and has affected control mechanisms in a non-profit*. Endowed foundations do not have a need to repeatedly seek outside finance. The continuation of their endowment finance is relatively certain, whereas

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33 Gompers et al. (2003) define: "Firms in the highest decile of the index are placed in the "Dictatorship Portfolio" and are referred to as having the "highest management power" or the "weakest shareholder rights"; firms in the lowest decile of the index are placed in the "Democracy Portfolio" and are described as having the "lowest management power" or the "strongest shareholder rights."

34 Note the difference between finance from operations versus operations conducted to realize charitable mission. These may look alike or even merge, for example in case of charitable hospitals which charge low service fees. But the difference exists in the case of a commercial hospital (operations=financing) whose profits are used to care for the homeless (=mission).

35 Recently the U.S. government pledged finance to a non-profit, the Trust for the National Mall, that will renovate the Mall in Washington, DC. The Economist (2015): *America's front yard.*

foundations financed in other ways are subject to repeated outside negotiating and monitoring, how light-handed or informal they may be. This assumption guides our hypotheses in this book.

We also test whether competition in the charitable market affects the governance model of a foundation. For that purpose we adopt Masulis, Wang, and Xie (2005) and Giroud and Mueller (2010) proposition that product market competition substitutes for governance.

4.1   Data on foundations and governance

Our data comes from Finland which is a developed, small, open Northern European economy with a relatively short history of capital accumulation. The oldest foundations date from the early 1800s. There has been a Foundation Act from the year 1930 on, and a foundation register from the early 1930s[36]. In non-profit sector comparisons Finland is categorized as an average country both concerning the size of the non-profit sector as well as the growth of the sector (Anheier (2001)). Table 1 summarizes a multifaceted appraisal of several European countries' foundation sector.

		Scale		
		Small	**Medium**	**Large**
Growth	**Low**	Austria, Belgium, France, Ireland		
	Medium	Greece, most other central and eastern European countries	Britain, Finland, Germany	Switzerland
	High	Hungary	Portugal, Spain, Turkey	Italy

Table 1. Foundation sector scale and growth pattern in European countries. Source: Table 7 in Helmut K. Anheier: *Foundations in Europe: a Comparative Perspective,* 2001, Civil Society Working Paper, London School of Economics and Political Science. "Scale" is a combination of five measures: Number of foundations per capita, foundations' expenditures as a percentage of GDP, employment as a percentage of total employment, grants as a percentage of total revenue, and assets per capita in a country. High "Growth" is assigned to countries in which a larger portion (number) of the country's foundations have been established after the 1950s and especially in the 1980s and 1990s.

Anheier (2001) classifies Finland among the Medium/Large foundation sectors, along with Britain, Denmark, Germany, Netherlands and Norway. The size of the foundation sector is assessed with five measures: the number

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36   Later in this paper we use interchangeably the words "non-profit" and "foundation". Our data consists almost entirely of foundations. However, many of our findings apply to the non-profit sector in a wider sense. See Appendix 1 about the sampling of our data.

of foundations per capita, foundations' expenditures as a percentage of GDP, employment in foundations as a percentage of total employment, grants as a percentage of total revenue, and assets per capita in a country. The Finnish foundation sector has also grown rapidly after the Second World War. Anheier notes: "Britain, Finland, Germany and Switzerland are high-income countries with stable political systems. We can assume that the foundation boom of recent years is in large measure a function of political stability and economic prosperity, amplified by a more self-confident middle class."[37]

Sinani et al. (2008) examine three Scandinavian countries (Denmark, Norway and Sweden, all geographically, culturally, historically and politically close to Finland[38]) and their formal and informal governance mechanisms. The authors have collected evidence of the Nordic corporate governance environment and suggest the countries have a high standard of living, good quality of law enforcement, absence of corruption, good government services and freedom of speech. According to Anheier above, such an environment is a fruitful platform to a well-functioning foundation sector.

In addition to its representative scale and growth, the Finnish foundation sector does not possess pronounced, country-specific foundation mission, wealth or operational structures. Anheier (2001, pages 2-3) discusses particular characteristics of countries' foundation population. He maintains that the following characteristics of foundations may cause difficulties in capturing a common set of institutions across the different countries and regions: where foundations come close to markets and change into economic actors primarily[39]; where foundations become instrumentality of the state; and where they are dynastic means of asset protection and control. We maintain that none of these settings is typical, dominant or even common in the Finnish foundation sector. Furthermore, Finnish foundations operate in fields that are the most common in other European countries, too[40].

Generally, the third sector has a redistributive role in society. The third sector emerges when there is sufficient wealth in society, combined with trust in the legal protection of legacied wealth and trust in the long-term consistency of - for instance - tax legislation. All in all, foundation sectors are the most developed and varied in developed countries. Finland belongs

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37   Anheier (2001), page 20.

38   Finland, Denmark, Iceland, Norway and Sweden, small countries in the north of Europe, form together the Nordic countries, which have wide political and cultural ties and co-operation.

39   Some Danish foundations own a single majority stake in a listed company. In Switzerland and Luxemburg taxation treaties are related to the growth of the foundation sector.

40   Education and research, Social services and Culture and recreation are the most popular missions in Europe as well as in Finland (Hopt and Hippel (2010), page 534). For mission categories see Table 2.

to the wealthiest[41], the least corrupted[42] and the most open[43] societies in the world, so we suggest that our data can be considered a good representation of a foundation sector in a developed country.

There were 2836 registered foundations in Finland at the end of June 2014. The Foundation Register collects foundations' rules and yearly financial statements. It also acts as a control body in case of fraud or irregularity. The Foundations Act of 1930 was redrafted during the years 2011-2014 and a new Foundations Act entered into force in December 2015.

Data on Finnish foundations' rules was obtained from the Finnish Ministry of Justice. The data was minutely collected by the Ministry's legal experts as a background material for redrafting foundation legislation. It includes detailed information about 891 foundations' objective or "mission industry"[44], rules, the year of registration, details about administrative organs' formation and powers as registered by the end of the year 2011. The sample is first randomly collected, then augmented with foundations that have taken part in the Ministry's surveys – such cases tend to be large foundations. Data collection is explained in Appendices 1 and 2.

In addition to the governance details, the Ministry also obtained the foundations' financial information for the years 2010-2012 from the Foundation Register. Financial information includes audited Balance sheet and Profit & Loss statements per foundation, according to the accounting method that the foundation uses[45]. We reviewed this database and screened financials to catch irregularities. Mistakes were corrected by checking the original filings in the registrar. Each of the largest two hundred sample foundations were checked against their own filing details, and market values of investments for the largest two hundred foundations were collected by hand. Fourteen largest foundations were also interviewed in order to get an overall understanding of the total allocation of their investments, as well as a more nuanced view of their investment strategies and governance. After these, we have comfort that the data reasonably accurately depicts the true financial positions in the sample.

The most interesting feature of the financial data is perhaps the breakdown of foundation income into different income sources. Gross and net income from investments, operations, donations and from the public sector is presented. This allows us to categorize foundations based on their source of financing. Comparing with Fisman and Hubbard (2003) we can test endowed foundations against other types without using elaborate endowment intensity proxies. Furthermore, we may still calculate the

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41   See, e.g., http://data.worldbank.org/indicator/NY.GNP.PCAP.CD/countries.

42   See https://www.transparency.org/cpi2014/results.

43   See https://index.rsf.org/#!/.

44   Classification is UN classification, International Classification of Non-Profit Organisations, ICNPO.

45   The foundations can choose if they mark investments to market or not, in which case the market values must be presented in the notes. See Appendix 2.

endowment intensity and use it in within-group analyses to see if relative endowment size affects *endowed* foundations' actions.

Foundation industry classification is based on the United Nations' International Classification of Non-Profit Organizations (ICNPO)[46]. It has 12 non-profit "industries", areas where charitable work is aimed at, no matter its method, financing or fiscal status. The sample foundations have chosen their industry classification by themselves when registering or updating their filings at the Foundation Register.

ICNPO-class description	ICNPO-class	Number of foundations	Share of total
Culture, recreation	1	207	23 %
Education and research	2	232	26 %
Health	3	42	5 %
Social services	4	137	15 %
Environment	5	21	2 %
Development and housing	6	68	8 %
Law, advocacy and politics	7	20	2 %
Philanthropic intermediaries, voluntarism	8	29	3 %
International	9	17	2 %
Religion	10	22	2 %
Business and professional associations	11	56	6 %
Other	12	40	4 %

Table 2. The ICNPO-classification of foundations in the sample. This United Nations' classification categorizes foundations on the basis of their mission market: where the charity operates. N=891.

Some notes are needed to understand these classes. The first class includes Sports, which draws much non-profit activity in all developed countries. Classes 1 and 2 are typically the largest in many countries: culture and scientific research are favorite missions. Classes 3 and 4 are separate here, whereas in other classifications hospitals and daycare are included in the same category. Class 8 includes organizations such as Plan (godparenting children in developing countries) or Ronald McDonald foundation (funding temporary lodging for parents whose children need to be in a central hospital for long periods). Class 10 is not large in countries with a defined state religion (as in many countries in Europe) and it typically represents small, off-mainstream religious beliefs; in the US, religious

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46   Other classification systems include National Taxonomy of Exempt Entities (NTEE) in the US and National Survey of Charities and Social Enterprises (NSCSE) in the UK.

entities form the largest part of charitable giving[47].

The sample foundations had the following financials. The total amount of assets owned by Finnish foundations was some EUR20bn and net assets some EUR16bn at the end of 2012. This includes all holdings: real estate, equity, debt, cash and operational assets. Over 70 percent of all assets are classified as Investments on the balance sheet. Wealth is very concentrated, with 77 percent of assets owned by the largest 50 foundations. At the other end of the spectrum there are numerous tiny foundations that we would call "Statue in Punxsutawney"- funds: a small endowment secures the upkeep of a small-town memorial. Funds are kept on a bank account and no economic decision making is needed, be it regarding governance, investments or operations[48].

Descriptive statistics of foundation sample	Mean	Median	Maximum	S.D.	Skewness
Balance sheet total	17 942 247	1 148 448	1 251 362 277	93 847 746	10.8
Endowment	14 600 945	660 331	1 241 705 957	86 846 657	11.6
Total expenses	3 263 240	168 179	403 864 183	16 434 228	17.9
Relative endowment (endowment/expenses)	43	8	4 875	283	13.2
Total revenue	3 892 053	211 417	440 669 996	19 158 217	15.9
Donative income	340 865	0	199 677 201	6 744 158	29.2
Financial Investments	12 033 980	16 666	1 244 936 803	80 751 355	12.3

Table 3. The descriptive statistics of the foundations in the sample. N=891. Based on averages in the years 2010-2012 for each foundation. Balance sheet values are corrected to market values. Endowment equals balance sheet total minus debt. Expenses are the total of operations, funding, investment and extraordinary expenses. Total revenue is the total of investment, donative and business income plus support from the public sector. Financial investments include balance sheet items classified as long-term or short-term financial assets plus cash. See Appendix 2 for information about foundation financial reporting.

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47   While investigating non-profit businesses' market shares in different US states, Hansmann (1984) constructed a variable reflecting the ratio of philanthropic expenditures to personal wealth. He found that this variable was *negatively* related to the market share of non-profit businesses in the same state. Hansmann concluded that the reason must be gifts to religious institutions which form a large part of charitable giving but were not included in data. Religious congregations are not required to register with the IRS, and their share in the third sector may be overlooked in some non-profit statistics. Blackwood, Roeger, and Pettijohn (2012) report religious non-profits' preponderance in the US (page 2 and Table 5).

48   Later in this paper we consider limiting our data to foundations with some level of economic agency decisions. Thus we would exclude foundations below a certain level of income or assets as the large number of diminutive cases may dominate the data.

5. Non-profits' equity investment style

5.1 Foundations as owners of companies

Evidence about investment behavior is needed when regulators express worries about the functioning of the capital markets. The increasing index investing and continuing rise of asset management diminish owner activity. Calls are made to encourage direct shareholder monitoring and active shareholders[49]. Some investor groups seem to be short-term owners, but with which other groups are they compared? Evidence about various investor types is needed for discussion about investor type behavior. Nevertheless, we seem to lack empirical evidence about investor groups' behavior (Derrien, Kecskés, and Thesmar (2014)).

It often emerges from the public and scientific discussion that the main tool for improving the functioning of the capital markets lies in securing direct, diverse and competent owner monitoring in companies. To complement asset management industry's growing[50] ownership in corporates, we need investors whose motivations are diverse and differ somewhat from asset management's motivations. This is necessary to safeguard the capital markets' functioning in short-term market failures: trading will cease if all investors are equally motivated[51].

We set out to investigate one distinct investor group, foundation investors, and prejudices regarding its investment style. It is singular in its characteristics and nature, and has not been examined as an

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49   See e.g., Kay (2012).

50   See Wong (2010) and French (2008).

51   This proposition is discussed in detail in the second essay of this book, Section 2.1.

equity investor[52]. In most western countries it is common to believe that foundations are long-term investors who do not trade frequently. However, such characterizations have not been empirically confirmed.

5.2   Data on foundations' equity investments

We complement our data on foundation characteristics, financials and governance with a second dataset of listed share ownership from Euroclear Finland[53] for 872 foundations[54]. Out of these, 530 turned out to have had direct listed equity ownership between 2000 and 2013. The data includes the ownership of listed shares on the NASDAQ Helsinki –exchange on 31 December 2000-2013, share prices and the industry category of the owned share and the issuer. The time period includes market extremes of the "techno bubble" in 2000-2002 and sub-prime crisis 2008-2009 but is not dominated by them as the time period extends beyond those time points. Not one share or industry value is dominant during the whole time period.

To measure foundations' risk-taking policies and trading activity we choose three measures for their equity investments portfolio: deviation from the overall industry sector breakdown of the stock market; turnover; and changes-in-ownership -indicator.

Active risk-taking is measured with Active Share, a ratio developed by Cremers and Petäjistö (2009). It measures a portfolio's deviation from market index weights. We use deviation from the market index industry breakdown as our measure, that is, we measure portfolios' deviations from the industry breakdown of the market index.

Examining turnover, we want to gain an understanding of the frequency of trading. We first measure the turnover of the equity portfolio as in Barber and Odean (2001)[55]. Turnover is the sum of values of all sales and acquisitions from/to the portfolio, divided by two, and divided by the value of the portfolio at the beginning of the period. Thus it is a ratio that relates trading to values traded and owned.

Secondly, we also develop a measure that neutralizes large relative swings in portfolios produced by measurement in values. To answer the question

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52   Many do not have any notion of non-profits as investors. The term "non-profit" seems a contradiction in terms for an investor group. However, the accumulation of wealth in foundations, endowments, funds and associations predicates their becoming active economic agents on the capital markets. Once active, their special nature affects their investment style.

53   The keeper of the book-entry settlements infrastructure in Finland. Euroclear handles all share transactions on the Nasdaq Helsinki exchange, as well as on smaller competing market places. All shareholdings are registered in this system, both for institutions and individuals.

54   Data was obtained before the final 17 additions to the sample were made (see Appendix 3). Two consolidated foundation-groups were dissembled into subsidiary units as the units were known to include significant shareholdings on subsidiary level.

55   See also Appendix 3.

whether foundations *typically* are a long-term shareholder in companies, we develop a change-in-ownership –indicator. It takes value 1, if the investor's position in a single share has changed more than 10 percent from previous year. If not, the indicator for that year is zero. By omitting values as a driver of the change measure, this indicator avoids the problem of not identifying stability in portfolios in which a few valuable stock ownerships change, but whose other – possibly numerous - holdings remain intact.

With these three main variables we are able to present findings about foundations' equity investment time horizon, diversification and within-group variation among foundations.

6. Empirical results and discussion

The findings of this book about non-profit organizations as economic agents, including our proposed model to assess foundation governance, and our empirical findings on foundations' investment style, make several contributions to our understanding of the economic behavior of foundations.

Examining reasons for governance choice in our first Essay, empirical results suggest, firstly, that a foundation's source of finance is associated with the concentration of decision powers in the foundation. Specifically, foundations that have to regularly approach outside sources of finance– donors, public sector or customers– enjoy more external control and show less concentration of power on the board level than foundations that can finance their missions with capital income from an endowment. We also find that competition in the foundation's charitable mission market is associated with a more concentrated governance model in the foundation; this indicates that competition, as an external control mechanism, replaces some of the need for openness in internal governance structures.

When examining consequences of governance, we test whether openly governed foundations spend more on charity. We find that foundations that have less concentrated governance spend statistically significantly more on charitable *operations* than foundations with concentrated governance. However, in *grant-making* foundations this association does not emerge: governance is not related to the level of grant-making. We discuss if – regardless of governance - foundations are pressured to keep up competitive levels of grant-making because grants are easily observed and measured by the public.

Our Foundation Governance Index (FGI) model has policy implications. In absence of owners the regulator may be the only external control of foundations. The regulator should first understand what factors affect the quality of governance in a foundation. We maintain that the source of finance is one factor. Consequently, we suggest the regulator pay attention to sources of finance of the foundation, which is easily observable from the financial statements. Moreover, FGI can act as a measure for governance

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concentration: we posit that the concentration of decision powers on the board level accentuates the moral hazard of less efficient use of charitable resources in foundations. We also note that this moral hazard has the strongest association with endowed foundations, and that competition among foundations, old age and large size of the foundation seem to mitigate the moral hazard. In practice, the regulator could rank registered foundations based on these observable facts and identify "increased-risk" cases for inefficiency or fraud.

Furthermore, governments may consider setting some governance requirements for non-profits. Currently some countries (but not all) require some level of charitable spending in return for tax exempt status. The non-profit sector has argued that income and spending cash flows do not necessarily concur, rendering rigid spending targets non-optimal. In addition, the set spending levels can either be reached with creative bookkeeping, or they may turn out to be too high or low when business cycles change. Instead of setting direct spending targets, the regulator could nudge non-profits towards optimal behavior by requiring open governance provisions. These requirements would apply only to larger non-profits, but they could motivate the whole sector to improve transparency.

In our second Essay, we argue for the need to understand the investment behaviour of various investor types, and present empirical evidence of non-profits' equity investment style. Overall, foundations are active risk-takers in the sense that they can carry concentrated equity risk by not diversifying towards the industry breakdown of the market index. Foundations turn out to be infrequent traders, with relatively low equity portfolio turnover. If they decide to own a stock for longer than one year[56], they remain owner for 3.6 years on average (in our 13-year sample period). In addition, the majority of their single shareholdings stay intact from year to year. Foundations do not adjust their positions frequently.

Foundation age and size are related to the equity allocation of foundations' portfolios: older and larger foundations diversify more along the lines of the market index breakdown. However, only foundation age is statistically significantly associated with trading activity and foundation size is not. Older foundations trade less frequently than younger ones.

Our results confirm the belief that the investment behaviour of foundation investors differs from other investors' behaviour, and forms its own identifiable investor type. This makes foundations a valuable complement to the capital markets. They bring long-term investment capability and risk appetite to markets which increasingly seek to avoid short-term malfunctions due to all investors behaving in a similar manner. As foundations are not subject to quarterly reporting obligations, and they do not need to signal about their financial success, they are relatively little constrained or motivated by short-term interests. This underscores the

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56   Our data includes only yearly observations which does not allow us to estimate shorter
      ownership periods than a year, or longer than 13 years; see Footnotes 224-225.

balancing role of non-profit investors on the capital markets.

As a result of our empirical findings, one investor-owner type is now somewhat better known, offering a reference point to other owner types[57]. We also contribute to the general non-profit research, where the main research focus has been in charitable work or in the behavior of foundations as sole owners of businesses, while the understanding of non-profits as economic agents more generally, or as pure capital markets investors, has remained almost non-existent.

There are several policy implications of our research. Firstly, foundation investors enjoy unique investment time horizons and risk preferences that complement those of other investor types on the capital markets[58]. This is beneficial for the resilience of the capital markets especially in times of short-term shocks. Thus the regulators should understand and encourage foundations' investment activities.

Secondly and following from above, governments should consider tax rules or – more generally - the granting of charitable status to a foundation independently from the foundation's investment activity. Regulatory status interpretations or tax rules should not limit trading or risk diversification efforts in foundations.

In practice, the regulator and foundations alike should acknowledge investment operations as a basic function in charities. The general public should pay attention to the management of foundation assets as a part of the overall efficiency of a foundation.

All in all, foundations merit research as economic agents. With their growing assets they act as owners of businesses and portfolios. They are also increasingly under scrutiny concerning the efficiency of their charitable work. In all these areas it would be useful to adapt some ways and means from the corporate world: how to find donors and report to them; how to see investing as a core function in a foundation; and how to measure efficiency and avoid obsolescence by way of transformations, as on the corporate market for control? In the following two Essays we engage in some of these discussions, and produce further ideas for future research of non-profits.

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57   One constant endeavour in our research has been to find evidence about other investors' trading or allocation activity, in order to be able to answer the question "trades/diversifies much – *compared to whom*?".

58   Although some attention should be paid to the concern that the third sector's motivation of eternal preservation of endowed assets may decisively differ from the market economy first sector value-creating motivation.

References

Alchian, A. A., & Demsetz, H. (1973). The property right paradigm. *The Journal of Economic History*, *33*(1), 16–27.

Anheier, H. K. (2001). Foundations in Europe: A comparative perspective. In A. Schulter, V. Then, & P. Walkenhorst (Eds.), *Foundations in Europe: Society, Management and Law* (1st ed., pp. 1–31). London.

Arrow, K. J. (1963). Uncertainty and the Welfare Economics of Medical Care. *The American Economic Review*, *53*(5), 941–973.

Barber, B. M., & Odean, T. (2001). Boys will be boys: gender, overconfidence, and common stock investment. *Quarterly Journal of Economics*, (February), 261–292.

Ben-Ner, A. (2002). The shifting boundaries of the mixed economy and the future of the nonprofit sector. *Annals of Public and Cooperative Economics*, *73*(1), 5–40. doi:10.1111/1467-8292.00184

Bertrand, M., & Mullainathan, S. (2003). Enjoying the Quiet Life? Corporate Governance and Managerial Preferences. *Journal of Political Economy*, *111*(5), 1043–1075. doi:10.1086/376950

Blackwood, A. S., Roeger, K. L., & Pettijohn, S. L. (2012). The Nonprofit Sector in Brief. *Urban Institute*, 1–8.

Brown, J. R., Dimmock, S. G., Kang, J.-K., & Weisbenner, S. J. (2014). How University Endowments Respond to Financial Market Shocks: Evidence and Implications. *American Economic Review*, *104*(3), 931–962. doi:10.1257/aer.104.3.931

Core, J. E., Guay, W. R., & Verdi, R. S. (2006). Agency problems of excess endowment holdings in not-for-profit firms. *Journal of Accounting and Economics*, *41*(3), 307–333. doi:10.1016/j.jacceco.2006.02.001

Cremers, K. J. M., & Petäjistö, A. (2009). How Active Is Your Fund Manager? A New Measure That Predicts Performance. *Review of Financial Studies*, *22*(9), 3329–3365. doi:10.1093/rfs/hhp057

Derrien, F., Kecskés, A., & Thesmar, D. (2014). Investor Horizons and Corporate Policies. *Journal of Financial and Quantitative Analysis*, *48*(06), 1755–1780. doi:10.1017/S0022109013000628

Desai, A. M., & Yetman, R. J. (2015). Constraining managers without owners: governance of the not-for-profit enterprise. *Journal of Governmental & Nonprofit Accounting*, *4*, 53–72. doi:10.2139/ssrn.661301

Fack, G., & Landais, C. (2012). Charitable giving and tax policy: A historical and comparative perspective. In G. Fack & C. Landais (Eds.), *CEPR conference: Charitable giving and tax policy* (pp. 1–155). Paris: CEPR/CEPREMAP.

Fama, E. F., & Jensen, M. C. (1983a). Agency Problems and Residual Claims. *The Journal of Law and Economics*, *26*(2), 327. doi:10.1086/467038

Fama, E. F., & Jensen, M. C. (1983b). Separation of ownership and control. *The Journal of Law & Economics*, *26*(2), 301–325.

Fisman, R., & Hubbard, R. G. (2003). The Role of Nonprofit Endowments. In E. L. Glaeser (Ed.), *The governance of not-for-profit organizations* (Vol. I, pp. 217–234). Chicago: University of Chicago Press.

Fisman, R., & Hubbard, R. G. (2005). Precautionary savings and the governance of nonprofit organizations. *Journal of Public Economics*, *89*(11-12), 2231–2243. doi:10.1016/j.jpubeco.2004.10.005

French, K. R. (2008). Presidential address: The cost of active investing. *Journal of Finance*, *63*(4), 1537–1573. doi:10.1111/j.1540-6261.2008.01368.x

Ghatak, M., & Mueller, H. (2011). Thanks for nothing? Not-for-profits and motivated agents. *Journal of Public Economics*, *95*(1-2), 94–105. doi:10.1016/j.jpubeco.2010.09.003

Giroud, X., & Mueller, H. M. (2010). Does corporate governance matter in competitive industries? *Journal of Financial Economics*, *95*(3), 312–331. doi:10.1016/j.jfineco.2009.10.008

Glaeser, E. L. (2002). *The governance of not-for-profit firms* (NBER Working Papers, No. 8921).

Glaeser, E. L., & Shleifer, A. (2001). Not-for-profit entrepreneurs. *Journal of Public Economics*, *81*(1), 99–115. doi:10.1016/S0047-2727(00)00130-4

Gompers, P. A., Ishii, J. L., & Metrick, A. (2003). Corporate governance and equity prices. *The Quarterly Journal of Economics*, (February), 107–155.

Grossman, S. J., & Hart, O. D. (1986). The costs and benefits of ownership: A theory of vertical and lateral integration. *The Journal of Political Economy*, *94*(4), 691–719.

Hansmann, H. B. (1980). The Role of nonprofit enterprise. *The Yale Law Journal*, *89*(5), 835–902.

Hansmann, H. B. (1984). The effect of tax exemption and other factors on the market share of nonprofit versus for-profit firms. *National Tax Journal*, *XL*(1), 71–82.

Hansmann, H. B. (1987). Economic Theories of Nonprofit Organization. In *The nonprofit sector: A research handbook* (pp. 27–42).

Hansmann, H. B. (1990). Why do universities have endowments? *The Journal of Legal Studies*, *19*(1), 3–42.

Hansmann, H. B., & Thomsen, S. (2013). Managerial Distance and Virtual Ownership: The Governance of Industrial Foundations (No. 372/2013). *ECGI Finance Working Paper*. Brussels.

Hines, J. R., Horwitz, J. R., & Nichols, A. (2010). The Attack on Nonprofit Status: A Charitable Assessment. *Michigan Law Review*, *108*, 1179–1221.

Hopt, K. J., & Hippel, T. von. (2010). *Comparative corporate governance of non-profit organizations*. (K. J. Hopt & T. von Hippel, Eds.) (1st ed.). Cambridge: Cambridge University Press.

Ikäheimo, S., Puttonen, V., & Ratilainen, T. (2011). External corporate governance and performance: evidence from the Nordic countries. *The European Journal of Finance*, *17*(5-6), 427–450. doi:10.1080/1351847X.2010.543832

Jensen, M. C. (1986). Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *American Economic Review*, *76*(2), 323–329. doi:10.2139/ssrn.99580

Kay, J. (2012). *The Kay review of UK equity markets and long-term decision making*. Report for the UK Government, Department for Business, Innovation and Skills. London.

Lakdawalla, D., & Philipson, T. (2006). The nonprofit sector and industry performance. *Journal of Public Economics*, *90*(8-9), 1681–1698. doi:10.1016/j.jpubeco.2005.11.004

Malani, A., Philipson, T., & David, G. (2003). Theories of firm behavior in the nonprofit sector. A synthesis and empirical evaluation. In *The governance of not-for-profit organizations*.

Masulis, R. W., Wang, C., & Xie, F. (2005). Corporate Governance and Acquirer Returns. *The Journal of Finance*, *LXII*(4), 1851–1889.

Rose-Ackerman, S. (1996). Altruism, nonprofits, and economic theory. *Journal of Economic Literature*, *XXXIV*(June), 701–728.

Sinani, E., Stafsudd, A., Thomsen, S., Edling, C., & Rand, T. (2008). Corporate governance in Scandinavia: comparing networks and formal institutions. *European Management Review*, *5*, 27–40. doi:10.1057/emr.2008.1

The Economist. (2015). America's front yard. *The Economist Magazine*.

Thomsen, S. (2013). Industrial Foundations in the Danish Economy. Copenhagen: Copenhagen Business School Working Paper.

Watros, S. R., & Weinstock, S. Y. (2013). The New Oldest Corporation in America. *The Harvard Crimson*, (May 21).

Weisbrod, B. A. (1964). Collective-consumption services of individual-consumption goods. *The Quarterly Journal of Economics*, *78*(3), 471–477.

Weisbrod, B. A. (1997). The future of the nonprofit sector: Its entwining with private enterprise and government. *Journal of Policy Analysis and Management*, *16*(4), 541–555.

Weisbrod, B. A., & Asch, E. (2010). Endowment for a Rainy Day. *Stanford Social Innovation Review*, *Winter*, 42–47.

Wong, S. (2010). Why stewardship is proving elusive for institutional investors. *Butterworths Journal of International Banking and Financial Law*, *July/Augus*(August), 406–411.

WHAT DETERMINES A NON-PROFIT GOVERNANCE MODEL - AND DOES IT MATTER?

Abstract

The association between the concentration of power in foundations' goverance and foundations' main source of financing is examined with a sample of 891 charitable foundations. Foundations are classified into four categories of source of finance, and a foundation governance index is constructed on the basis of provisions in the detailed rules of foundations. Endowed foundations are less openly governed than foundations financed by donations, by business operations or by the public sector. Other reasons for foundations' choice of governance are also tested: a foundation's age, size and the competition in the mission market are also associated with the governance choices of a foundation. Finally, the governance of operational foundations is found to be associated with their charitable spending. The research presents previously unavailable foundation-specific empirical data for the assessment of the root causes of governance choices in foundations, and renders practical implications to foundation oversight.

1. Introduction to Essay 1

The governance of foundations differs fundamentally from the governance principles of for-profit corporates on three dimensions: (1) foundations do not have legal owners who could exert external control over the foundation; (2) without universal measures, such as profitability or stock market valuation, the efficiency of foundations is difficult to assess and compare externally; and (3) most foundations are established to exist in perpetuity[59] and are not subjected to any market for control. These factors create obvious governance problems as the guardians of a non-profit foundation will inevitably lack part of the external control, as well as checks and balances that for-profit corporates with legal owners enjoy. This also leaves non-profit foundation governance to suffer from ample risk of moral hazard.

This paper focuses on the following two-fold research question. Firstly, (1) which foundation-specific elements explain the concentration of control in foundation governance? Addressing this question, we empirically investigate an extensive sample of 891 foundations in Finland, with data on the foundations' detailed rules, financials, and other characteristics. We construct and develop a new index measure for the concentration of control in foundations, based on data on the rules. We then categorize foundations on the basis of their main source of income, to see if financing and exposure to outside control by financiers has an effect on governance. Secondly, (2), we examine the consequences of governance choices on the level of grant-making or charitable spending.

Our proposed model makes several contributions to our understanding of foundations' role in the economy. Empirical results suggest, firstly, that a foundation's source of finance is associated with the concentration of control at board level in foundation governance. Specifically, foundations that have to regularly approach outside sources of finance–donations,

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59   For one seasoned view on foundation lifespan, see Bill Gates' interview at Harvard University in 2012. https://www.youtube.com/watch?v=cBHJ-8Bch4E, at 34-minute mark about life span. At 35.20 comment on extended lifespans: "...There would be some weird board, God knows what they would do."

public sector support or business income from customers–feature more external control (and less concentration of power at the board level) than foundations that can finance their missions with an endowment capital income. Secondly, we find that competition in the foundation's charitable mission market is associated with less external control of the foundation. Finally, we test whether the quality of governance affects a foundation's grant-making or charitable expenses and find that operational foundations with a more concentrated governance model spend relatively less on their mission operations than foundations with less concentration of decision power at board level.

We show a statistically significant relationship between a foundation's reliance on outside sources of finance and its quality of governance, with endowment-financed foundations opting for a more concentrated model of governance. Our model has policy implications: regulators should note the sources of finance and foundations' competitive situation when monitoring non-profits. In absence of owners the regulator is the only external control of non-profits.

The rest of the essay is structured as follows. We discuss earlier research in Section 2. We then discuss salient features of foundation governance in Section 3, especially pointing out differences to the governance of corporates. In Section 4 we present our data and develop measures for governance quality, foundation competition and sources of finance. In Section 5 we formulate our test functions and present empirical findings. Finally, in Section 6 we discuss findings and limitations to our conclusions.

2. Earlier studies on non-profit governance and its consequences

Non-profit governance research has not been wide. Main interest has evolved around endowment building.

Hansmann (1990) gives a thorough consideration to university endowments and comments a wide variety of arguments justifying their growth. Hansmann notes that the "maintenance of an endowment is often viewed as an objective in its own right, rather than simply as a means to an end." He suggests that the preservation or use of an endowment should be justified by a similar analysis that companies perform to decide on investments: money should be spent where and when it brings the most return. If the rate of return of preserving an endowment is higher than returns of an endowment used in a project today, endowment building is beneficial. However, if present investment yields are low it would seem that the use of endowment can be justified by many fruitful mission projects that can show a decent financial or societal return. Furthermore, time is of essence: the gain of finding a "cure for cancer"[60] in this decade would surely be higher than saving endowments to seek such inventions in later decades[61].

Fisman and Hubbard (2003) develop a measure of excess endowment and relate it to the state-level regulation of foundations. They find that American states with a better regulatory oversight of foundations are populated with more donation-intensive foundations. The authors interpret this as evidence that a more intense regulation mitigates the risk of endowment

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60   Or any other much-anticipated invention or operation.

61   This argument is the core rationale for Bill and Melinda Gates Foundation's time-determinate existence. The foundation will be closed when 20 years have elapsed from the death of the spouse surviving longer. Bill Gates comments that malaria (one of the focal projects of the foundation) should be cured in such a time period, and that next philanthrophic generations will have other objectives (Gates (2013)).

building and/or expropriation by foundations, which in turn encourages donations. However, Fisman and Hubbard do not detect a direct relation between excess endowments and state regulation.

Desai and Yetman (2005 and 2015) develop state-level indices of the legal and reporting rules facing non-profits and examine their impact on non-profit behavior. They consider public and private charities separately[62] and find that stricter non-distribution constraints and reporting rules are associated with greater charitable giving and lower insider compensation in both groups. Further, they examine how non-profits inter-temporally smooth their expenditures and find that well-governed non-profits' expenditures are more responsive to local adverse economic conditions than other non-profits'.

Core, Guay, and Verdi (2006) examine the relation of excess endowments to several foundation characteristics. They investigate three possible predictors for a large endowment: 1) Foundation faces growth opportunities and holds excess money for that purpose, or 2) Strict monitoring environment allows for a large endowment without agency problems, or 3) Moral hazard explains the amount of excess endowment. They find that mission-related spending is lower and management compensation higher for foundations with excess endowments, consistent with the agency suspicion. They also find excess endowments to be persistent over time and not related to growth or cash flow fluctuations.

Brown et al. (2014) examine moral hazard linked to university endowments. They find there is an asymmetric payout behavior in university non-profits: pay-outs respond to negative shocks in their spending, but not to positive ones. The authors note that university endowments have grown more rapidly than university expenditures, contradicting the hypothesis that endowments would be used to smooth the expenditures over time.

In many of the above studies an endowment is considered parallel to financial slack associated with the free cash flow in companies (Jensen (1986). Excess endowment is assumed to produce agency costs similar to free cash flow slack. In foundations the agency costs may stem from 1) less effort in the daily work of the management[63], 2) tunneling of funds and benefits to the management, and 3) less effort to seek efficiencies by, e.g., merging or joining charities. This last efficiency cost is especially relevant as there is no market for control for non-profits: merging non-profits is not

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62 Non-profit types and classifications vary from country to country. In the US, the third sector bears some of the public sector responsibilities (Clotfelter 2012) and thus distinction between "public" and "private" is meaningful. In Europe, charities are considered "private", although no similar distinction between private and public, as in the US, is used in most countries (even the French "Fondation Publique" does not bear the same characteristics as an American public charity). Furthermore, most of the American private charities (=private foundations) are grant-making foundations. In Europe, foundations typically have many modus operandi: a foundation can be either operational or grant-making.

63 Here we include the board of directors into the overall management of a foundation.

driven by investors who seek material benefit.

However, the determinants of an endowment are summarily taken to be the state-level regulation of non-profits: poor oversight by the regulator leads to excess endowments. State regulation has represented foundation governance in research, instead of genuine foundation-level governance data. This leaves the finer details of governance, such as the board and auditing, out of the analysis.

An excess endowment has also been used as a predictor of meager charitable activities, that is, of lesser societal performance. We discuss the direction of causality between determinants of governance, governance and outcome of governance in more detail in Section 3.1 and Section 5.

Linking outside control to internal decisions, LeRoux and Goerdel (2009) find that the competition for finance or for other resources motivates non-profit management to safeguard the non-profit's reputation by keeping up the service quality, albeit at the cost of sacrificing longer term funding or development. The link between governance and competition originally stems from Masulis, Wang, and Xie (2005) who tested competition's effect on a *for*-profit acquirer's performance, and more specifically Giroud and Mueller (2010) and (2011), who tested *for*-profit firms' performance and returns against their governance. Both studies found that *product market competition* is a substitute for governance. Absent competitive pressure from the product market, weak governance gives rise to agency costs. Weak governance does not lead to higher agency costs in firms who face competition, when compared to strong governance firms. The "non-profit competition" is a much more elusive concept: foundations do not compete for market share, customers or for profits[64]. With this caveat in mind, we posit that in the non-profit world, Giroud-Mueller hypothesis could be tested on the resource market competition (as LeRoux and Goerdel have done), or mission-market competition: are there many competing foundations working on the same problem, and thus competing for the donors' mission-specific funding and volunteering?

Several points arise from earlier governance studies: detailed agent-level information about individual non-profits is needed in order to make stronger inferences about how non-profits form their governance. Based on such conclusions we can better understand the source of moral hazard in non-profits. We also lack a market-based measure for non-profit competition to compare outside "market" control with internal governance control. Finally, we need a plausible measure for governance quality to better understand how the quality of governance is associated with the societal performance of non-profits.

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64   See more discussion about competition in Footnote 100.

3. How are foundations governed?

Statutes of different kinds of societies determine the industry where the society operates, its administrative bodies, and procedures to change the statutes or close down operations. So much is true for both corporates and foundations. The differences are to be found in detailed provisions.

We summarize the main sections and provisions of both corporate and foundation articles of association in Table 4 below.

Rules' section	In corporates	In foundations
Name and industry	**Name, home and business sector**	**Name, home and purpose/mission**
Share capital	**Share classes and their rights** Share transfer restrictions **Rights to distributions**	Original endowment Right to accept donations
Administration	**Annual General Meeting** elects: (Administrative board) **Board of Directors,** elects **Management** Procuration rights	(Members) (Administrative board) **Board of Directors** and its committees Management Procuration rights
Closing of accounts and audit	Accounting year (AGM elects auditor)	Accounting year **Which body elects auditor**
Change of articles	(decided by AGM)	**Which body decides**
Closing down of operations	(decided by AGM)	**Which body decides**

Table 4. The features of corporate and foundation articles of association or rules. Obligatory clauses are bold-typed.

There are no shares or shareholders in a foundation[65]. Consequently the corresponding elements are absent in foundations' rules. Whereas a corporation's annual meeting of shareholders decides on auditor selection, on board composition, on changing the articles or on dissolving the company,

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65   Desai and Yetman (2015) note that the absence of owners and ownership influence allows
      us to examine the impact of rules (governance) alone.

a foundation must assign those decisions to other organs. Foundations' only obligatory body is the board of directors. A separate management layer of a foundation may not necessarily exist, and the board may take care of the running of operations in a less active foundation. There are no rules attached to distributions, ownership or shares.

Thus the central agent is the board and we must adjust our principal-agent setting accordingly. In corporate governance research the board is often assumed to hold interests that are aligned with the owners[66] and the conflict of interest exists between the management and the board/owners. In foundation setting the conflict exists between the officers of the foundation, be it the board or management, and the principal, the "owner" of foundation activity. Who are these owners?

A non-profit's "owners" should be the final beneficiaries of the foundation's activity, just as the shareholders are the residual claimants of a firm's profits. Such beneficiaries have an interest in the efficiency and continuity of a foundation. By this definition the grantees or objects of mission are "owners". They[67] are, however, often not represented in the board of directors of a foundation and do not use their collective voice to influence foundations' operations. Absence of such influence does not make the principal-agent conflict any less important.

On the other hand, those who provide financing to a foundation may be considered owners. The uncertainty about a non-profit's revenues is clearly a concern for all non-profits (see Carroll and Stater (2008)). Financiers do not profit from distributions from a foundation, but they control its future ability to operate. "Future" is critical here: the future flows of finance secure the foundation's motivation to govern openly. In many countries, founder control (in foundations) is considered equivalent to owner control (in corporates). This, however, neglects the crucial set-up: a founder has already donated and may use a foundation's funds inefficiently, presenting a loss to the society which gives the foundation tax exemptions. In contrast, there is more money to come in the future from outside financiers. Finance must be negotiated from future donors, but not from the founder. Thus founder control is not a guarantee against monitoring problems. The best monitors are the ones who will repeatedly decide on financing[68] the foundation's mission: they regularly expose the foundation to outside scrutiny. Donors, customers of the foundation's business operations[69] or the state supporting the foundation can be considered such financiers.

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66   Gillan, Hartzell, and Starks (2011) even find that the board is a substitute to the market for control.

67   For example, the poor, the foreign, the disaster victims or soup kitchen customers.

68   Financing may be in form of donations, buying services or granting public funds.

69   Some foundations finance themselves by business proceeds from, e.g., health care service, sports paraphernalia, country-club catering or such. These businesses have customers who often patron such services in order to support the foundation's mission. Customers have a repeated commercial relation with the foundation, and are not to be confounded with the foundation's charitable beneficiaries.

Ultimately the society can be considered the owner. In return for tax exemption the society expects general benefits from non-profits. Tax exemption is a form of financing for the non-profit.

Our interest is in examining the conflicting interests and moral hazard between principals and agents in foundations. Even if grantees, beneficiaries, financiers or the society may be considered a foundation's "owners", they do not possess a formal position of control. The *shift* of power from owners to managers is in focus in corporate setting. For foundations, we focus on the *concentration* of power to the board[70] and on an inherent lack of control by any other body, be it financiers or beneficiaries of the foundation.

In our consideration, efforts to divide decision and oversight powers to more than one body would create a surrounding that is conducive to good governance. Fama and Jensen (1983) call for similar division on powers: decision management and decision control should be in separate hands[71]. Hopt and Hippel (2010) note about foundations: "The auditor is appointed by the board. This is a questionable arrangement, given that the auditor's task is to monitor the activities of the board."[72]

Gompers et al. (2003) nominate extreme corporate governance models as the "Dictatorship" and "Democracy" ends of the spectrum[73]. Similarly, we call governance in foundations that have concentrated decisions powers to the board as the "All-in-one-hands" governance, as opposed to the "Open governance" of a foundation.

We try to see how much power is vested in one governance body alone. Concentrated power (even without financial repercussions) gives rise to moral hazard of substandard effort from the agents. In foundations, power resides at the board level. Thus we examine whether there has been any effort to mitigate the concentration of power to the board. We suggest that such effort would come from financiers of the foundation or from competition on the mission market. This is the main setting in our hypotheses in Section 3.2, and in our empirical tests in Section 5.1.

Corporate articles of association omit many foundation-type rules because decision structures in corporates are based on corporate law. A general meeting of shareholders decides on the dissolution of the company, on changes of the articles and on any other important decisions not otherwise delegated to other organs. In foundation rules the decision agent for such fundamental resolutions must be stated. Most often these

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70   The board is the only foundation body required by the law.

71   Pages 303-304.

72   Page 764.

73   Gompers et al. (2003) define: "Firms in the highest decile of the index are placed in the "Dictatorship Portfolio" and are referred to as having the "highest management power" or the "weakest shareholder rights"; firms in the lowest decile of the index are placed in the "Democracy Portfolio" and are described as having the "lowest management power" or the "strongest shareholder rights."

decisions fall upon the foundation board, although the board may be subjected to some other administrative body or even outside authority.

As a final note, we repeat our discussion in the Introduction of this book. The moral hazard settings in foundations are not necessarily or even mainly related to an opportunity to materially benefit from the foundation, and the agency costs are not direct cash costs, but rather costs of inefficiency or motivations that are not in line with the foundation's mission. Thus moral hazard may exist even in the altruistically motivated world of non-profits.

3.1 Time sequence, causality and effect

Earlier non-profit governance studies have used the state-level regulation as a proxy for the quality of governance in foundations. The causality has been straight-forward: legislation affects agents' choices (foundations' or donors'), and the relevant research question is: given governance, how do non-profits behave? The only other causality possible would be to ask if foundations select or change their home state based on their own circumstances, thus: do some foundation characteristics affect the selection of governance environment? The data available has not been detailed enough to allow for a more nuanced causality discussion. If we are able to examine individual foundations' rules, causality becomes more interesting.

A necessary condition for causality is that the cause precedes the outcome. What is the lifecycle of a foundation and what is the sequence of decisions about foundation rules, finance and scope? At first thought the rules and governance model are decided upon the establishment of the foundation. Registering a foundation necessitates registering its rules and governing bodies. It would seem that the governance model exists first, and other facts follow. But a governance model is formed on the basis of the complete plan of the founder. Often the endowment capital arrives at the birth of the foundation, defining the financing at the start. Surely the planned financing, scope and operations have an impact on the first rules that are chosen. Thus the causality, at least at the beginning, seems ambiguous.

However, the life span of a foundation can be decades, even centuries[74]. A foundation may change its rules during its lifetime when its circumstances change: the operations may have grown, the foundation may have accumulated an endowment from successful investments, it may have attracted a large volunteer base or its reputation may have spread wide, prompting larger donations. All this may cause the foundation management to ponder on the appropriateness of the governance model. Anecdotal

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74 The oldest operating public charitable foundation is said to be the Cathedral Foundation in the UK which maintains King's College in Canterbury. The foundation was set up in 1541, during the period of dissolution of monasteries by King Henry VIII. Older private funds and trusts exist in many countries.

evidence from the regulator suggests that rules' changes are indeed regularly registered to the foundation register, albeit at long intervals compared to corporates.

The rarity of rules' change is due to slow change in foundations themselves. There are no mergers, takeovers or growth leaps. Even if foundations vigilantly ponder the need for change in governance, that need does not arrive fast.

An opposite assumption would be that foundation characteristics follow foundation rules. A foundation would adjust its sources of finance or competitive situation on the basis of its rules. This may be the case over the short term, but we doubt the plausibility of this assumption on the longer term. A foundation has every interest to change itself to accommodate opportunities in financing or operations that the outside world presents. The rules can be altered with an internal decision, the outside world hardly so.

During the lifetime of a foundation, the endowment may not be entirely a choice variable. The accumulated or legacied cash cannot be eliminated by paying it to outsiders. The endowment may be (at least in the early years of a foundation) determined by the legacy and the rules imposed by the founder. In addition, the local legislation may limit the use or reduction of the endowment, and foundations cannot flexibly seek long-term capital by issuing securities. As a consequence, the existence of an endowment, and/or its size, may not be fully interpreted as a sign of some peculiar motivation or as a consequence of foundation management style. Along the same lines, it can be discussed if the rules are a choice variable for the foundation management: legislation may effectively limit rule changes or closing down the foundation. We return to this discussion in Section 4.1.

Many researchers into non-profit governance, referred to in Section 2, do not clearly address the question of causality. Research in corporate governance typically examines if governance is related to corporate valuation or profitability. In an untypical vein, Aggarwal et al. (2011) investigate association between corporate ownership and governance. They find that foreign institutional ownership and institutions' good home-country legal systems are positively related to the better governance of companies outside the U.S. They also test the effect of institutional ownership on the most relevant[75] governance components and find that foreign institutional shareholding is positively associated with more shareholder-friendly board structures. Aggarwal et al. (2011) base their findings on a governance sample covering 5 years (2004-2008) which in our view remains relatively short period for a governance overhaul. They discuss causality and test it by using changes in ownership as predictors for changes in governance. They also test the reverse regression (governance attracts foreign ownership). Aggarwal et al. (2011) are able to confirm causality from certain changes in

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75   Components that are most studied by researchers and policy makers. Aggarwal et al. (2011) p. 22.

ownership to better governance and not vice versa. Thus governance may prove to be an exogenous variable in suitable time series.

Unfortunately our data does not allow us to determine changes in governance over our sample period, as we have rules from one point of time[76]. Our financials cover only 3 years. Thus any dynamic changes cannot be observed. We lean on the evidence from Aggarwal et al. (2011) and assume that foundations' rules and governance follow from foundation characteristics.

Finally, we note that explanatory variables may work in a fundamentally different manner: they may either enforce change or replace change. The presence or absence of some governance characteristics may be due to such differing effects of explanatory variables. For example, Giroud and Mueller (2010) find that product market competition *substitutes* for governance, with governance having less association with company valuation in competed markets. External competition allows for less governance inside. However, we may equally find that, for example, demanding financiers require *more* governance, resulting in the source of finance being associated with more governance provisions. This is the opposite of substitution.

The difference between the two effects is that some variables work from outside the economic agent, while some variables cause change inside the economic agent's organisation. We highlight this difference in our hypotheses 1 and 2 in the next section.

3.2 Hypotheses

Based on the above discussion we formulate our hypotheses. The first two relate to the reasons for governance choices, and the last one to the consequences of governance (see Figure 1). We present the hypotheses here, while clarifying their exact wording in subsequent Sections 4.1 to 4.5 where chosen variables are defined in detail.

We start with the moral hazard situation that we outlined earlier in Introduction, Section 3. According to Jensen (1986) moral hazard is severe in firms with large free cash flows. We apply this proposition to foundations and suggest that the endowment of a foundation can be considered similar to "excess cash" in corporates. Generalizing further from the corporate setting, we posit that the certainty of "cash", i.e., certainty of sources of finance, affects foundation governance decisions – as Jensen (1986) posits that the availability of excess cash affects corporate decisions. Income from endowment (investment income) can be considered more predictable and easier to negotiate than donations, business income or support from

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76   The collection of rules from the online register database for almost 900 foundations was ongoing in the Ministry of Justice from January 2011 to November 2011. Thus the data reflects the situation at the time of collection for any specific foundation.

the public sector[77]. Given this, endowed foundations face less pressure concerning their governance system. Outside financiers are more likely to demand transparency, control structures or even a say on material matters of the foundation. Thus we formulate our first Hypothesis:

> *Hypothesis 1: Foundations who finance themselves with income from endowment have a more concentrated model of governance than foundations which need to regularly seek financing from external sources.*

Along the lines of Giroud and Mueller (2011) we also test the effect, if any, of the external control provided by competition on a foundation's mission market. Masulis, Wang, and Xie (2005) and Giroud and Mueller (2010) found that *product market competition* acts as a substitute for governance. Absent competitive pressure from the product market, weak governance gives rise to agency costs. But weak governance does not lead to higher agency costs in firms who face competition, when compared to strong-governance firms. Even if the non-profit competition is difficult to define, we propose that in the foundation world, we can replace product market competition with the mission market competition: are there many competing foundations working on the same problem, and thus competing for the financiers' mission-specific funding? And if so, how does the competition alter governance in competing foundations?[78]

Two opposite competition effects can be considered. Giroud and Mueller (2010) find that external pressures substitute for governance. Intuitively, competition pressures guarantee a certain level of correctness in foundations, thus reducing the need for top-quality governance. If this hypothesis holds, competition drives foundations to minimize agency costs and operate efficiently *without* open governance structures. Competition may also force foundations to concrete administrative cost savings and getting rid of internal control layers.

On the other hand, unlike corporates, foundations are *not* constantly steered on the basis of their market share or profits. Competition affects corporates much more directly than it affects foundations. Thus it could be assumed that competition intensifies the need for quality governance. It may be a pre-requisite from donors or customers. If this hypothesis holds, competition forces foundations to have open governance structures. Foundations which have a better reputation and public image are best positioned to get intensely competed resources and projects. Foundations

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77   This assumption may not hold during times of financial instability when investment returns fluctuate. However, income from investments does not need to be yearly renegotiated, and counterparties are mainly the faceless market forces, in contrast to donors, customers and civil servants who decide on donations, business income or public sector support. All in all, it is plausible that foundations financed from endowment income face the least uncertainty and discomfort about financing.

78   See more discussion about this in Footnote 100.

in competitive surroundings can be more motivated to install transparent and high-quality governance, because it reduces the risk of moral hazard and thus safeguards reputation better.

Which of these effects exists in reality will be confirmed by our empirical tests by the sign of coefficients of the competition variable. We formulate our second Hypothesis in the same direction as observed in for-profit empirical findings.

> *Hypothesis 2: Foundations in competed mission markets have a more concentrated model of governance than foundations in less competed markets.*

And finally, to see if governance matters, we will test whether governance quality is related to societal performance. The society is the ultimate beneficiary of charitable work. In return for tax exemption the society grants to non-profits, society expects non-profits to use their wealth efficiently and beneficially. If good governance improves such performance, it is worthwhile to encourage good governance in the third sector.

Linking governance, charitable work and financing sources, LeRoux and Goerdel (2009) find that non-profits who receive more government funding, compared to other sources of funding, engage in more advocacy operations. Core, Guay, and Verdi (2006) find that mission-related spending is lower in foundations with excess endowments.

We measure societal performance by charitable spending. It is admittedly a poor measure of the efficiency and impact of charities which are generally challenging to measure[79]. For lack of better measure, we employ the operational expenses of foundations to estimate the benefit to the society.

We suggest that the lack of control, through poor quality governance, leads to higher agency costs to society. These costs appear in form of lesser charitable spending in foundations with poor governance. Our Hypothesis is:

> *Hypothesis 3: The relative level of charitable spending is smaller in foundations with a more concentrated model of governance.*

We develop these three hypotheses and the needed variables in more detail in Section 4.

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79   We would need to assess the importance and impact of various charities in society. This would require wide mission-specific skills (sociological, environmental, cultural and so forth) because the non-profit sector does not produce financial results by which to evaluate success, unlike the for-profit sector.

4. Data and development of variables

In this section we describe the data available to this research and sample characteristics. The most important contribution of this essay is the development of foundation governance index which is explained in detail. We also form categories for the foundation source of finance, based on foundations' financial statements breakdown. A measure for competition on foundation mission industry is also defined, as well as a classification of foundations on the basis of their operating model. Finally, we present size, age and industry control variables suitable for foundations.

4.1 Foundation governance index

To differentiate a board-centric governance model from one of lesser concentration to the board we formulate a measure for the concentration of power in governance. Again, we take lead from corporate governance studies and discuss differences in foundation environment and their impact on foundation governance. We also summarize the main non-agency theoretic and non-economic theories about non-profits, which we do not attempt to cover in this essay but note as plausible and likely complements to our economic explanations. We finally form suitable variants of power indicators for foundations.

4.1.1 Forming Foundation Governance Index

Gompers, Ishii, and Metrick (2003) (henceforth GIM) developed a governance index for corporates that captured the elements of restricting shareholders' rights in favor of those of the managers'. GIM examined whether this balance of power had any relationship to corporate valuation

and operating performance[80]. They found that corporates with more shareholder-powered governance earned significantly higher returns on the stock market and had better operational profitability. GIM established that managerial moral hazard leads to agency costs to shareholders.

Bebchuk, Cohen, and Ferrell (2009) investigate the relative importance of governance provisions. Testing the relation between sample firms' stock returns and their reduced "Entrenchment Index", they find a similar negative association between entrenching rules and valuation as GIM did.

Cremers, Nair, and John (2009) show that stock returns are related to vulnerability to takeover, determined by the absence of certain governance provisions.

Bushee, Carter, and Gerakos (2014) studied for-profits' governance from the investor's perspective. They find that large institutions, those holding a large number of portfolio stocks, and those investing in growth firms are more likely to be sensitive to corporate governance mechanisms. The authors suggest that such mechanisms may be a means for decreasing monitoring costs and may be more essential for firms with a high level of growth opportunities.

There have been opposite or contradictory views about the detrimental role of concentrating power to the management or the board. Ikäheimo, Puttonen, and Ratilainen (2011) find support for differences in the roles of anti-takeover provisions. If ownership is widely dispersed and company management has a strong power position, the quality of corporate governance relies heavily on external corporate governance, where the market for corporate control has a disciplinary effect on a company's management. In such a case, a company's management may protect itself against this takeover threat by using provisions in the company's bylaws. This corresponds to the GIM assumption that power-concentrating provisions are detrimental, and the authors find empirical support that takeover provisions are associated with lower valuation. However, if the ownership is concentrated and the provisions are set by the current major shareholders to protect themselves against takeover, the provisions offer current shareholders a safe corporate governance environment to assist and to control managers and, in extreme cases, to replace management without the costly mechanisms of corporate. Current shareholders gain the benefits of long-term investments in company performance without the constant threat that these benefits would be taken over by outside shareholders. The authors show evidence that takeover provisions are associated with higher operating performance, in contrast to GIM

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80 GIM did not discuss efficiency of the stock market, but assumed a one-way effect from governance to performance which induced large changes in firm value (p. 109). Later, Bebchuk, Cohen, and Wang (2013) discovered that the stock market had learned to correctly value bad governance, and that performance still had a relation to governance. Others also presented alternative reasons for the abnormal stock returns (e.g., Cremers, Nair, and John (2009)). We refer extensively to GIM due to their pathfinding governance index use.

assumptions. Sinani et al. (2008) find indications that in small countries, such as Scandinavian countries, trust, information diffusion and reputation mechanisms are active governance mechanisms that can replace other controls. Underperforming companies damage their reputation and this spills over to the personal reputations of the top management. Bad personal reputation has a negative impact on their future careers (e.g., eligibility for new jobs or board positions).

Concerning non-profits, Beck, Lengnick-Hall, and Lengnick-Hall (2008) note that small non-profit organizations cannot always apply management theories and techniques developed for large, private businesses but limit their use to specific limited problems. This creates unintended negative results. One possible solution to this dilemma is adoption of bundles of practices instead of singling out suitable methods. This resonates with general corporate governance bundle theories that suggest the existence of equifinality in governance choices: that several different combinations of governance provisions may lead to an equally beneficial governance system (see, e.g., Aguilera and Jackson (2003)).

Finally, there are non-agency theoretic explanations for non-profit governance models. Kanter and Summers (1994) apply organizational theory to non-profits, noting that non-profits face dilemmas about how to monitor the "doing good". In organizations with abstract missions (rather than that of the pursuit of profits), effectiveness criteria may become substitutes for goals. The lack of feedback from clients is another disadvantage for many non-profits. Additionally, financial setbacks may help non-profits to rally more donations, in contrast to for-profits who have a clear interest to avoid financial distress. Davis et al. (1997) develop the stewardship theory of management. They note that the application of control does not imply that all agents' decisions will result in increased wealth for principals; it implies only that the managers are more likely to strive to get outcomes favoured by principals. There are many reasons other than poor motivation for agents' failing to deliver this for their principals (e.g., low ability, lack of knowledge, and poor information). According to Davis et al. (1997), agency theorists are not as concerned with these failings as they are with those resulting from motivational (i.e., agency) problems. Goldschmid (1998) discusses regulating governance of non-profits. He argues that the tax exemption granted to non-profits is a legitimate public policy concern, but the society needs to avoid excessive control of non-profits in order to encourage talented individuals to serve on the non-profit sector. Goldschmid calls this "fairness to those who are willing to serve". He also notes that proper enforcement should improve governance practices more than increasing regulation. Rose-Ackerman (1996) asks what the links between human motivation and organizational structure are. She considers altruism, organizational form, and market structure affecting structures. Organizations may operate differently depending upon the motivations of employees, managers, and customers, or upon competition the non-profit faces. Young (2000) suggests that the model of co-existence

between the public and the non-profit sector explains the regulatory and governance environment of non-profits. He defines three separate models of co-existence: non-profits (a) operate independently as supplements to government, (b) work as complements to government in a partnership relationship, or (c) are engaged in an adversarial relationship of mutual accountability with government. Bebchuk and Roe (1999) and Roe (2003) examine developed economies and their corporate governance models. They find that there have been various paths to the current governance models in different countries. Political systems, history, structure of economy and institutions affect the governance model. The researchers acknowledge that various single components can lead to an equally beneficial local governance models. Venable, Rose, Bush, and Gilbert (2005) conduct six multimethod studies of non-profit stakeholders to define the role of brand personality in non-profit organizations. Current and potential donors ascribe personality traits to non-profit organizations and differentiate between non-profits on the basis of the organizations' personality. Non-profits form their structure to gain the best personality in competition for donors' time, money, and in-kind goods or services.

It is also important to consider the effect of costs: the more organs, control and hierarchy a foundation has, the more it incurs costs. There may also be costs of information acquisition: the board has the best information to decide on rules changes or closing down the foundation. Placing important decisions in external hands may cause extra costs and increase the risk of unfortunate decisions. Furthermore, there may be moral hazard in external control, e.g., when outsiders can choose costly providers and benefit from such patronage. Thus the choice of concentrating power to the board may sometimes be optimal. The benefits of an open governance model with external control must be weighed against the disadvantages of such model. Adapting GIM method, we develop an index for foundation governance (Foundation Governance Index, FGI). Two main questions emerge when comparing with GIM: First, what are the corresponding elements for power-concentration in the rules of foundations? And second, what would be the measure for governance outcome, comparable to the corporate performance[81] measure? We leave the second question to be addressed in Section 5.3.

Most of GIM's index elements relate to share rights, which do not exist in a foundation. The *shift* of power from owners to managers is in focus in the corporate setting (GIM). Following the discussion about non-profit "owners" in Section 3, our focus are the elements that concentrate power to the foundation board. In absence of owners there is no comparable shift of power but rather a concentration of it. Any effort by a foundation to mitigate the concentration of power to the board is assumed to reduce the likelihood of agency costs resulting from the foundation's governance model.

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[81] In GIM, "performance" referred to both the company's stock market returns and company profitability.

Which are the clauses that concentrate power to the board? We continue by choosing relevant rules from our foundation rules data. There are no voting rules or clauses pertaining to a change of control. On the other hand there are strong powers to alter the rules and to close the foundation.

4.1.2 Relevant foundation provisions and factors affecting their adoption

We select provisions whose existence in some form is required by law (see Table 4) and that increase the board's power and/or decrease external control over the board. This, we posit, is in line with the GIM motivation of "adding one point for every provision that restricts shareholder rights (increases managerial power)." [82] We adopt the assumption that a limited number of provisions are able to convey the concentration of power to the board, and that we consequently do not need all detailed provisions of foundations' rules in our index. We base this assumption on subsequent research of GIM index which originally included 24 provisions.

Bebchuk, Cohen, and Ferrell (2009) investigate the relative importance of GIM components and start by reducing the GIM index to six components that have drawn substantial opposition from institutional investors because of their shareholder power entrenching nature. Bebchuk et al. further justify this choice by their own analysis and by interviews with M&A practitioners. They find that the eliminated 18 GIM components are not correlated with stock returns. Thus the six chosen components largely drive the documented negative correlations that the provisions in the articles of association have with firm valuation and stock returns in 1990-2003. Bebchuk et al. note that reducing the components reduces noise and facilitates future research into what matters in governance. Ikäheimo, Puttonen, and Ratilainen (2011) discuss the number and importance of various types of provisions in companies with or without large blockholders and construct a Nordic governance index with nine provisions that are most commonly used[83]. Bushee, Carter, and Gerakos (2014) define a model where all governance variables are defined so that smaller values capture "better" governance. Five main provisions that concentrate decision power

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82   Gompers, Ishii, and Metrick (2003) p. 114.

83   Ikäheimo, Puttonen, and Ratilainen (2011) argue for two types of control motivation: 1) The company management has a strong power position. The market for corporate control has a disciplinary effect on a company's management, but a company's management may protect itself against this takeover threat by using provisions in the company's bylaws; and 2) In case of concentrated long-term ownership and lesser management power, company provisions are set by the current major shareholders to protect themselves against takeover activities by outside investors.

to foundation board level emerge[84]:

	Yes	%
Board self-nominates	387	43 %
Board nominates auditor	578	65 %
Board decides about rule changes	629	71 %
Board decides on closing the foundation	599	67 %
No organ above the Board	690	77 %

Table 5. The prevalence of main provisions in the sample foundations' rules. N=891.

It is worthwhile to consider whether there may be an internal, opposing efficiency rationale for the inclusion of the above power-concentrating provisions. We have discussed the effect of costs on these rules choices: the more organs, control and hierarchy a foundation has, the more it incurs costs. This is, in general, against the very ideal of frugality in non-profits. Similarly, there may be costs of information acquisition: the board has the best information to decide on rules changes or closing down the foundation. Placing such important decisions in outside hands may cause extra costs and increase the risk of unfortunate decisions. Having an external party choose the auditor but not pay the fee may be seen as a slight, new moral hazard: eager outside governors may enjoy patronizing the finest and the most expensive audit firms. All in all, we do not know which process of choosing external control (auditor or administrative organs) produces the most severe agency problems: while avoiding one agency cost a foundation may create another[85].

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84   In line with Bebchuk et al. (2009) and Ikäheimo et al. (2011), we examined if some components are more significant than others. Unfortunately, there are no stock returns or valuation variables with which to measure the importance of components in foundations. We rely on analyzing the components' appearance with other rules, their association with our results and components' explanatory power, and finally we consider notes from interviews with foundations and the regulator. After having interviewed 16 foundations and having studied the prevalence, the significance and co-appearance of rules, we noted that the use of many provisions was arbitrary: the behavior of foundations who had a voluntary provision and those who did not could be exactly the same. The Ministry of Justice collected 13 different types of provisions, including voluntary ones. Some of them were deemed to be insignificant to our research question, e.g., "Board can hire personnel" or "Board designs yearly action plans". Three factors, "board approves the accounts", "board decides on strategy" and "no limit to board tenure" had little differentiating power in our sample. In only 21 foundations the board decides on strategy (or, perhaps more accurately, it is written in only 21 foundation rules explicitly that the board decides on strategy). Only 48 foundations have limited the tenure (successive memberships) of the board members. And in more than 80 percent of foundations the board approves the yearly accounts. After these considerations we included the final five provisions: three obligatory provisions and two descriptive provisions whose effects on operations are not open to interpretations.

85   See also Footnote 7 about the agency paradox.

With these caveats in mind, we maintain that in the continuous business of running a foundation year-on-year, and in the Finnish legal and regulatory environment, the lack of control on the concentrated power of the board presents the most common moral hazard in foundations.

We start building a governance index by adding one point for every rule provision that increases the board's powers[86]. All provisions may not have an equal impact on the power balance, but all have some impact. Thus our index can be considered ordinal and even a scale variable. We keep the additive order as "0=open, 5=concentrated" as it is intuitive if one keeps in mind the five power-concentrating provisions.

We obtain the following frequencies for a FGI that has values from 0 to 5:

Foundation Governance Index values' frequencies

FGI	Frequency	Percent
0	180	20.2 %
1	40	4.5 %
2	27	3.0 %
3	95	10.7 %
4	241	27.0 %
5	308	34.6 %
Total	891	100 %
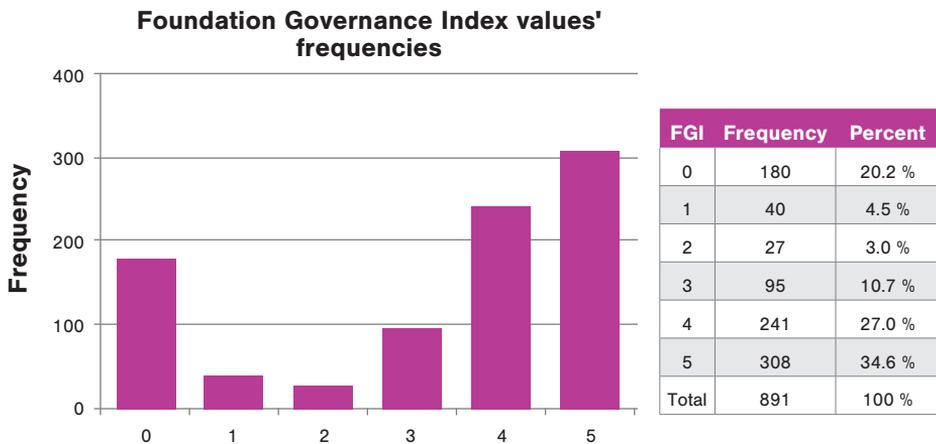
Chart 1. The frequencies of the Foundation Governance Index ranks. N=891.

We henceforth use the five-element FGI as our main dependent variable, unless otherwise stated. Note that FGI scores have 6 levels, from 0 to 5.

Gompers et al. (2003) nominate the extreme corporate governance models the "Dictatorship" vs. "Democracy" ends of the spectrum[87]. Similarly, we call governance in foundations that have concentrated decisions powers to the board as the "All-in-one-hands" governance, as opposed to the "Open governance" of a foundation.

Another evident question about the rules choices in foundations is: are there any external reasons for adopting certain rules? Do laws, taxes or

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86   Which we consider here tantamount to "managerial power" in GIM.

87   Gompers et al. (2003) define: "Firms in the highest decile of the index are placed in the "Dictatorship Portfolio" and are referred to as having the "highest management power" or the "weakest shareholder rights"; firms in the lowest decile of the index are placed in the "Democracy Portfolio" and are described as having the "lowest management power" or the "strongest shareholder rights.""

costs dictate the choice of rules? [88] We study how Finnish foundations' governance choices are associated with other foundation characteristics and choices. For these associations to be interesting, the choices of rules made by the foundations should be voluntary and not dictated by some overriding outside factor such as legislation or taxation. Furthermore, it should be possible to change the rules. Thus, it is worthwhile to discuss the legislation and the taxation of foundations during the period that our empirical data covers.[89]

Finnish legislation on foundations does not limit or guide the choice of rules. The adoption of outside control elements is well-regarded, but the law requires all foundation board members to act solely in the interest of the foundation and its mission (and not in the interest of some outside party).[90] Similarly, the soft code legislation, i.e., the self-regulation by the foundations' association, emphasizes both the benefits of control as well as independence of board members. The board members' fiduciary duty extends to keeping the rules and the mission updated, in case the mission of the foundation has become obsolete[91]. Changes of rules do occur and the regulator's approach has been pragmatic towards justified changes[92].

In order to gain tax-exempt status, a Finnish foundation has to fulfil three conditions: 1) it operates for a public good, 2) its beneficiaries are not limited to a certain group, and 3) parties involved in the operating of the foundation do not receive benefits in form of, e.g., distributions or excessive salaries. The tax-exempt status is granted by the tax authority, based on an overall assessment that also includes the evaluation of the scope of charitable expenses and accumulation of endowment over the long term (Suvikumpu (2016)). It is notable that there are no specific precedents or legal interpretations that would preclude or limit the use of some governance methods by the foundations. For instance, a foundation

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88   In some countries there may be more restrictive legislations concerning the choice of rules, rendering the governance choice more limited. There may also be laws stating that leaving important decision powers to other organs than the board may risk infringing on the autonomy and legal personality of the foundation. In such environments a more concentrated governance choice may clearly be optimal for foundations. In Finland no such risk exists, as evidenced by the 201 foundations in our sample that had an outside organ above the board.

89   The empirical data is from the period when the old Foundation Act was in force. The Act dates from 1930 and was fully renewed in the years 2011-14. The new Foundation Act entered into force on December 1, 2015.

90   This paragraph is based on an extensive interview with Mr. Markus Tervonen, Senior Adviser at the Ministry of Justice of Finland, Law Crafting Department, Private Law Unit. He is responsible for drafting and developing the Companies Act and the Foundation Act in Finland.

91   Suvikumpu (2016), Hohti and Kilpinen (2010).

92   Discussions with the regulator and the Council of Finnish Foundations reveals that the typical stickiness of some rules exists in Finland, as in other developed countries: the change of a foundation's *purpose* must be very carefully motivated and must follow the original charter's lines of thought. The interpretation of the founder's will is not easy, especially if one tries to assess how a benefactor might think a century later.

may keep its board intact for decades, cede many decision powers to outside parties such as the founder's relatives, or even have a determined lifetime without risking the tax exempt status. The only decisive factors are the three listed above.[93]

Another factor that may affect governance choices is costs. Our All-in-one-hands model of governance is less costly to a foundation: there is only one governance organ, the board, that can efficiently decide on audit, rules and who gets elected to the board. The Open-governance model would include other organs that chose board members and an auditor, and generally represented checks and controls over the board. It is evident that the direct costs (money and time) for concentrated governance model are the lowest. However, the financial risks can remain uncontrolled if there is only minimal control. The choice of governance model then becomes an optimization between costs and risk control.

Ability to carry costs would seem to be a function of foundation size. Larger foundations have better resources to carry the costs of open governance, and they have more reason to invest in open governance, because larger scope increases risks. We will confirm in Section 5.1 that foundation size is statistically significantly associated with governance model, suggesting that larger foundations have better resources to afford a more open governance with several controlling bodies. We discuss this in Section 5.1, below Table 11. The same observation is made even within one foundation sub-group, the Endowed foundations, further corroborating the belief that regardless of a foundation's financing base, an open and more costly governance structure is more justified in large foundations.[94] However, controlling for size in all our empirical tests, we are able to maintain that the choice of rules is an independent choice by the foundation.

The diversity of combinations in the rules of foundations in our Finnish sample suggests that the legislation did not dictate foundations' choices of rules and provisions. Although some pairs of rules tend to appear together, the majority of combinations of rules seems discretionary (see footnote 114). We incline to think that our sample foundations can legally make various choices of rules, and that there are no obvious optimal choices of rules due to the local legislation. In order to avoid attaching too much importance to single rules' choices (because they could be a result of some regulatory pressure), we also test our data with only extreme cases, where a foundation has categorically, in most of its rule choices, opted for an "open" governance vs. for a concentrated governance (see Section 5.1, binary logistic regression in Table 14).

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93   Finland differed from many other European countries in the EU project to create a "European Foundation". In many European countries, the charitable status is linked to an exhaustive list of acceptable public-good missions. In Finland, the mission does not affect the evaluation of a charitable, public-good status. Only the public availability of the mission benefits is considered when deciding about the charitable status of a foundation. See also Footnote 185 later in this book.

94   See Sections 4.1 and especially 4.2, Table 15 for within-group testing.

Finally, optimal governance is a question of lawmaker's beliefs. It can be argued that a merited board will have the strongest motivation to control the foundation and keep it focused on the mission. Having outsiders to decide on various matters in the foundation only complicates governance and at worst allows for mission drift. The basis of this thinking is that the boards are so carefully screened and the nomination represents such responsibility that the board is likely to possess, from the set-up, superior ability and integrity to steer the foundation, and does not need outside control. For instance, Sinani et al. (2008) examine three Scandinavian countries and their formal and informal governance mechanisms. The authors find that trust, information diffusion and reputation have an important governance role in such "small world" environments. Furthermore, they posit that reputation becomes even more a powerful factor in firms or industries where a greater relative weight is placed on reputation – as the case is for the non-profit sector. If these factors, such as reputation, are strong enough to overcome control concerns, then a simple, concentrated governance model may prove to be optimal.

Having defined our main dependent variable, the quality of governance, with our Foundation Governance Index FGI, we proceed to categorize foundations based on their source of financing.

4.2 Foundation source of financing

We return to our discussion about who might be considered the owners of a foundation. In Section 3 we suggested that financiers are in control of a foundation's continued existence. Different sources of finance may present varying levels of external control to the foundation, which may lead to differences in governance (see, e.g., LeRoux and Goerdel (2009) about financing a foundation with donations versus government funding).

We posit that financiers anticipate the consequences of the lack of control and require mitigating structures in a foundation. According to GIM the agency costs[95] come through some combination of inefficient investment, reduced operational efficiency, or self-dealing in corporates. Foundations may slip into decreasing grant-making or declining investment in the foundation's operational capacity. A foundation's financiers try to mitigate moral hazard by influencing foundation governance. Thus we assume that a foundation's source of finance is associated with the governance choices of a foundation.

To understand the foundation finances we examined their sources of income in their profit and loss accounts. According to the Finnish GAAP, foundations report (among other things) in their profit and loss statement

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95   GIM hypothesis I. The other hypotheses relate to other causality routes that show up in results or stock market valuation, and are thus not relevant to the foundations' case. P. 131.

the following items:

1. Operations: revenue, costs and net income
2. Investment activities: revenue, costs and net income
3. Donative activities: revenue, costs and net income
4. General support received (=public sector support)
5. Total net profit for the period
6. Grants made.

We analyze all foundations based on their different sources of income: investment income, donations, profit from operations, or support from the public sector in 2010-2012[96]. We use the average for 2010-2012 for each relevant item. We then look at

a) *Net* income (gross income less costs) from four main income sources for each foundation, and their share of the total net income of the foundation.

b) *Gross* income from four main income sources for each foundation, and their share of total revenues of the foundation.

We classify each foundation after having considered both a) and b). Most cases show clear reliance on one main source of finance, but some have several sources. We emphasize the alternative a) but in our sample period the net income may be negative and we have to qualitatively consider both gross and net income streams to decide which form of income keeps the foundation going concern[97].

We then categorize all foundations into one of four categories: Endowed, Donative, Operative or Public sector[98].

In most cases the structure of finance is very clear: one type dominates. In donative foundations there is often some investment income and some operative foundations receive public sector support, too. Classification is in such cases made to the highest income category.

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96   See Appendix 2 for a summary of foundation financial statements form.

97   See also illustrative example about sustaining income definition in Appendix 2.

98   "Operative" should be interpreted here as "receiving substantial positive income from operations", and not to be confused with *operational* foundations which carry out their mission with own employees (that is, not through grant-making). "Donative" means substantial income from donations. Category "Public sector" means substantial support from public entities, not to be confused with the fact that all foundations are included in the private sector in national statistics.

Main source of income	No of foundations	Share of total
Endowed	465	52 %
Donative	114	13 %
Operative	205	23 %
Public sector	107	12 %

Table 6. The main source of income for foundations in the sample. N=891. Based on the relative share of total income in profit and loss statement, average for 2010-2012 (see Appendix 2).

We present median incomes from four sources of finance, as well as other descriptive financials, for the main four finance categories in Table 7:

	Balance sheet, market values, euro	Investment net income, euro	Donations, euro	Operational profits, euro	Public support, euro	Expenses, euro	Endowment/ Expenses, avg 2010-2012
Endowed	1 033 196	31 330	0	-26 961	0	81 599	14.68
Donative	385 348	548	21 542	-14 426	0	61 442	5.72
Operative	2 604 211	-2 469	0	72 931	0	1 287 466	0.91
Public support	979 815	192	0	-177 300	202 666	920 319	0.67

Table 7. Median income from different income sources in four income type classes, total balance sheet, expenses and relative endowment in four types of foundations. Balance sheet values are corrected to market values. Expenses include the total expenses of operations, funding and investments as well as extraordinary expenses. Relative endowment equals balance sheet total less debt, divided by total expenses. All financials are calculated from averages over the years 2010-12 for each foundation.

Table 7 shows average financials for our four types of foundations. Endowed foundations' investment income is the highest (highlighted with coloring). Donative foundations have the highest donations. It is natural that for all other categories the *operational* profits are negative: mission work is not meant to be profitable. In *operative* foundations profits are, however, supposed to bring in financing. Operative foundations show large median values for balance sheet (they typically have to own tangible assets to carry out the mission, such as housing, theatres, hospitals or soup kitchens).

The high number of small foundations can be seen in Endowed and Donative foundations' expenses: the median absolute expense is lower than in operative and public support foundations. Expenses are high in Operative foundations because they run a business to finance mission; despite high expenses, operative foundations also carry a positive operational profit.

Note that these figures are medians. The high skewness of the sample (the concentration of wealth and revenue into a handful of foundations) makes averages uninformative. Furthermore, our typology is not clear-cut:

many endowed foundations do receive donations, too, and many donative foundations possess a sizable endowment[99]. Thus there may be some ambiguity in income averages calculated for the whole groups.

We now come back to the moral hazard between foundation financiers and foundation governors. We reiterate our assumption, presented in the Introduction of this book, that repeated contact with outside financiers affects control mechanisms in a foundation. Endowed foundations do not need to repeatedly seek outside finance because they have "their own money" and receive yield to finance their operations. This can be seen in Table 7, where the investment net income for Endowed foundations is large compared to other types of foundations. Endowment per yearly expenses is comfortably above 14 for Endowed foundations, while it is close to 6 for Donative foundations and below 1 for other foundations. Donative foundations spend donations over a longer project period, and the seemingly high "endowment" may include money that is already earmarked to be used up. Thus donative foundations do face the need to seek financing regularly, if they have worthwhile charitable projects in horizon. Repeated outside financing is a form of outside control that affects and has affected the quality of governance; this assumption guides our hypotheses in this book. In Section 5 we will use the source of finance as the main variable explaining a foundation's quality of governance.

We now proceed to another explanatory variable for foundation governance: competition.

4.3   Competition on the mission market

As discussed in Section 2 and 3.2, Giroud and Mueller (2010) suggest that product market competition substitutes for governance in corporate world. LeRoux and Goerdel (2009) extend this proposition into non-profit environment and suggest that competition for non-profit resources affects non-profit behavior. They find a nonlinear relation between the level of competition in the non-profit's resource environment and the frequency of organizational advocacy. At lower levels of competition, non-profits reduce their advocacy activities and turn their attention inward to focus on the core mission. However, when levels of competition in the resource environment approach extremely high levels, non-profits increase advocacy, most likely in an effort to help protect the organization's future funding base. LeRoux and Goerdel measure competition with a 0-to-4 scale that includes competition from non- and for-profit organizations in the same area.

The non-profit competition is an elusive concept that cannot be

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99   Categorization was made on the basis of the largest income source. The hybridity of some foundation types (especially between endowed and donative, and then between operative and publicly supported) can be seen in our discussion on regression results in Tables 11 and 12.

conclusively defined by this essay. Previous research has taken several views on non-profit competitive pressures. Hines, Horwitz, and Nichols (2010) discuss the nature of non-profit competition. "The virtue of markets is that they provide a forum for competition, and as Adam Smith and every subsequent thoughtful observer has noted, it is the competition, rather than the profits, that generates the benefits we associate with markets." Competition for resources such as employees, board members, capital, premises or raw materials, as well as for the best grantees and projects, affects non-profits' behavior. Rose-Ackerman (1996) notes that "a nonprofit organization can survive only if it can attract money and customers", lining non-profit competition closely with for-profit competition. Lakdawalla and Philipson (2006) identify tax exemptions as the only competitive difference between non-profit and for-profit producers in the so-called "mixed industries" (where both non- and for-profit providers compete). We conclude that non-profit competition is not as clear to define as for-profit competition, but competition can be assumed to affect non-profits in a similar manner as it affects for-profits.

Money can also be competed among foundations. Donors and the public sector carefully choose their charities. However, there are two shortcomings in restricting one's attention to only money: Firstly, competition about money happens only between foundations that have to seek money regularly. The basic setting in this thesis is that there are endowed foundations who do not need to compete for money. Thus a major part of our sample foundations would not face competition, if competition were deemed to be only about money[100]. Secondly, there is competition about employees, projects, grantees, raw material, board members, visibility and so forth. Many of these can be much more decisive competition for foundations than

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[100] The number of competitors in the same mission industry is clearly a somewhat rough measure for real competition that a foundation faces. To test pure money measures, we examined how much donation and public support money was available in each ICNPO mission category in the years 2010-12 in total and per foundation in the category, and compared this measure of competition (for money) with our original measure, the number of competitors. There can be two philosophies about the effect of money: the more there is money available *in total* in a foundation's mission industry, the more competition there will be. Or: the less there is money available *per foundation* in a foundation's mission industry, the more competition there will be. We tested both of these only-money-philosophies' variables with the tests conducted in Section 5.1. We also combined them with our original variable, number of foundations. The first philosophy indicated that competition would be a complement to governance, whereas the second philosophy corroborated our finding that competition is a substitute for governance. Some of the other tested money measures did not produce statistically significant associations with governance. The measure that combined our original measure (competitors) with the total available money measure produced statistically significant results and corroborated our original findings about competition being a substitute for governance. In this essay we kept the original competition measure, the number of competitors, as our variable, because it can be assumed to capture not only competition for outside finance, but also for employees, projects or grantees. In addition, it is clear from our limited discussion and tests that the chosen philosophy about how money relates to competition should be carefully tested and justified with theory.

competition about donations.

We test whether the competition in the mission market has a bearing on foundation governance. We measure competition in the foundation's industry by the number of foundations operating in the same ICNPO industry category[101]. The number of competitors in each category is presented in Table 2, varying between 17 and 232. The presence of many foundations working with a similar mission diminishes the probability of receiving donations, public support, volunteer work and mission-knowledgeable employees. In addition to this, foundations may face competition for best mission-related projects or best researchers as grantees.

As discussed in Section 3.2, competition may either substitute governance or force foundations to have open governance structures. Reputation is important to all non-profits. It may be the rationale why non-profit status is adopted and it mitigates several costs due to information asymmetry[102]. Most non-profit treatises deal with the direct agency costs due to unknown service quality. In case of governance, if consumers understand the indirect agency costs related to poor governance, governance can be seen a contributor to a foundation's reputation. Moreover, the pressure for impeccable reputation may be stronger for foundations as they have few other measures of performance or success.

We formulated our testable hypothesis (Hypothesis 2) on the basis of the first assumption: that competition substitutes for control. The correct assumption may be detected in the sign of the regression coefficient in Section 5.

4.4 Control variables

We add variables to our model to control for foundation-specific differences in governance choice. Child and Grønbjerg (2007) argument for the use of foundation characteristics such as field of activity, size and age as explanatory variables for foundation behavior. Core, Guay, and Verdi (2006) observe that there are differences among mission industry categories (ICNPO) in endowments, program expenses and compensation and that controlling for industry variation is important. Desai and Yetman (2015) control for industry effects, size and revenues. In our sample we observe similar differences in age, wealth, revenues and competition (see Table 8 below) and also deduce from anecdotal evidence that, e.g., housing

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101 A direct consequence of this definition is that industry and competition variables will correlate perfectly. Thus they cannot be used in the same regressions. However, industry is a dummy variable whereas competition is a scale measure, indicating the availability of alternative similar non-profit causes.

102 See discussion on rationale for third sector in Introduction, section 2. Reputation and non-profit status mitigate information asymmetry between customers and producers. See also seminal work on reputation and quality by Glaeser and Shleifer (2001) and on growing importance of reputation in Ben-Ner (2002).

foundations have a fully different character from business advocacy foundations. We believe these differences are likely to present foundation-specific fixed effects on our independent variable, the quality of governance.

We use foundation age, industry[103] and revenues[104] as our control variables. These are expected to alter the dependent or independent variables, but are not of substantive interest to our hypotheses under examination. If excluded from the model and if they have a non-zero covariance with one or more of the independent variables of interest, their omission could bias our ordinary least square regressions' results for the effect of our independent variables of interest.

However, if our control variables are correlated with our independent variable they may also be a consequence of it. The inclusion of control variables that may be influenced by our independent variable (the quality of governance) may lead to endogeneity problems where the regression coefficient in an ordinary least squares regression is biased. However, if the correlation is not contemporaneous, then it may still be consistent. We maintain that good governance may lead to higher age and revenues, but they are not codetermined; governance model is formed over time (Δ age), and the growth of a foundation (Δ revenues) may slowly start to increase pressure to alter governance model (see our discussion on causality in Section 3.1). Our analysis is not a time series analysis so we present no structural model. We posit that at most, age and revenues may be endogenous over a long period of time, but exogenous in our one period model. Foundation industry variable is in our view fully exogenous: it is decided at the establishment of the foundation and almost never changed[105].

Foundation age is calculated from the year of registration to the foundation register. The register was established in 1930, and many existing foundations registered then. However, we have corrected all known older cases to their correct, older establishment date. This information was collected from the foundations' internet pages.

In Section 3 we noted that either grantees or financiers can be seen as a foundation's owners. Along this analogy, the mission industry can act as a proxy for the nature of the grantee-owner: the grantees' characteristics are similar in one mission industry group. For instance, grantees (or beneficiaries) of Social services can be considered less vocal in a foundation's governance than beneficiaries of Business foundations. Typically, research

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103 In "Industry" we adopt a term familiar from corporate world. It applies well to the third sector because it distinguishes between the final "customers" of the operations, not method of financing or other characteristics. As in Child and Gronberg we mean "...the field of activity the nonprofit primarily operates ...". We may refer to it also as "mission industry".

104 We use foundation revenues as a size indicator because balance sheet items correlate strongly with the Source of financing –variable.

105 As there are no mergers or restructurings of foundations, they do not present avenues for changing the mission (e.g., industry clause) of a foundation. An administrative change of foundation rules, especially the mission clause, are typically cumbersome processes.

grantees are represented in foundation boards, whereas international help recipients are not (groups 2 vs. 9). This thinking – "recipients are the true owners of a foundation" – would allow us to use the mission industry as an ownership proxy and discuss the implications of both competition and "ownership" to the governance of foundations.

To summarize descriptive characteristics of our data we present Table 8 with financial, competition, governance and age characteristics of the 891 foundations, grouped by the foundations' mission industry.

DESCRIPTIVE STATISTICS		Foun-dation age	Revenues	Market value of Balance sheet		Source of finance								Com-petition	FGI
Foundation's mission industry		Mean years	Mean	Mean	Median	Endowed		Donative		Operative		Public sector		Number of found.s	Mean
	N		euro	euro	euro	Count	%	Count	%	Count	%	Count	%		
Culture and Recreation	207	36	3 580 110	33 712 420	403 809	106	23	36	32	30	15	35	33	207	3,34
Education and Research	232	39	4 976 778	21 258 143	2 357 450	152	33	27	24	27	13	26	24	232	3,40
Health	42	33	9 260 374	15 201 164	3 113 652	20	4	5	4	14	7	3	3	42	2,76
Social Services	137	32	5 064 959	12 893 904	2 439 150	36	8	11	10	74	36	16	15	137	3,05
Environment	21	19	627 217	2 090 113	473 032	10	2	10	9	1	0	0	0	21	3,95
Development and Housing	68	36	4 412 132	25 347 109	2 765 941	23	5	4	4	35	17	6	6	68	3,15
Law, advocacy and politics	20	35	429 271	4 466 335	369 515	14	3	2	2	3	1	1	1	20	3,00
Philanthropic Intermediaries	29	43	2 483 726	6 796 367	1 018 638	18	4	5	4	4	2	2	2	29	3,93
International	17	22	993 311	1 618 445	915 447	5	1	2	2	2	1	8	7	17	2,94
Religion	22	44	3 369 050	3 647 263	2 050 651	11	2	6	5	4	2	1	1	22	3,45
Business and Unions	56	47	339 740	4 831 526	328 793	45	10	4	4	5	2	2	2	56	3,05
Other	40	27	616 988	4 752 736	365 163	25	5	2	2	6	3	7	7	40	2,53
	891														

Table 8. The descriptive statistics of the sample foundations. N=891. Age is measured at the end of 2012. Revenues and Market Value of Balance sheet are category averages of each foundation's average for 2010-2012. The source of finance is determined case-by-case, based on the share of total revenues or of the net profit of each type of finance. These relative shares are calculated with the average values for 2010-2012 of each item. See Appendices 1 and 2 for classification and detailed foundation financial reporting. Competition is a scale factor obtained from the number of sample foundations in each ICNPO-category. FGI is Foundation Governance Index, a measure of the concentration of decision powers to the foundation board, as explained in Section 4.1.1. A higher FGI indicates governance that is concentrated to the board, instead of a more open control structure. FGI takes values 0 to 5.

Table 8 shows little variation in the average age of foundations. Business foundations have on average been founded much earlier (average age 47 years) than environmental or international foundations (19 and 22 years). It seems that all types of foundations are being currently established as their average age does not vary much from category to another.

The large difference between the average and median values of financials highlights the concentration of wealth in the third sector. At the end of 2012, the largest 100 foundations possessed some 87 percent of the sample foundations' wealth. At the other end of the spectrum there are numerous small foundations whose economic activities are almost insignificant. We use log-alterations for our financial variables to smooth the skewness of data.

4.5 Operational model

In our tests investigating the effects of governance choices (Hypothesis 3) we need to analyze a foundation's expenses. These are determined by the foundation's operational model.

The foundation method of accomplishing its mission is close to the "asset structure" used as an explanatory dummy in Cremers, Nair, and John (2009). A foundation's operational model affects the nature of its expenses. Foundations can carry out their mission in two ways: by making grants (to research, arts, sports etc.); or by working on the mission with their own employees (helping the poor, keeping up a museum, cleaning environment with volunteers).

Grant-making foundations may grant dozens of millions every year, but have minimal expenses to do the grantee selection (or they have a pro bono selection board). It could be said that grant-making foundations have largely "outsourced" doing good: it is done by grantees.

Operational foundations produce their charitable services themselves: they employ workers and administer volunteers, they use materials and they incur administrative expenses to organize reporting. Thus their expenses are fragmented and higher on most accounts.

The bookkeeping line "operational expenses" recorded in our data includes both grants and (tangible) charitable operational expenses. Project personnel salaries or materials, as well as monetary grants are recorded in a similar manner as operational costs[106]. Nevertheless, the amount of grants is also separately reported and typically highlighted in foundations'

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106 There is debate among accounting scholars if grants should be treated in book-keeping as distributions, and not recorded on the profit and loss statement as expenses. This would however undermine the distinctive character of foundations as entities without distributions. Furthermore, the decision of either operating "hands-on" or through grant-making ("outsourced hands-on") should be administratively neutral to foundations. The argument does, though, correspond to our suggestions in section 3 about the beneficiaries being a foundation's owners.

communications, whereas other operational charitable costs are not, maybe because they are fragmented and difficult to analyse. Somewhat illogically, the general public seems to like a large amount of grants, but not a large amount of soup kitchen salaries.

To account for this difference in the nature of operations, we classified all sample foundations into "grant-making" or "operational", based on their grant-making activity in 2010-12[107] (absolute and relative to their net assets). The classification is used by foundations themselves[108] and there seems to be agreement about these two foundation types being very different by nature. Table 9 shows the breakdown of our sample foundations into grant-making and operational ones.

Method of accomplishing mission	Number of foundations	Endowment / Expenses from averages in 2010-2012, median for the class
Grantmaking foundation	426	13.38
Operational foundation	465	1.64

Table 9. The classification of sample foundations by the foundation's method of accomplishing mission, and median endowment intensity in the category. Assignment to either grant-making or operational foundation class was made after considering the foundation's grant-making activity in 2010-12 (absolute amount and relative to net assets). Endowment intensity is the foundation's average in 2010-12 of the market value of the balance sheet less debt, divided by the average of expenses in 2010-12. N=891.

Grant-makers typically have a large endowment and are predominantly in ICNPO-categories 2, 5, 8 and 11. Table 9 reports the median endowment per expenses of these two types of foundations, showing that endowments are higher in grant-makers and that they are predominantly endowed foundations[109]. Thus our "Operational model"-variable will be somewhat correlated with both the source of finance and the purpose of the foundation. We use this variable only to test our Hypothesis 3 in Section 5.3.

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107 In all our analysis, we have the sums, medians, averages and the original numbers for 2010-12 available. This reduces the risk of extraordinary years affecting our classification.

108 For instance, in the U.S. there are large associations and lobby groups for "Grant-making foundations". See http://www.geofunders.org/ or http://foundationcenter.org/grantmakers/ .

109 The inverse of Endowment/expenses –ratio of 13.38 is 7.47 percent, suggesting that grantmakers would distribute approximately the returns of a moderately risky investment portfolio as grants. However, a small number of grant-makers has other income in addition to endowment income that is also distributed as grants and that does not accumulate into endowment funds. Our ratio of Endowment/expenses is to be taken as illustrative only.

5. Empirical results

Having extensively explored the particulars of the foundation sector we are ready to turn to reasons of governance choice: what determines a foundation's governance quality?

Figure 2. The causality from determinants of governance to governance quality.

We formulate generally:

Governance quality = $\beta_0 + \beta_1$ (variables affecting governance choice) + β_k (control variables)	(1)

As elaborated in Section 3 and 4, the source of finance or competition variables may increase or mitigate governance moral hazard. The control variables are foundation age, size and industry.

5.1 Relation between foundation source of finance, competition and governance

We first note the mean FGI for each group of foundations, based on their source of finance (see Section 4.2 and Footnote 98):

Average Foundation Governance Index per foundation type	FGI Mean	N
Endowed	3.47	465
Donative	3.45	114
Operative	2.96	205
Public support	2.53	107
N		891
ANOVA F-value	9.276	
ρ	<0.001	

Table 10. Average Foundation Governance Index (values 0-5) scores in four foundation categories, based on the source of finance. N=891.

There seems to be a statistically significant association between sources of finance and governance. Endowed foundations score highest on FGI, indicating that Endowed foundations' boards are on average more powerful than boards in foundations financed by other means. Foundations that receive support from the public sector are the most openly governed, followed by foundations financed by operations (business). Reasons for this may be that the public sector is by its nature more vigilant about the uses of public money, or that it is legally obligated to set more controls to the use of public money. Operational foundations must please customers every day, which may induce more transparency in order to build a good reputation. Donative foundations would seem to be in a similar position as operational foundations, as donative foundations must constantly keep donors happy. However, this may be slightly mitigated by the fact that some large donors have access to better information than a fragmented customer base in operational foundations. Donors may build their relationship to the foundation on personal trust, allowing thus a more concentrated and cost-efficient governance structure than in operational and public sector foundations.

To test the relation between the quality of governance, the source of finance and some control variables, we regress FGI as follows. The choice and description of these variables is detailed in Sections 4.1. - 4.4.

$$GI = \beta_0 + \beta_1 \text{ Source of finance category of a foundation } + \beta_2 \text{ foundation age } + \beta_3 \text{ foundation size } + \beta_4 \text{ (foundation mission industry or competition intensity in the mission industry)}$$ (2)

The choice of suitable regression model necessitates an analysis of our outcome and explanatory variables. Our outcome, the level of FGI, is a

rank-ordered ordinal variable [110]. The primary characteristic of ordinal data is that the numbers assigned to successive categories of the variable being measured represent differences in magnitude: our FGI level 1 means less concentrated governance than level 4, and level 5 means more concentrated than level 4. Numbers representing successive categories coincide with meaningful directional differences.

Given the above, we apply ordinal logistic regression to our Equation (3). Logistic analyses for binary outcomes (in our case: "does the foundation have a FGI below level 3 or not?") attempt to model the odds of an event's occurrence and to estimate the effects of independent variables on these odds. The odds for an event is a quotient that conveniently compares the probability that an event occurs ("foundation has a FGI above 2") to the probability that it does not occur. When the probability of event happening is greater than the probability of not happening, the odds are greater than 1.0; if the two outcomes are equally likely, the odds are 1.0; and if the probability of happening is less than the probability of not happening, the odds are less than 1.0.

To examine the impact on the odds of an independent variable, such as foundation source of finance, we construct the odds ratio, which compares the odds of scoring at least a certain level of FGI for different categories of the source of finance type. An odds ratio of 1.0 indicates that the source of finance variable has no effect on the odds of having a certain level of FGI [111]. Small values of the odds ratio (< 1.0) indicate that the odds of having a higher level of FGI are smaller than the odds of other categories of that variable having a higher FGI. The opposite is true for values of the odds ratio that exceed 1.0: such categories of the explanatory variable have a higher probability of scoring higher levels of FGI.

The odds ratio is a measure of association that describes how the risk of belonging to a certain level of FGI changes with the explanatory variables. The regression estimation is done by maximum likelihood estimation. The estimates maximize the likelihood of obtaining the original data. The logistic model of odds ratios is developed through a nonlinear transformation of the outcome, meaning that the method does not require a normal distribution of the error terms, as does ordinary least squares estimation.

The nature of our data fits the description of ordinal outcomes and categorical explanatory variables, but a discussion of their ordinal nature is necessary. There is a clear ordering of FGI categories (4 is less concentrated than 5, and 1 is less concentrated than 2 to 5). It may be discussed whether FGI is even interval: change from FGI level 3 to 4 is strictly as large a step toward concentrated model as a step from 4 to 5. In rough investigations this is plausible. In a more detailed analysis we note that FGI consists of elements that may not be equal in their effect. It may be that not only the

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110   Our description here follows main points of O'Connell (2006), pages 10-13.

111   Note that the explanatory variable's reference category will have an odds ratio of 1.0 and other categories' odds are compared to that category.

sum of FGI elements is important, but also which components make up the sum. In extreme, three rules (FGI level 3) might be considered as much power-concentrating as a combination of four somewhat lighter rules. Furthermore, there may be equifinality in governance choices so that some provisions either substitute or complement other provisions. This discussion would necessitate a larger investigation into differences in the effect of each rule, if any, or discussion on complementarities of rules[112]. We could also discuss if any specific combination of the components affects the outcome. In the scope of this paper we adopt the neutral approach that all components of FGI are equally power-concentrating and their effects on the governance quality are separable[113].

Table 11 reports the results of an ordinal logistic regression (OLR), as our dependent variable (FGI) is an ordinal categorical variable with 6 possible outcomes (levels 0 to 5), and two of our independent variables are nominal categorical (the source of finance, mission market industry). OLR estimates the odds of being at or below a given FGI category, versus the categories above. The model simultaneously considers the effects of our independent variables across the possible consecutive cumulative splits of outcome: at or below FGI=1, at or below FGI=2, etc. It is assumed[114] that the explanatory variables have the same effect on the odds at all levels.

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112 For a discussion on complementarities in governance, see, e.g., Gillan, Hartzell, and Starks (2003), Aguilera et al. (2008).

113 We have, however, conducted an analysis of co-appearance of provisions in our sample foundations' rules and regressed our outcome and explanatory variables on the presence of each provision. Although inconclusive, the analysis indicates that there are pairs of rules that appear together in over 90 percent of the cases (Board amends rules – No administrative bodies above the board; and Board amends rules – Board decides on closing of foundation) and a dozen pairs that appear together in 80 percent of the cases. Similarly, there are provisions that appear together only in 40 percent of the cases (Board self-nominates – Board tenure is limited). Furthermore, some individual rules have a stronger association with our other variables than do other rules.

114 The proportional odds assumption, discussed later in this section.

Determination of Governance Index Ordinal Logistic Regression	A		B		C	
	Exp β	Sig.	Exp β	Sig.	Exp β	Sig.
Endowed	2.327	<0.001	2.271	<0.001	2.214	<0.001
Donative	2.200	0.001	1.772	0.020	1.555	0.081
Operative	1.369	0.140	1.528	0.049	1.457	0.093
Public sector	1.000		1.000		1.000	
Competition intensity			1.062	0.110		
Ln of Foundation age			0.666	<0.001	0.657	<0.001
Ln of Foundation revenues (size)			0.922	<0.001	0.911	0.001
Foundation mission industry dummy	no		no		yes	0.011*
N	891		891		891	
Cox & Snell	0.029		0.087		0.108	
Nagelkerke	0.030		0.091		0.113	

Table 11. The results of an Ordinal Logistic Regression of Foundation Governance Index as a function of the source of finance, foundation age, foundation size and mission industry or competition intensity. The source of finance reference category is the last category: foundations financed by the public sector. The first column includes results from a simple regression of the source of finance on FGI. The next column shows the result from the regression including source of finance, competition intensity and natural logarithms of foundation age and foundation average revenues in 2010-12. Competition intensity is measured as the number of foundations in the same industry. In the last column, we replace the competition intensity with a foundation industry dummy. Industry categories are as defined by the United Nations' International Categorization of Non-profit Organizations, ICNPO. As the competition intensity is determined by the number of foundations in the same industry, the competition factor and industry dummy cannot be used in the same regression function. *contrast Wald test result significance.

We start by examining the source of finance type as the only explanatory variable for FGI (first block A in Table 11). We then include Competition as an explanatory variable, and include some control variables in the center and right hand blocks noted as B and C.

We present the odds ratios for our explanatory variables at different levels of FGI (Exp β). In the first simple regression, the odds of Endowed foundations having a higher FGI score was 2.327 times that of Public sector foundations. The odds for Donative foundations was 2.200 times that of the last category, and for Operative foundations the odds were 1.369 times. We can conclude that Endowed foundations have a higher probability of scoring higher FGI, followed by Donative foundations, and then Operative foundations. Foundations financed mainly through public funds are the least likely to score high FGI.

In block B with Competition, Age and Revenues, we confirm our conclusions for different types of foundations. Competition seems to slightly increase the FGI (odds 1.062); however, this result is not statistically significant (p=0.11). The odds above 1 indicate that foundations facing more intense competition are *less* openly governed. Our proposition (Hypothesis

2) - that outside competition substitutes for, rather than complements, governance - seems to hold for foundations, as it did for corporates in Giroud and Mueller (2010). Competition for best grantees, projects, employees, funding or other resources seems to act as an outside control, alleviating the need to have control structures inside the foundation. We incline to reject the opposite possibility that increased competition would induce reputation building among foundations, and reputation would be built by having open governance structures[115].

It is noteworthy that our two main explanatory variables, source of finance and competition, work in a fundamentally different manner: a lack of outside control by outside financiers is related to foundation governance being less open, whereas a lack of outside control by competition is related to foundation governance being more open. Thus, we conclude that outside financiers seem to require open governance, whereas competition necessitates reducing agency costs by some other means.

An increase in Age was associated with a decrease in the odds of having a higher FGI score, with an odds ratio of 0.666. An increase in Size (revenues) was associated with a slight decrease in the odds of having a higher FGI score, with an odds ratio of 0.922. A foundation's size and age show statistical significance, and their increase is related to a decrease in FGI. In other words, older or larger foundations are on average more openly governed than younger or smaller foundations. Larger foundations can maintain administrative structures because the relative cost of doing so is bearable. For a small foundation, it is not worthwhile to have a large board and intricate nomination procedures. Older foundations have grown larger and even if not large, they typically are at least well known in their local community. Over time, they may have gained a routine for maintaining a governance structure that improves their good reputation. There might be a "*noblesse oblige*" effect where foundations feel the need to improve their governance as the foundation becomes better known. For older foundations, it is likely that over time they have already experienced the risks of insufficient control, and have therefore improved their governance to limit such risks. Age brings wisdom. Finally, it has been shown that the corporate life cycle affects corporate governance choices (Filatotchev, Toms, and Wright (2006)); by the same token, it is possible that the life cycle, and thus age, can be associated with even the governance model chosen by foundations.

In block C we include a foundation mission industry dummy into OLR. We alternate between using either industry or competition as a control variable (see footnote 102). Including the industry dummy slightly increases the model fit (Cox & Snell, Nagelkerke ratios). The ordering and size of odds remains similar to those in blocks A and B.

To summarize, Endowed-category odds are statistically significant in all

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115 However, see our discussion in Footnote 100, Section 4.3, about other possible measures for competition among foundations.

regressions; the odds ratios for the Donative and Operative categories are statistically significant, or nearly so, in most regressions. The ordering of odds ratios remains the same (highest to Endowed, then declining), thus validating our Hypothesis that outside financing is associated with more open governance. Category 1 clearly shows a strong, statistically significant difference to other categories. It seems that foundations that must seek finance from outside sources must keep their governance relatively open and less concentrated. Such outside sources consist of donors, customers and the public sector. Judging from our data, the public sector emerges as the most demanding financier with respect to the openness of governance.

One of the assumptions underlying ordinal logistic regression is that the relationship between each pair of outcome groups is the same. In other words, ordinal logistic regression assumes that the coefficients describing the relationship between, say, the lowest versus all higher categories of the dependent variable are the same as those describing the relationship between the next lowest category and all higher categories, and continuing to do so at all consecutive levels. Thus, the change from one FGI-level to another, say, from 2 to 3, is considered to be dependent on our explanatory variables in the same manner as a change from 4 to 5. This assumption of proportional odds is tested by the test of parallel lines: can one use one equation over all levels of FGI; that is, are the responses to explanatory variables equal on all levels of FGI.

We note that our assumption of proportional odds holds only for the model using the industry dummy (block C in Table 11). For other models (only source of finance as explanatory variable, or source of finance, competition, age and size as explanatory variables), the test of parallel lines indicates rejection of the proportional odds assumption. The parallel lines test is very sensitive to large data sets and to the use of scale independent variables[116] – our data consists of 891 cases, with competition, age and revenues acting as explanatory scale variables. We tested the robustness of our ordinal logistic regression by estimating binary logistic regressions for all levels of FGI: such that the odds of belonging to "FGI=below 1" versus belonging to higher score groups; then odds of belonging to "FGI=below 2" versus higher score groups, and so forth. We do not tabulate the results here. Odds estimates become statistically insignificant in the middle levels of FGI (levels 2 and 3) for source of finance categories Donative and Operative. However, on all levels of FGI, the statistical significance remains strong for the difference between the first source-of-finance category (1, Endowed foundations) and the others; and similarly between the fourth source-of-finance category (4, Public sector financed foundations) and the other categories. The ordering of the odds remains similar to our OLR findings on FGI levels 0-1 and 4-5, so that the odds of the first category (Endowed foundations) belonging to higher levels of FGI is clearly higher than the odds of Donative foundations,

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116   O'Connell (2006).

which again have higher odds than operatively financed foundations. However, the sequence of the odds is reversed in the middle FGI levels 2 and 3, with Donative foundations having lower odds of belonging to FGI level 2 or 3 than Endowed foundations. All in all, the ordering of odds in the middle FGI levels is inconclusive for Donative and operatively financed foundations. This would suggest that a binary outcome model might better fit the governance phenomenon, which we will revisit later in this section.

Other variables (Competition, Age, Size and Industry) remain statistically significant and parallel to our OLR findings, except on FGI level 3, where the effect of competition or industry become insignificant. On all other levels, competition, age, size and industry variables remain significant and show similar directional associations: competition increases FGI, while age and size lower FGI.

We next test the robustness of our results by using multinomial logistic regression (MLR). MLR allows us to avoid the proportional odds assumption but the model loses the explanatory power of ordered categories clearly shown in our data (see discussion at the beginning of this section). Multinomial logistic regression is used to model nominal outcome variables, in which the log odds of the outcomes are modeled as a linear combination of the predictor variables. The reported odds ratios (Exp. β) for each variable give the odds of belonging to a given FGI group instead of being at the FGI=0 level (note the difference between MLR and OLR, where the odds were always *cumulative up to* a certain level of FGI). On each FGI level, we compare our categorical variable, foundation source of finance, against the last category, foundations financed by the public sector. The maximum likelihood calculation thus used to determine how much more likely it is, for instance, for an Endowed foundation to be in the group FGI=5 than in the group FGI=0, compared to Public sector foundations? In Table 12 below, we present the results of the MLR regression.

Determination of Governance Index Multinomial Logistic Regression	A		B		C	
	Exp β	Sig.	Exp β	Sig.	Exp β	Sig.
Level 5 compared to level 0:						
Endowed	3.672	<0.001	3.080	<0.001	2.920	0.001
Donative	2.520	0.012	1.758	0.145	1.452	0.355
Operative	1.460	0.228	1.796	0.073	1.667	0.141
Public sector	1.000		1.000		1.000	
Competition intensity			1.002	0.054		
Ln of Foundation age			0.679	0.003	0.640	0.001
Ln of Foundation revenues			0.800	<0.001	0.788	<0.001
Foundation mission industry dummy	no		no		yes	<0.001
For total model:						
N	891		891		891	
Cox & Snell	0,061		0,190		0,271	
Nagelkerke	0,064		0,200		0,284	
Likelihood ratio test:						
Source of finance		<0,001		0,001		0,003
Competition				0,085		
Age				<0,001		<0,001
Revenues				0,001		<0,001
Industry						<0,001[a]

Table 12. The results of a Multinomial Logistic Regression of Foundation Governance Index as a function of the source of finance, foundation age, foundation size and mission industry or competition intensity. The probabilities of being on FGI levels 1-5 are tested against being on FGI level 0; the Table includes only level 5 compared to level 0. The source-of-finance reference category is the last category: foundations financed by the public sector. The first column A shows the results from a simple regression of the source of finance on FGI. The next column B includes the results from the regression including competition intensity and natural logarithms of foundation age and foundation's average revenues in 2010-12. In the last column C we replace the competition intensity with an industry dummy. Industry categories are as defined by the United Nations' International Categorization of Non-profit Organizations, ICNPO. As the competition intensity is determined by the number of foundations in the same industry, the competition factor and industry dummy cannot be used in the same regression function. a=test may be invalid as many groups had zero cases.

Endowed foundations are 3.672 times more likely than the reference group Public sector foundations (for which odds=1) to have a FGI of 5 instead of FGI of 0.

We tabulate only the results for the highest level of FGI (5) compared to the reference category, the lowest category of FGI=0, and the overall fit and significance results. The findings corroborate our OLR results, even though the MLR does not produce significant probabilities for all of our source of

finance -categories on middle levels 2-4 of FGI. We refer to the discussion above and suggest that a binary[117] outcome would fit the phenomenon better.

We also test our hypotheses with the ordinary least squares regression method. We make a gross simplification and assume that FGI is continuous variable with its 0-5 levels, and use the source of finance as a dummy explanatory variable. We also check for possible violations of the assumptions of general linear model, not relevant in our earlier logistic regressions. The results from this rough OLS estimation are presented in Table 13 below.

Determination of Governance Index Ordinary Least Squares Regression	A		B		C	
	β	Sig.	β	Sig.	β	Sig.
Endowed	0.936	<0.001	0.852	<0.001	0.807	>0.001
Donative	0.916	<0.001	0.671	0.007	0.539	0.033
Operative	0.429	0.056	0.535	0.015	0.468	0.039
Public sector	0.000		0.000		0.000	
Competition intensity			0.001	0.054		
Ln of Foundation age			-0.389	<0.001	-0.397	<0.001
Ln of Foundation size (revenues)			-0.090	<0.001	-0.100	<0.001
Foundation mission industry dummy	no		no		yes	
Constant	2.532	<0.001	4.748	<0.001	4.200	<0.001
N	891		891		891	
R²	0.030		0.093		0.112	
Adj. R²	0.027		0.087		0.096	

Table 13. The results of Ordinary Least Square Regression of Foundation Governance index as a function of the source of finance, foundation age, foundation size and mission industry or competition intensity. The source-of-finance reference category is the last category: foundations financed by the public sector. The first column shows the results from a simple regression of the source of finance -dummies on FGI. The next column includes the results from regression including competition intensity and natural logarithms of foundation age and foundation's average revenues in 2010-12. In the last column we replace the competition intensity with an industry dummy. Industry categories are as defined by the United Nations' International Categorization of Non-profit Organizations, ICNPO. As the competition intensity is determined by the number of foundations in the same industry, the competition factor and industry dummy cannot be used in the same regression function.

Again, comparing our main source-of-finance categories, the difference between first and last categories is statistically significant in all our

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117 The tests we conducted to investigate the ordinal logistic regression's cumulative odds assumption on each level of outcome are essentially binary outcome tests. They show that the governance differences are clearest at the ends of the governance index spectrum.

model specifications. Endowed foundations are more likely to belong to higher levels of FGI than Public sector foundations (coefficient 0.936>0). However, the ordering between the middle categories is unclear from our results, and the results are not statistically significant for all.

The results of OLS regression for competition, foundation age, size and industry are all statistically significant and parallel to our earlier regressions. The concentration of governance decreases with age and size, indicating that older and larger foundations are more openly governed on average. Competition substitutes for governance, with more competed foundations being able to rely on concentrated governance models.

Conducting OLS regression we detected heteroscedasticity in our data. Levene's test implies we have to reject the assumption of homogeneity of variances ($\rho<0.001$). The modelling errors for the FGI can be correlated for our sample. The OLS estimator is still unbiased in the presence of heteroscedasticity, but it is inefficient because the true variance and covariance are underestimated. Looking at the frequencies of FGI scores in our data (see Chart 2) we maintain that the choice of governance in foundations is dichotomous: either a foundation has an open governance (FGI levels 0 and 1), or then it adopts a relatively concentrated model of governance (FGI levels 4 and 5). Very few foundations (14 percent of our sample) choose the road in the middle. An OLS estimator does not capture efficiently the binary nature of the outcome.

Finally, to respond to our regression findings so far, we conduct a binary logistic regression on our data. We form two groups of FGI: the "All-in-one-hands" group with FGI of 4 or 5, and the "Open Governance" group with FGI 0 or 1. (Foundations who score 2 or 3 are discarded.) We then regress the same factors on the binary dependent variable "All-in-one-hands" in the reduced sample (N=769) to see whether the dependencies are clearer in these extreme groups.

The use of logistic regression is appropriate due to the binary nature of the dependent variable. Binary logistic regression produces odds ratios for the likelihood of belonging to "All-in-one-hands" -group, compared to the reference category. The logistic model of odds ratios does not require a normal distribution of the error terms. We present the results in Table 14.

Existence of "All-in-one-hands" Board Binary Logistic Regression		A		B		C	
	N	Exp β	Sig.	Exp β	Sig.	Exp β	Sig.
Endowed	400	2.745	<0.001	2.617	<0.001	2.465	0.001
Donative	107	2.916	0.001	2.328	0.010	1.920	0.055
Operative	168	1.558	0.092	1.814	0.031	1.658	0.083
Public sector	94	1.000		1.000		1.000	
Total sig. for source of finance variable			<0.001		0.002		0.007
Competition intensity				1.002	0.017	nm	
Ln of Foundation age				0.579	<0.001	0.568	<0.001
Ln of Foundation size (revenues)				0.894	<0.001	0.872	<0.001
Foundation mission industry dummy		no		no		yes	0.015
N		769		769		769	
R²	Cox & Snell	0.030		0.095		0.117	
	Nagelkerke	0.042		0.136		0.168	

Table 14. The results of a Binary Logistic Regression of the existence of an "All-in-one-hands" board as a function of the source of finance, foundation age, foundation size, and competition intensity. "All-in-one-hands" subgroup includes 549 foundations and "Open governance" group 220 foundations. The categories' significances relate to the eventual difference of categories to the reference category (Public sector), and the reported total significance depicts significance of the source-of-finance variable in total. The first column shows results from a simple regression of the source-of-finance variable on FGI. The next column includes the results from the regression including competition intensity, measured by the number of foundations in the same mission industry, and natural logarithms of foundation age and foundation's average revenues in 2010-12. In the last column we replace the competition intensity with an industry dummy. Industry categories are as defined by the United Nations' International Categorization of Non-profit Organizations, ICNPO.

Again, the difference in the governance of foundations financed in different ways is clear. The first column A shows binary logistic regression where only the source of finance is entered as a categorical variable explaining the existence of an "All-in-one-hands" board. Our earlier results are confirmed, with Endowed foundations having a 2.745 times the probability for the existence of an "All-in-one-hands" board, compared to the probability of the reference group, Public sector foundations. The odds for the existence of an "All-in-one-hands" board is also statistically significantly associated with a foundation's age and size, with an increase in age and size lowering the odds of having a "All-in-one-hands" board (odds <1). An "All-in-one-hands" board is significantly positively associated with competition intensity, with higher competition slightly increasing the odds of having an "All-in-one-hands" board (odds>1, confirming our Hypothesis

2). An "All-in-one-hands" board is also statistically significantly associated with mission industry (odds not tabulated here for the 12 industry categories).

Summing up our tests, we are able to confirm our Hypothesis 1: Foundations who finance themselves with income from an endowment have a more concentrated model of governance than foundations that need to regularly seek financing from external sources. Our main tests, ordinal logistic regression on all six levels of governance index as well as the binary regression between "All-in-one-hands" and "Open" governance confirm the existence of statistically significant association between foundation finance and governance. More specifically, the results showing Endowed foundations' difference to other foundations are robust across various regression methods and assumptions.

We also confirm Hypothesis 2: Foundations in competed mission markets have a more concentrated model of governance than foundations in less competed markets. Competition intensity is positively, consistently and statistically significantly associated with foundation governance index in all our regression methods[118].

All in all, our results show that there are differences in governance among foundations that are financed from different sources. Endowed foundations which do not have to regularly seek outside financing are more likely to have a concentrated governance model where the foundation board holds extensive decision powers. Foundations which have to regularly seek outside financing in the form of donations from donors, operational income from customers or financial support from the public sector, maintain more open governance structures with some form of outside control layer above the board.

Competition has a statistically significant association with a foundation's governance model. Foundations which operate in a more competed environment have on average concentrated more decision powers to the foundation board. This finding suggests that external control, through competition from resources, substitutes for internal control through governance.

We discussed effects that either substitute or enforce change in Section 3.1. Our findings about the relation between the foundation source of finance, competition and governance quality turn out to show these opposing effects on the outcome. For the source of finance, outside financiers, in particular the public sector, seem to concretely insist on certain open governance practices, for example right to nominate board members or auditor. The financiers may directly press for or enforce some governance rules in foundations. Thus outside finance is related to open governance. In contrast, our competition intensity substitutes

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118 In our Ordered Logistic Regression (OLR), Competition intensity's $\rho=0.11$, indicating borderline insignificance, while in three other regressions the Competition variable is statistically significant.

inside governance structures: more competition is associated with more concentrated governance. An outside force replaces inside structure.

The endogeneity of association between the source of finance and governance quality does not seem likely to us. Endogeneity would arise if foundations governed in a certain way would seek a certain source of finance; the source of finance would not lead to governance quality, but the association between finance and governance would come from this deterministic behavior of foundations. We discussed the lifecycle of foundations in Section 3.1; based on that discussion, we think it more likely that a foundation's source of finance is planned at the time of the foundation's conception, and that an opportunistic change of finance is not easy or possible. We believe the relatively stable source of finance has a bearing on foundation governance choices and not vice versa.

5.2 Determination of governance in endowed foundations

Having observed a relation between source of finance and governance quality, it is of interest to contemplate the subgroup of Endowed foundations. Our sample has 465 endowed foundations; they represent some 52 percent of our mainly random[119] sample and are the most common form of foundation in Finland. Our interest is now on the importance of other determinants of governance choice once the source-of-finance variable is given. Earlier we suggested that the moral hazard is the most accentuated in endowed foundations, and our findings seem to support our Hypothesis. But the presence of moral hazard aside, what other characteristics matter? We can best observe other factors by within-group tests.

We examine the differences within the Endowed foundations' group by testing the existence of an "All-in-one hands" board[120]. In our tests in Section 5.1 we noted that the binary model best fits the governance choice phenomenon. As explanatory variables we now focus on size of endowment, age and competition intensity. The size of endowment now better serves our depiction of foundation size. Endowment is calculated as balance sheet total minus total debt; we use the average for 2010-12 to smooth over the outlier years, and take logarithms to mitigate the high skewness of the data (for discussion, see paragraphs following Table 8). We present the results of these regressions in Table 15 below.

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119   See Appendix 1 about the sampling of data.

120   This concept is as explained for the Binary Logistic Regression in Table 14.

Existence of "All-in-one-hands" Board	A		B	
Binary logistic regression	Exp β	Sig.	Exp β	Sig.
Ln of Endowment size	0.895	0.031	0.891	0.038
Ln of Foundation age	0.525	<0.001	0.456	<0.001
Competition intensity	1.004	0.004	nm	
Constant	81.306	<0.001	31.909	<0.001
Foundation mission industry dummy	no		yes	<0.001
N	398		398	
Cox & Snell	0.075		0.149	
Nagelkerke	0.113		0.226	

Table 15. The results of a Binary Logistic Regression of the existence of an "All-in-one-hands" board in Endowed foundations, as a function of endowment size, foundation age, competition intensity and mission industry. The "All-in-one-hands" subgroup includes 306 foundations and the "Open governance" group 92 foundations. Cases where FGI=2 or 3 are discarded (67 cases). The first block A shows the result from regression of the size of endowment, competition intensity and natural logarithm of foundation age on the binary outcome of "existence of the "All-in-one-hands" board. In the second block B we replace the competition intensity with an industry dummy. Endowment is calculated as balance sheet total minus total debt; we use the average for 2010-12 to smooth over the outlier years, and take logarithms to mitigate the high skewness of the data. Age is the natural logarithm of the years of existence. Competition intensity is the number of foundations operating in the same ICNPO industry category.

We first note that foundation age is strongly associated with foundation governance within the Endowed foundations' group. We refer to our earlier discussion about "*noblesse oblige*" after Table 11: that foundations voluntarily open their governance as the foundation gets older. The cause may be the growing positive reputation of the foundation that the foundation wants to keep up with open governance[121], or simply that once the foundation has been established, the governors may have more time to ponder on administrative practices than at the outset of the foundation's existence. With elapsing time there have been more chances to learn from suboptimal governance, and the possible relative costs of governance risks, lost reputation or money, have become higher over the years.

Endowment size has a significant relation to the governance: foundations with a larger endowment are slightly less likely (odds increase by 0.895 or 0.891 with endowment log increase) to have an "All-in-one-hands" board.

Foundations facing tough competition are more likely to have an "All-in-one-hands" board (odds increase 1.004 times with competition intensity, measured by the number of competitors in same industry). Interestingly enough, the odds are higher here than in our earlier regressions in Tables

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121 The investment in good reputation is a "sunk cost" that will produce positives for the foundation: easier employment of good workers, better grant applications or constant flow of legacied money.

11 to 14, suggesting that competition provides a more important external control to the *endowed* foundations than to the foundation population as a whole.

5.3 Relation between governance and charitable spending

We return to the question presented in connection with our early discussion on Gompers, Ishii and Metrick (GIM) model: what is "performance" in non-profits? Where does governance matter, if anywhere? Societal performance of non-profits means efficient and sufficient charitable activities (see, e.g., Desai and Yetman (2015) who summarize: "...measures of how well a private foundation is accomplishing its charitable purpose are related to how much, and how soon, foundations give to public charities"). We test the effect of concentration of decision power in a foundation's governance on the foundation's charitable expenses that should be sufficiently large in order to ensure achieving the foundation's mission.

Figure 3. The causality from the governance quality to the consequences of governance.

One has to note that in case of non-profits, expenses are a positive matter. In contrast to for-profits, who aim to minimize expenses and maximize profits, non-profits' raison-d'être is to use as much money as the mission demands. Thus the moral hazard here is that the foundation *does not* use as much money as would be necessary. Foundations may be tempted to spend less on the mission and to, e.g., build a more impressive endowment, if the size of the endowment presents some benefit to the foundation administrators[122]. Even if the board would not derive any private utility from the endowment hoarding, it may prefer to limit risks to a suboptimal degree. We start from the assumption that the higher the charitable expenses, the less sign of a moral hazard in a foundation.

Before we can proceed to tests we differentiate between different kinds of charitable expenses that might confuse our testing. We separate grant-

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[122] This is in accordance with Sections 2 and 3, where we summarized earlier research about unnecessary endowment building as one outcome of moral hazard. For a short assessment of the moral hazard and possible other motivations for endowments, see Weisbrod and Asch (2010). Also note that the board members cannot receive any direct material benefit from endowment building because of the non-distribution constraint of non-profits.

making foundations and operational foundations, as discussed in Section 4.5[123]. The term "operational" is not to be confused with "operative" (see Definitions). *Operative* refers to finance, as in Section 4.2 and throughout this book. *Operational* refers to the foundation's way to carry out its mission, which we proceed to explain here.

Foundations can carry out their mission in two ways: by making grants (to research, arts, sports etc.); or by working on the mission with their own employees (helping the poor, keeping up a museum, cleaning environment etc.). The costs structures differ markedly, with grants being clear and observable whereas other operational charitable expenses being fragmented and their efficiency being more difficult to evaluate.

Grant-making foundations may grant dozens of millions every year, but have minimal expenses to do the grantee selection (or they have a pro bono selection board). It could be said that grant-making foundations have largely "outsourced" doing good: it is done by grantees.

Operational foundations produce their charitable services themselves: they employ workers and administer volunteers, they use materials and they incur administrative expenses to organize reporting. Thus their charitable expenses are fragmented and higher on most accounts.

The bookkeeping line "operational expenses" recorded in our data include both grants and (tangible) operational expenses. Project personnel salaries or materials, and on the other hand monetary grants are recorded similarly as operational costs[124]. Nevertheless, the amount of grants is also separately reported and typically highlighted in foundations' communications, whereas other operational costs are not, maybe because they are fragmented and difficult to analyse. Somewhat illogically, the general public seems to like a large amount of grants, but not a large amount of soup kitchen salaries.

To account for this difference in *operational* model of foundations, we classified all sample foundations into grant-making or not, based on their grant-making activity in 2010-12[125] (absolute and relative to their net assets). Simply: a foundation was classified as a grant-making foundation if it had significant spending in grants. In absence of grant-making, a foundation was classified as an operational foundation. This division proved to be quite clear-cut. In Table 16 we report selected descriptive statistics.

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123 See also the list of concepts, abbreviations and symbols at the beginning of this book.

124 There is some debate among scholars if grants should be treated as distributions in book-keeping, and not recorded on the profit and loss statement as expenses. This would, however, undermine the distinctive character of foundations as entities without distributions. Furthermore, the decision of either operating "hands-on" or through grant-making ("outsourced hands-on") should be administratively neutral to foundations. The argument does, though, correspond to our suggestion in Section 3 about the beneficiaries being a foundation's owners.

125 In all our analyses, we have the sums, medians, averages and the original numbers for 2010-12 available. This reduces the risk of extraordinary years affecting our classification.

Method of accomplishing mission	Number of foundations	Average Revenues 2010-12	Relative operational costs: Operational costs/Revenues, avg 2010-12
Grantmaking foundation	302	3 451 527	0.51
Operational foundation	325	7 213 984	0.80
T-test value		5.996	51.498
Significance (2-tailed)		<0.001	<0.001

Table 16. The descriptive statistics of grant-making and operational foundations. Revenues represent the sum of investment, donative, operative income and support from the public sector in a year. Average revenues are the average over the years 2010-12. Relative operational costs are average costs of operations in 2010-12, divided by average total revenues in 2010-12. See Appendix 2 for details about operational costs and foundation profit and loss form. We reject 29 outliers with relative spending exceeding 2 (costs exceed revenues more than two times on average in our 3-year sample period). Only operational foundations with an average yearly revenue above 20,000 euros are included (206 cases excluded, some of which are already rejected on the basis of relative spending). After these exclusions N=627.

We start by noting the relative operational costs in our two sub-groups. Earlier we discussed the different nature of costs in grantmakers and operational foundations. Now we note that there is a difference on the operational cost level of grantmaking and operational foundations (even though grants are part of operational costs). A t-test is used to test whether two sets of data are significantly different from each other. As reported in Table 16, t-test values confirm statistically significant difference between grant-making and operational foundations' operational cost level, with operational foundations spending on average more than grant-making foundations.

We continue to our main question: what is the association between governance and spending in foundations? For that, we run regressions separately for grant-making foundations, excluding operational foundations, and vice versa. The operational model of a foundation acts as a control variable. We also benefit from the separate reporting of grants, and use grants variable as an alternative to a grantmaker's total operational expenses as a dependent variable in tests of grantmaking foundations sample.

At the outset we exclude from our total sample the foundations whose expenses have been on average above 2 in our sample period (expenses are on average twice the revenue every year, in 2010-12). For a 3-year period and for foundations this may be a true case, but exceptional one over longer periods of time. Such exceptions tend to influence statistical testing heavily. On this ground we rejected 29 outlier cases.

In order to focus on foundations making significant economic decisions we also exclude foundations whose yearly total income (on average in 2010-12) is below 20,000 euros. This excludes 206 foundations from our data, some of which were already discarded on the basis of the expense ratio explained above.

Our sample for examining relation between governance and charitable spending includes now 627 foundations.

We now define our testable function for sample foundations:

Relative operational expenses $= \beta_0 + \beta_1\, FGI$	(3)

Relative operations expenses equal yearly operational expenses[126] (including grants) divided by yearly total revenue from operations, investments and donations[127]. We use expense and revenue averages from the years 2010-12 to calculate relative ratios.

Relative operations expenses reflect the portion of all income used to charitable programs, as opposed to fund raising, investment services or extraordinary costs or income not used at all but accumulated as retained profits. It does not, however, catch fraudulent or inefficient use of money that is booked into operational expenses, which the auditor has accepted. As all foundations in our data must use the detailed profit and loss form which separates operations expenses from other expenses, we assume that differences in operational expenses catch differences in charitable spending.

Both dependent and independent variables in equation (4) are scale variables so we carry out our test by means of ordinary least square regression (we treat governance index as a scale variable). We present the results in Table 17 below.

Determination of charitable spending	All		Only Grantmakers		Only Operational	
Operational expenses/Total income	β	Sig.	β	Sig.	β	Sig.
FGI	-0.010	0.083	0.007	0.455	-0.024	<0.001
Grantmaker dummy	-0.295	<0.001				
Constant	0.834	<0.001	0.485	<0.001	0.874	0.002
N	627		302		325	
R²	0.218		0.002		0.028	

Table 17. The results of Ordinary Least Squares Regression of foundations' relative operational costs as a function of governance quality. Relative operational costs are average costs of operations in 2010–12, divided by average total revenues in 2010–12. We reject outliers with relative spending exceeding 2 (costs exceed revenues more than two times on average in our sample period). Only foundations with average yearly revenue above 20,000 euros are included.

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126 Core, Guay, and Verdi (2006) and Desai and Yetman (2015) use program expenses which exclude fundraising and administration costs. In our Expenses the administrative overheads are included. The separation of "program" and "administration" expenses may be biased in the foundation sector.

127 Core, Guay, and Verdi (2006) relate program expenses to total costs, whereas Desai and Yetman (2015) relate program expenses also to total income.

Foundation Governance Index (FGI) is a sum of five power-concentrating provisions in foundation rules as set out in Section 4.1.1. Regression in the first column (All) includes all sample foundations. Second column shows results for a subgroup including only grantmakers. Third column includes only operational foundations.

We conduct three OLS regressions, regressing Foundation Governance Index on dependent variable Operational expenses/Total income[128]. The first one includes the whole sample of 627 foundations[129] and we include a dummy variable for grantmaking foundations to separate the foundation type effect from governance effect[130]. In the second column we conduct the same regression to grantmaking foundations only, and in the third column to operational foundations only.

In the first regression including both grantmaking and operational foundations the coefficient for FGI is negative and statistically significant ($\rho=0.083$), indicating that the more concentrated the governance is, the less the foundation spends on its mission (relative to its income). This means that more openly governed operational foundations bring relatively more societal performance than less openly governed ones. The grantmaker-dummy is negative as expected, given the relative cost level difference in Table 16: grant-makers spend on average less than operational foundations.

However, when we run the regression for the grantmaker subgroup we find no statistically significant relation between governance and charitable spending. The third regression with only operational foundations shows again a statistically significant ($\rho<0.001$) and negative association between the governance index and charitable spending. This reveals that the original relation between governance and spending for the whole sample is driven by operational foundations' data.

To test grantmakers' case further we run another testable function for grant-making foundations where the dependent variable is grants made, relative to the endowment of the foundation.

Relative Grants= $\beta_0 + \beta_1\ FGI$	(4)

The results in Table 18 confirm our finding that in grantmaking foundations governance does not seem to be associated with charitable spending[131].

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128 Conducting OLS regression we tested for heteroscedasticity for FGI and relative expenses. Levene's test implies we can assume homogeneity of variances ($\rho=0.166$).

129 We have excluded foundations whose average revenues 2010-12 were less than 20,000 euros, and discarded foundations whose operational expenses/total income was on average more than 2 in our sample period 2010-12.

130 We also tested regressing FGI on relative operational expenses without the grantmaking-dummy, but the explanatory power of the regression was close to zero.

131 We tested several notions of relative grantmaking: grants relative to endowment, to revenues and to financial investments. No significant relation emerged between such spending and governance. Endowment and financial investments values are market values.

Determination of charitable spending	Only Grantmakers	
Grants made/Endowment	β	Sig.
FGI	-0.017	0.903
Constant	0.565	0.289
N	302	
R²	0.000	

Table 18. The results of Ordinary Least Squares Regression of grantmaking foundations' relative grants as a function of governance quality. Relative grants are the yearly average amount of grants in 2010-12, divided by average endowment in 2010-12. Endowment is the market value of balance sheet less debt. We reject outliers with relative spending exceeding 2 (costs, including grants, exceed revenues more than two times on average in our sample period). Only foundations with average yearly revenue above 20,000 euros are included. Foundation Governance Index (FGI) is a sum of five power-concentrating provisions in foundation rules as discussed in Section 4.1.1.

The difference between operational and grantmaking foundations may be due to the fact that the absolute and relative amounts of grants are easily observable to the outside world. Grantmakers operate in a publicity and reputation competition in this respect. It may well be that competition acts again as an outside monitor to grantmaking foundations, rendering governance irrelevant to societal performance.

To summarize: we find a statistically significant association between governance and charitable spending in operational foundations, but find no statistically significant association between charitable spending and governance in grantmaking foundations. In operational foundations less concentrated governance is related to higher charitable spending and thus better societal performance[132].

A final note about charitable spending and expenses is due. We posited at the beginning of this section that expenses are a good thing for a foundation: it is working for the mission. This book does not address the issue of evaluating efficiency of such charitable spending. It is commonly assumed that charities can be assessed with some boilerplate ratio or analysis. However, watch-dog organizations point out that too many donors are paying too much attention to overheads or executive salaries in non-profits (see, e.g., Pallotta (2009)). Our simple variable of a foundation's expenses

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132 We also tested our regressions with Age (ln) and Size (ln of revenues) as explanatory variables. This leads to a heteroscedasticity problem as our FGI variable has been shown to be significantly associated with both variables (see Section 5.1). Added rudimentarily to our OLS test in Table 17, Age was not related to charitable spending, but Size was, replacing our main explanatory variable FGI as the statistically significant determinant of charitable spending. We conclude that larger foundations spend relatively more on charity on average, and size seems to matter even more than governance. Size may bring economies of scale to foundations, allowing larger foundations to spend relatively more on charity. Added to our grantmaking regression in Table 18, Age or Size variables did not improve the regression's statistical significance.

does not differentiate between types of expenses: it may avoid overly criticizing overheads, but on the other hand it certainly can include items that do not work toward the mission.

5.4   Summary of hypotheses and results

We summarize our empirical findings in Table 19 below.

Determination of charitable spending		
Hypothesis		**Result**
1	Foundations who finance themselves with income from endowment have a more concentrated model of governance than foundations which need to regularly seek financing from external sources.	Confirmed
2	Foundations in competed mission markets have a more concentrated model of governance than foundations in less competed markets.	Confirmed
3	The relative level of charitable spending is smaller in foundations with a more concentrated model of governance.	Confirmed for operational foundations, not confirmed for grant-making foundations

Table 19. Summary of hypotheses about the determinants of foundation governance and the consequences of governance, and empirical results.

Concerning Hypothesis 1, we find a statistically significant association between governance and foundation finance. Our main tests, ordinal logistic regression on all six levels of governance index as well as the binary regression between "All-in-one-hands" and open governance confirm the existence of statistically significant association between foundation finance and governance. It seems that foundations that have to seek finance from any outside source other than its own endowment must keep their governance relatively open and less concentrated. Such outside finance sources are donors, customers and the public sector. The latter emerges as the most demanding financier when it comes to openness of governance.

Our Hypothesis 2 - that outside competition substitutes for rather than complements governance - seems to hold for non-profits, as it did for corporates in Giroud and Mueller (2010). Competition for best grantees, projects, employees, funding or other resources acts as an outside control, alleviating the need to have control structures inside a foundation.

We also find relation between governance and charitable spending in operational foundations, but find no statistically significant association between charitable spending and governance in grant-making foundations (Hypothesis 3). However, when we added Age and Size factors to our regressions, Age was not related to charitable spending, but Size was, replacing foundation governance index as the statistically significant determinant of charitable spending. We conclude that larger foundations spend more on charity on average, and size seems to matter even more than governance.

6. Conclusion and discussion

Our proposed model for assessing foundation governance makes several contributions to our understanding the economic behavior of foundations. Our first observation from the data is that the foundation governance choice seems to have binary outcomes: foundations either choose an open governance or a governance that concentrates most or all power into the hands of the board. Binary models thus fit this phenomenon best.

When examining the reasons for governance choice, the empirical results suggest, firstly, that a foundation's source of finance is associated with a concentration of decision powers within foundation governance. Specifically, foundations which must regularly approach outside sources of finance – donors, public sector or customers – feature more control structures and less concentration of power at the board level than do foundations that can finance their missions with endowment capital income. Secondly, we also find that intense competition in the foundation's charitable mission market is associated with a lack of other control mechanisms. Our findings concerning the relation between foundation source of finance, competition and governance quality show opposing effects on the outcome: outside financiers seem to force improvements in governance, whereas outside competition seems to substitute for open governance to some extent.

When examining the consequences of governance, we test the consequences of governance choices by testing whether openly governed foundations spend more on charity. We find that foundations that have less concentrated governance (lower FGI) spend more on charitable *operations* than foundations with concentrated governance. However, this association does not exist in *grantmaking*: governance is not related to the relative level of grants. It seems that – regardless of the concentration of governance – grantmaking foundations are pressured to keep up competitive levels of grantmaking because grants are easily observed and measured by the public. However, charitable expenses are less observable.

Our Foundation Governance Index model has policy implications. In the absence of owners the regulator may serve as the only external control for

non-profits. The regulator should first understand which rules define the quality of governance in a foundation, and then pay attention to sources of finance for the foundation. We suggest Foundation Governance Index (FGI) and its factors as a measure for governance power concentration, and posit that a high concentration of decision powers at the board level accentuates the moral hazard of less efficient use of charitable resources in foundations. We also note that this moral hazard is strongly associated with endowed foundations. Competition among foundations seems to mitigate this moral hazard. In practice, the regulator could rank registered foundations based on these observable facts and identify "increased-risk" cases for inefficiency or fraud.

Furthermore, governments may consider governance as one element of the requirements imposed on the third sector. Currently, some countries (but not all) require some tangible level of charitable spending in return for tax exempt status. The non-profit sector has argued that income and spending cash flows do not necessarily concur, rendering rigid spending targets non-optimal. Furthermore, the set levels can either be achieved through bookkeeping choices[133], or they may turn out to be too high or low depending on business cycles[134]. Instead of setting direct spending targets, the regulator could nudge non-profits towards optimal behavior by requiring open governance provisions. Although these requirements would apply primarily to larger non-profits[135], they would still motivate the whole sector to improve transparency. Since non-profits tend to be altruistic and eager to have an impeccable reputation, self-regulation and benchmarking should come naturally for foundations. In summary, a well-functioning and vigilant board is the best means to safeguard the most efficient mission achievements in a wide variety of non-profits. Governments should encourage governance systems that support such boards.

Some prominent foundations openly describe their governance structure and discuss the difficulties in setting up monitoring devices. Some create two administrative levels in order to have at least one group with only "owner-like" responsibilities. Some rely on an association, university or public organ to do owners' tasks. Although the regulator may trust that having the founders or their descendants in a foundation would secure control, it does not eliminate moral hazard between the foundation and the society. The ultimate form of founder control is to establish a determinate-

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133 For instance, foundations may choose to report either the market values or the book values of assets. If charitable spending requirement is linked to reported asset values, the chosen bookkeeping method may distort the requirement. Similarly, if spending is linked to yearly results, the foundation may choose not to cash in latent value gains on the balance sheet.

134 See Deep and Frumkin (2001).

135 For small foundations the cost of proper governance may outweigh its benefits. Furthermore, small foundations may have difficulties in finding good administrators willing to work pro bono. However, the agency costs of low control, arising from opportunities for fraud or inefficiency, are smaller in small foundations.

life foundation: by defining the life span of a foundation, the founder and society avoid the long-term risks of creeping inefficiency or irrelevance of the mission.

Smaller foundations must optimize between external control in governance, and costs. The structure of the foundation sector in many countries reveals numerous small foundations with little economic activity. Small foundations may be allowed to concentrate governance at the board level and to assess, from time to time, the need for improvement as the foundation matures and/or grows. Furthermore, corporate and foundation board members may not differ in their motivation. Foundation board membership is considered an honor and is not accepted for monetary compensation, but rather for standing in society[136]. In many countries, there may be social pressure to be active in some sort of pro bono work. Foundation boards typically include merited members of the business community, members from the upper echelons of society in general and members who are knowledgeable about the mission market. They may be the very persons that sit in a corporate board, too. They are prone to seek efficiency in operations. Thus, if the personal characteristics are as described here, the governance in foundations may in practice resemble efficient corporate governance, despite the different economic nature of foundations and the presence of power concentration at the board level.

Overall, society should have an increasing interest in better understanding foundations. Great amounts of wealth are increasingly being accumulated in foundations, in most cases for eternity. It would seem suboptimal to cosset wealth which hardly grows in an environment where investment yields are at a low level, without requiring that it be used to accomplish mission objectives. Society should consider supporting foundations with determinate life span as well as determinate timetables for achieving results.

There are numerous limitations to our study and many avenues for future research. A longer series of financial and governance information would be necessary to separate time effects from cross-sectional variation, to understand dynamic changes in foundations' governance and to confirm the direction of causality between governance and behavior. Information about changes in rules could be collected and compared to changes in financials. Changes in foundation legislation can offer a fruitful basis for event studies: when state-level regulation changes, how do foundations change their rules or behavior?

Finally, the foundation governance index could be developed further. We discussed the joint appearance of some rules but did not determine the

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136 Fama and Jensen (1983a) hypothesize generally for non-profits as well as for-profits: "[]...
outside directors have incentives to develop reputations as experts in decision control."
Signaling through the board-member role is credible when compensation is low, as it
typically is in non-profits. Hansmann and Thomsen (2013) note that such signaling is not
needed at the end of one's career. Board positions are typically given to already merited
and older persons, they comment.

joint effects of the provisions nor their substitute/complementary nature vis-à-vis other provisions. It is also plausible that some provisions carry stronger power than others. Our FGI is a simple sum of provisions that does not differentiate between the various compositions contributing to the sum. Thus, a FGI=3 may differ in governance quality from another FGI=3, depending on the three components present.

More generally, the most promising future non-profit research areas are those in which non-profits, acting as economic agents, face partially similar, partially differing interests compared to corporate interests. For example, a stock exchange for non-profits[137] may at first sound absurd since a stock exchange provides a market for the transferring the risk of future distributions, whereas a non-profit has no distributions, uncertain or otherwise. Nevertheless, a stock exchange is also a tool for minimizing transaction costs: supply meets demand efficiently. Non-profits could benefit from a primary market where the supply of donations would meet the need for finance in a facilitated manner. The benefit arises not from the constant transfer of risk (as in the case of corporate stock, the so-called secondary market) but from the efficient transfer of primary finance. Corporates use standardized reporting and would be aghast to receive demands for individually drafted reports from various interest groups. Non-profits face such demands regularly. They would benefit from a structured market place where donations would be available as long as some form of market standard information obligations (primary and continuous) are met. Other examples where the corporate market mechanism would be needed, but should be adapted to non-profits, include the measurement of non-profit success or efficiency[138], or mechanisms for restructurings[139]. As the economic importance of the third sector grows, the study of non-profits as economic agents deserves increasing attention from researchers.

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137 SVX, Social Ventures Exchange, in Ontario, Canada is an example.

138 The Economist (2015) lists tried market mechanisms to evaluate non-profits' "bang-for-buck" and their efficiency problems.

139 The absence of market for control means that non-profits are not pushed to efficiency-improving mergers or restructurings like their for-profit counterparts.

References

Aggarwal, R., Erel, I., Ferreira, M., & Matos, P. (2011). Does governance travel around the world? Evidence from institutional investors. *Journal of Financial Economics*, *100*(1), 154–181. doi:10.1016/j.jfineco.2010.10.018

Aguilera, R. V., Filatotchev, I., Gospel, H., & Jackson, G. (2008). An Organizational Approach to Comparative Corporate Governance: Costs, Contingencies, and Complementarities. *Organization Science*, *19*(3), 475–492. doi:10.1287/orsc.1070.0322

Aguilera, R. V., & Jackson, G. (2003). The cross-national diversity of corporate governance: Dimensions and determinants. *Academy of Management Review*.

Bebchuk, L. A., Cohen, A., & Ferrell, A. (2009). What matters in corporate governance. *The Review of Financial Studies*, *22*(2), 783–827. doi:10.1093/rfs/hhn099

Bebchuk, L. A., Cohen, A., & Wang, C. C. Y. (2013). Learning and the disappearing association between governance and returns. *Journal of Financial Economics*, *108*(2), 323–348. doi:10.1016/j.jfineco.2012.10.004

Bebchuk, L. A., & Roe, M. J. (1999). A Theory of Path Dependence in Corporate Ownership and Governance. *Stanford Law Review*, *52*(1), 127. doi:10.2307/1229459

Beck, T. E., Lengnick-Hall, C., & Lengnick-Hall, M. L. (2008). Solutions Out of Context. *Nonprofit Management & Leadership*, *19*(2). doi:10.1002/nml

Ben-Ner, A. (2002). The shifting boundaries of the mixed economy and the future of the nonprofit sector. *Annals of Public and Cooperative Economics*, *73*(1), 5–40. doi:10.1111/1467-8292.00184

Brown, J. R., Dimmock, S. G., Kang, J.-K., & Weisbenner, S. J. (2014). How University Endowments Respond to Financial Market Shocks: Evidence and Implications. *American Economic Review*, *104*(3), 931–962. doi:10.1257/aer.104.3.931

Bushee, B. J., Carter, M. E., & Gerakos, J. (2014). Institutional Investor Preferences for Corporate Governance Mechanisms. *Journal of Management Accounting Research*, *26*(2), 123–149. doi:10.2308/jmar-50550

Carroll, D. A., & Stater, K. J. (2008). Revenue Diversification in Nonprofit Organizations: Does it Lead to Financial Stability? *Journal of Public Administration Research and Theory*, *19*(4), 947–966. doi:10.1093/jopart/mun025

Child, C. D., & Grønbjerg, K. A. (2007). Nonprofit Advocacy Organizations: Their Characteristics and Activities. *Social Science Quarterly*, *88*(1), 259–281.

Clotfelter, C. T. (2012). Charitable giving and tax policy in the US. In G. Fack & C. Landais (Eds.), *Charitable giving and tax policy: a historical and comparative perspective* (pp. 38–62). Paris: CEPR / CEPREMAP.

Core, J. E., Guay, W. R., & Verdi, R. S. (2006). Agency problems of excess endowment holdings in not-for-profit firms. *Journal of Accounting and Economics*, *41*(3), 307–333. doi:10.1016/j.jacceco.2006.02.001

Cremers, K. J. M., Nair, V. B., & John, K. (2009). Takeovers and the Cross-Section of Returns. *The Review of Economic Studies*, *22*(4), 1409–1445.

Davis, J. H., Schoorman, F. D., Donaldson, L., & Davis, J. H. (1997). Toward a Stewardship Theory of Management. *Academy of Management Review*, *22*(1), 20–47. doi:10.5465/AMR.1997.9707180258

Deep, A., & Frumkin, P. (2001). The foundation payout puzzle (Working Paper Series No. 9). *Hauser Center for Nonprofit Organizations*.

Desai, A. M., & Yetman, R. J. (2015). Constraining managers without owners: governance of the not-for-profit enterprise. *Journal of Governmental & Nonprofit Accounting, 4*, 53–72. doi:10.2139/ssrn.661301

Fama, E. F., & Jensen, M. C. (1983a). Agency Problems and Residual Claims. *The Journal of Law and Economics, 26*(2), 327. doi:10.1086/467038

Fama, E. F., & Jensen, M. C. (1983b). Separation of ownership and control. *The Journal of Law & Economics, 26*(2), 301–325.

Filatotchev, I., Toms, S., & Wright, M. (2006). The firm's strategic dynamics and corporate governance life-cycle. *International Journal of Managerial Finance, 2*(4), 256–279. doi:10.1108/17439130610705481

Fisman, R., & Hubbard, R. G. (2003). The Role of Nonprofit Endowments. In E. L. Glaeser (Ed.), *The governance of not-for-profit organizations* (Vol. I, pp. 217–234). Chicago: University of Chicago Press.

Gates, W. H. (2013). The Harvard Campaign Launch interview. Video. USA: Harvard University.

Gillan, S. L., Hartzell, J. C., & Starks, L. T. (2003). Explaining Corporate Governance: Boards, Bylaws, and Charter Provisions (No. 2003-03). *Weinberg Center for Corporate Governance Working Papers*. doi:10.2139/ssrn.442740

Gillan, S. L., Hartzell, J. C., & Starks, L. T. (2011). Tradeoffs in Corporate Governance: Evidence From Board Structures and Charter Provisions. *Quarterly Journal of Finance, 01*(04), 667–705. doi:10.1142/S2010139211000183

Giroud, X., & Mueller, H. M. (2010). Does corporate governance matter in competitive industries? *Journal of Financial Economics, 95*(3), 312–331. doi:10.1016/j.jfineco.2009.10.008

Giroud, X., & Mueller, H. M. (2011). Corporate governance, product market competition, and equity prices. *The Journal of Finance, LXVI*(2), 563–601.

Glaeser, E. L., & Shleifer, A. (2001). Not-for-profit entrepreneurs. *Journal of Public Economics, 81*(1), 99–115. doi:10.1016/S0047-2727(00)00130-4

Goldschmid, H. J. (1998). The fiduciary duties of nonprofit directors and officers: Paradoxes, problems, and proposed reforms. *Journal of Corporation Law, 21*(4), 631.

Gompers, P. A., Ishii, J. L., & Metrick, A. (2003). Corporate governance and equity prices. *The Quarterly Journal of Economics*, (February), 107–155.

Hansmann, H. B. (1990). Why do universities have endowments? *The Journal of Legal Studies*, *19*(1), 3–42.

Hines, J. R., Horwitz, J. R., & Nichols, A. (2010). The Attack on Nonprofit Status: A Charitable Assessment. *Michigan Law Review*, *108*, 1179–1221.

Hohti, P. (Editor), & Kilpinen, K. (Editor). (2010). *Säätiön hyvä hallinto*. The Council of Finnish Foundations. Helsinki.

Hopt, K. J., & Hippel, T. von. (2010). *Comparative corporate governance of non-profit organizations*. (K. J. Hopt & T. von Hippel, Eds.) (1st ed.). Cambridge: Cambridge University Press.

Ikäheimo, S., Puttonen, V., & Ratilainen, T. (2011). External corporate governance and performance: evidence from the Nordic countries. *The European Journal of Finance*, *17*(5-6), 427–450. doi:10.1080/1351847X.2010.543832

Jensen, M. C. (1986). Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *American Economic Review*, *76*(2), 323–329. doi:10.2139/ssrn.99580

Kanter, R. M., & Summers, D. V. (1994). Doing well while doing good: Dilemmas of performance measurement in nonprofit organizations and the need for a multiple-contituency approach. In David McKevitt & A. Lawton (Eds.), *Public Sector Management: Theory, Critique and Practice* (pp. 220–236). London: Sage Publications.

Lakdawalla, D., & Philipson, T. (2006). The nonprofit sector and industry performance. *Journal of Public Economics*, *90*(8-9), 1681–1698. doi:10.1016/j.jpubeco.2005.11.004

LeRoux, K., & Goerdel, H. T. (2009). Political Advocacy By Nonprofit Organizations. *Public Performance & Management Review*, *32*(4), 514–536. doi:10.2753/PMR1530-9576320402

Masulis, R. W., Wang, C., & Xie, F. (2005). Corporate Governance and Acquirer Returns. *The Journal of Finance*, *LXII*(4), 1851–1889.

O'Connell, A. A. (2006). *Logistic Regression models for Ordinal Response Variables*. Sage Publications.

Pallotta, D. (2009). Charity Navigator Fixes Its Compass. *Harvard Business Review*, 1–2.

Roe, M. J. (2003). *Political Determinants of Corporate Governance: Political Context, Corporate Impact* (Vol. 112). Oxford University Press. doi:10.1093/acprof:oso/9780199205301.001.0001

Rose-Ackerman, S. (1996). Altruism, nonprofits, and economic theory. *Journal of Economic Literature*, *XXXIV*(June), 701–728.

Sinani, E., Stafsudd, A., Thomsen, S., Edling, C., & Rand, T. (2008). Corporate governance in Scandinavia: comparing networks and formal institutions. *European Management Review*, *5*, 27–40. doi:10.1057/emr.2008.1

Suvikumpu, L. (2016). *Säätiön hyvä hallinto - Good Governance in a Foundation*. The Council of Finnish Foundations. Helsinki, Finland.

The Economist. (2015). Doing good by doing well. *The Economist Magazine*, May 25.

Venable, B. T., Rose, G.M., Bush, V.D. and Gilbert, F. W. (2005). The Role of Brand Personality in Charitable Giving: An Assessment and Validation. *Journal of the Academy of Marketing Science*, *33*(3), 295–312. doi:10.1177/0092070305276147

Weisbrod, B. A., & Asch, E. (2010). Endowment for a Rainy Day. *Stanford Social Innovation Review*, *Winter*, 42–47.

Young, D. R. (2000). Alternative Models of Government-Nonprofit Sector Relations: Theoretical and International Perspectives. *Nonprofit and Voluntary Sector Quarterly*, *29*(1), 149–172. doi:10.1177/0899764000291009

ARE NON-PROFITS ACTIVE EQUITY INVESTORS?

Abstract

We provide evidence about one investor type's investment behavior: trading and allocation activity. We study a sample of 530 foundations' listed equity portfolios from the years 2000-2013 to establish whether non-profit investors are long-term shareholders with a relatively low equity portfolio turnover, and whether they are risk-averse in the sense of strictly following the market portfolio composition of stocks. In our sample period, foundation equity investors retain their individual shareholdings for an average period of 3.6 years. Their portfolio turnover is on average 12 percent yearly, and they are willing to carry risk by not following the market portfolio industry breakdown. Endowed, Donative, larger and older foundations follow the market industry breakdown on average more than smaller or younger foundations or Operative and Public foundations. Our findings corroborate the widely held notion that foundations are long-term investors which can carry sizeable and concentrated equity risk. Our results add previously non-existent evidence on one investor type's investment behavior to the investor typology needed for the capital markets regulation.

1. Introduction to Essay 2

Evidence about investment behavior is needed when regulators express worries about the functioning of the equity capital markets. Increased index investing and continuing rise of asset management dilute owner activity. Calls are made to invite direct shareholder monitoring and active shareholders. In particular, investors not subject to short-termism seem to be in favor with the regulators. Some investor groups seem to be short-term owners, but compared to which other groups? Evidence from various investor types is needed for discussion about investor type behavior.

We hold prejudices about owner types and their investment style. It seems plausible to believe that family owners are long-term blockholders, a state owner seldom engages in frequent trading, or pension funds diversify and actively limit their risk exposure. Ample anecdotal evidence exists about investor types and styles. At the same time we seem to lack statistically reliable empirical evidence about them (Derrien, Kecskés, and Thesmar (2014)).

We set out to investigate one distinct investor group, non-profit investors, and prejudices regarding its equity investment style. If not the most weighty investor type, it is singular in its characteristics and nature and has not been examined as an equity investor[140]. In most western countries it is common to believe that foundations are long-term investors who do not trade frequently. There are also somewhat fuzzier characterizations along the lines of "foundations are conservative investors".

The investment style of non-profits is influenced by three distinctive factors, compared to other investor types. These three characteristics affect non-profit investment horizon and style: (1) the ultimate goal of non-profits is not to produce profits from operations. A non-profit will, though, try to

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140 Many do not have any notion of non-profits as investors. The term "non-profit" seems a contradiction in terms for an investor group. However, the accumulation of wealth in foundations, endowments, funds and associations predicates that they become normal economic agents on the capital markets. We maintain that their special nature affects their investment style.

produce funding for non-profit mission work by its investment activities. However, the over-arching imperative of profitable operations is absent as are hence many performance measures or valuation. Thus non-profits may not be the most apt organizations to react to substandard performance of investing activities. (2) Non-profits do not have owners. They lack the control element of someone who has a financial interest in operations. We discuss non-profit ownership in a separate essay and in the Introduction of this book, but note here only that control from financiers, donors or receivers of charity is often distant. Furthermore, there are no methods to return capital to financiers. (3) Most non-profits are established to be eternal, without any corrective market mechanisms over time. Non-profits do not merge, go bankrupt or disappear as fluently as corporates do, with the help of market for control. This has important implications to agency setting in non-profits. All in all: non-profits are by nature slow-moving long-term institutions that are to some extent insulated from outside pressures. They can be patient investors that can hold large concentrated holdings and avoid short-term pressures on the market.

This paper firstly discusses (1) why recognizing investor type matters, what investor activity is, and which factors drive such activity; and secondly, investigates (2) whether foundations are active investors, as observed from their equity portfolio allocation and trading frequency. We examine our random[141] sample as a whole to identify foundations' investment activity. In addition, we categorize foundations based on their source of finance and governance model to see if these characteristics have an association with investment style within the foundation group. We also control for foundation age and size to see whether these are related to equity investment style.

Our empirical results show, firstly, that foundations diversify relatively little and that many are able to carry significant risk positions. This also means that they allocate actively away from the market index. Secondly, we find that most foundations do not trade actively. Their positions, share-for-share, stay intact for years.

The rest of the essay is organized as follows. We discuss reasons for growing interest in investment styles of various owner types and previous research on investor activity in Section 2. We then present chosen measures for activity in diversification as well as trading activity and develop new ones, form testable hypotheses and present our data in Section 3. In Section 4 we present empirical findings. Finally, in Section 5 we discuss findings and limitations to our conclusions.

Our research will provide evidence on one investor-type equity investment style. It will provide a comparison point to other investor types, be it pension funds, private individuals or family owners. Empirical

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141   Sample collection is based on a large random take. Foundations that are active financially or in business have been added. This means mostly larger or wealthier foundations. See Appendices 1 and 2 about our data.

findings have practical use in development and regulation of the capital markets. The securities market benefits from different types of owners. In order for trades to take place, investors must have differing beliefs, time horizons, liquidity preferences, risk aversions and information. Initiatives to safeguard and improve the functioning of securities markets start with the information about market participants. Our research produces evidence from one investor type which is present on all developed capital markets.

2. Investor types and investment style on the equity market

In the following section we present reasons for recognizing the importance of identifying investor types.

We shortly visit the importance of varied investor base for trading and for the functioning of the capital markets. We continue to present agency problems in the investment industry and discuss how agency problems are related to various agents, e.g., investor types. At the extreme, such agency problems affect the capital markets' ability to allocate assets in the real economy. Finally we present earlier research on investor types' investment behavior.

2.1   Investor beliefs and motivations to trade

It is necessary to have different investor types if there are to be differing investment views on the market and if trading is expected to occur. If all investors are alike, the market moves in unison, and at the extreme no trading takes place[142]. With trading, markets can price traded goods based on supply and demand, and with pricing, allocate resources to most efficient uses[143].

Reasons for trading to occur have been discussed in financial economics (see, e.g., Harris and Raviv (1993), Jones, Kaul, and Lipson (1994), Allen and Gale (1999)). Fisher (1930) notes that the value of future income streams depends on human views: "Valuation is a human process in which foresight enters. Coming events cast their shadows before. Our valuations are

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142 Copeland and Weston (1992), chapter 1.B refers to subjective preferences: "An individual will make all investments in productive opportunities that have rates of return higher than his or her subjective rate of time preference." "Without the existence of the capital markets, individuals [...] may choose completely different investments because they have different indifference curves." Through borrowing and lending, the capital markets allow all indifference curves to find an optimal consumption pattern on the capital market line.

143 See, e.g., Copeland and Weston (1992), page 4, chapter 1.A.

always anticipations." Thus, uncertain valuations may differ. Furthermore, Fisher refers to the varying impatience of agents: "... marginal degrees of impatience for all individuals in the market are brought into equality with [...] the market rate of interest." A seminal tenet by Aumann (1976) posits that economic agents' prior beliefs must differ or their knowledge must be private for posterior beliefs to differ – that is, if investors share common views and they know what others know, they will act similarly[144]. Later this position has been expanded: whenever one investor group's prior beliefs change relative to the other's, some trading will occur. Furthermore, trade may be generated by uneven dissemination of public information signals, belief disagreement may be the result of private information, or because investors simply interpret commonly known data differently (Harris and Raviv (1993)).

Sharpe (1964) adds investors' risk aversion and time span as reasons why agents trade. In equilibrium on well-functioning capital markets, capital asset prices adjust so that each investor is able to attain his desired point along the capital market line; for that, the investor chooses his preferred time horizon and risk level. Varying risk aversion levels and practical matters such as varying reporting rules, taxations, investor's industry regulations and liquidity preferences affect the choice of investments. This forms various "clienteles" for different investment time horizons on a functioning capital market. Should certain time horizons lack clientele, the market risk would rise for investments of such time horizon. Simply: a wide and well-functioning market has different investor types choosing their position on the capital market line.

Summarizing the above seminal theories we note that the variance in beliefs, in information, and in motivation to participate on the capital markets ensures the functioning of the markets.

2.2 Agency, intermediation and short-termism

Given the variety of investors' motivations for participating on the capital markets, there are several possibilities for agency problems in the investment industry. We focus on the equity capital markets and its participants.

The type of relation between owners and companies and the intensity of ownership has been widely examined (see, e.g., Shleifer and Vishny (1986), Jensen (1989), Holmström (1999), Gillan and Starks (2003) and Holderness (2003)). The spectrum of owners begins with an owner who is very present in the life of a company: an entrepreneur, a manager or a family. A continuum of owner types then follows that includes owners more or less distant from the company: blockholders, industrial owners, corporate

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144 Aumann (1976): "If two people have the same priors, and their posteriors for an event [ ] are common knowledge, then these posteriors are equal."

raiders or individuals.

A specific type of owner is the agent owner who invests other people's money at the agent's discretion: mutual or pension funds[145] belong to this category. Having relatively little material interest in their portfolio, agent owners are more prone to have other motivations than increasing the value of the company. Agent owners may signal their skills and effort in investing by reporting investment returns at short intervals. If such agents are evaluated on the basis on these frequent signals, they have an incentive to produce short-term profits, sometimes at the cost of long-term returns (see, e.g., Gaspar, Massa, and Matos (2005), Asker, Farre-Mensa, and Ljungqvist (2014), or Graham, Harvey, and Rajgopal (2005)). Theories of short-term signaling on the equity capital markets are especially relevant in the growing asset management industry. Intermediation of ownership by asset managers and resulting long ownership chains[146] dilutes direct Agent-Principal monitoring, as presented by Jensen and Meckling (1976).

In this paper, we draw parallels between the corporate world (as described above) and the financial investment world. Jensen (1989) notes that "Wall Street now competes directly with senior management as a steward for shareholder wealth". In the corporate world, short-term signaling could be seen as a corrective element of the capital markets: constant information on the market for control encourages efficiency in companies and corrects inefficiencies. Signaling about efficiency – even on a short term –should be value enhancing. However, as suggested by Grossman and Hart (1980) and Miller and Rock (1985), not all shareholders can analyze short- and long-term prospects correctly, and not all capable managers or investors are willing to share their educated views. Good appearance on the capital markets has become important in itself, as suggested by Lakonishok et al. (1991), who noted that fund managers sell past poor performers regardless of their future outlook. Thus, opportunistic signaling for short-term profit seeking persists. Critics of short-termism maintain that short-term result seeking destroys value *when forsaking* long-term investments (see, e.g., Stein (1996) and Derrien, Kecskés, and Thesmar (2014)). Summers (2015) notes that "After the events of recent years, the case for relying on speculative markets to drive the real economy — to whatever extent it had validity — is surely attenuated."

Compensation, a partial solution to agency problems 0n the corporate market, may accentuate short-termism on the asset management market. If investment managers are incentivized on a short-term basis (yearly,

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145 State investors would fall into the agent owner category, but for the discussion that ensues they do not face similar agency problems. States do not compete for assets under management and they do not strive to show short-term profits. The agency problem faced by many states lies in political interests that may pressure states to forsake short- *and* long-term profits for employment or other politically motivated considerations. See, e.g., Shleifer (1998), Shleifer and Vishny (1994).

146 For example, a mutual fund manages pension fund assets, the ultimate owner of which is the employee saving his pension. The chain may also include funds-of-funds.

even quarterly) and they have no long-term ownership incentive, the investment activities are geared towards short-term profit reporting. Investment managers may also be compensated on the basis of their assets under management, thereby accentuating the need for positive short-term signaling to attract more wealth into a fund. Cohen, Gompers, and Vuolteenaho (2002) note that the open-ended structure of asset management organizations is the reason for asset managers' cautious investing behavior: signaling is needed *every day* when attracting new money into the fund. In closed-end funds, money is invested at the beginning, and no new signaling is therefore needed during the lifetime of the fund. The closed-end fund structure may be one factor contributing to private equity owners' success in turning companies around (Brunzell, Liljeblom, and Vaihekoski (2011)). Shleifer and Vishny (1997) note that asset managers will be motivated to use short-term signaling even if they have proper long-term incentives in place: asset managers are uncertain of their own abilities to benefit from market mispricing, and risk averse managers tend to lose their nerve when market mispricing keeps increasing instead of being rapidly corrected. Thus risk aversion drives asset managers towards short-term profits. Derrien, Kecskés, and Thesmar (2014) emphasize continuous redemptions as a reason for short-term profit seeking. Wong (2010) notes that asset management fee mechanics deter long-term behavior: some large investors do not pay asset management fees, but allow asset managers to use portfolio securities for share lending. However, such lending prevents asset managers from voting. If this is the only source of income for asset managers, they will have little interest in calling back the lent shares in order to use shareholder say on company matters. All in all, asset managers' incentive to act on short-term motives is clear.

Other investors' ability and incentives to actively monitor companies vary. For example, industrial owners may act as better monitors than individuals who may not have access to company management. Many investors (individuals, small non-profits or small institutions) do not have the resources or motivation for monitoring[147] companies, as suggested by Grossman and Hart (1980), let alone to assemble a large block of shares, as shown by Shleifer and Vishny (1986). Thus, *any* direct ownership is not capable of compensating for growing indirect agent monitoring.

Furthermore, Summers (2015) points out that too much *long*-termism is not beneficial, either. For example, in Japan, the keiretsu system insulated management from all outside control. Similarly, in Silicon Valley, "market participants who are willingly placing high valuations on start-ups that lack any profits and have little revenue may be putting too much, not too little, weight on the distant future." A similar worry applies to non-profits

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147 As a special case of costly monitoring and short-termism, Shleifer and Vishny (1990) suggest that in order to benefit from the mispricing of long-term securities, more investment capacity and knowledge acquisition is required from the investor. Thus investors in general prefer arbitrage on short-term mispricings.

who are of "eternal nature"[148]: if the preserving of original endowed assets is considered tantamount to following the founder's wishes, foundations may become rigid owners whose motives decisively differ from those of a normal capitalist seeking to create value[149]. McCahery, Sautner, and Starks (2015) report that 42 percent of the institutions in their survey believe that the threat of an institution's exit from ownership is an effective tool for disciplining management. The institutions surveyed further believed that the exit complements an activist strategy. In such a setting, the exit must be a real possibility in order that the threat be convincing, and long-term ownership must always carry with it the (even if distant) possibility of selling. Also, The Economist (2015) acknowledges the danger of blindly idealizing long-term ownership: "Rather than trying to stipulate the horizon over which investors and firms should think, governments should promote competition. That is the best way to harness capitalism's hyperactive energy in the service of growth."

Finally, there is a fundamental difference in economic behavior that is not observable: Is a long ownership period the result of "laissez-faire" attitude towards one's portfolio, or is the decision not to trade conscious and repeatedly analysed? As long as we do not know the true thinking behind long ownership periods, inferences about benefits of long-termism remain uncertain.

Still, we can safely assume that long ownership periods allow for better information acquisition[150] by the market participants (as assumed by, e.g., Shleifer and Vishny (1986), Bushee (2004), McCahery, Sautner, and Starks (2015)). Regulators are concerned about investor engagement, which may manifest itself through the length of ownership. In the UK, The Kay Review (2012) conducted a survey among market participants which noted that increasing share ownership by intermediaries, such as asset managers and pension funds, who are judged by quarterly results, leads to suboptimal choices in investments. This happens notwithstanding ultimate beneficiaries, fund owners or future pensioners, having a long-term investment horizon. Asset managers are motivated to act based on their short-term interests and not to exercise their ownership rights[151]. The review recommended that equity markets be developed so as to encourage more direct, active and long-term ownership.

In the US, the Dodd-Frank Act was passed in 2010 to correct many market deficiencies. It contained clauses related to short-termism in many details;

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148 A characteristic commonly mentioned by foundation administrators and lobbyists, and often considered an absolute virtue.

149 Eternal ownership may preclude the efficiency measures provided by the market for control: mergers or restructurings of assets. While producing better values, they can disrupt the direct ownership of an asset by the original non-profit owner.

150 Information acquisition means thorough company and industry analysis as well as gathering tacit information about assets held.

151 Exercising ownership rights is costly: one must invest in analysis and take part in corporate meetings.

for instance the Act limits certain shareholder nomination powers to only those shareholders who have been owners for at least two years, as well as imposes new regulations for asset managers[152]. The long-term operational strength of the market in facing short-term shocks is the core rationale of the Act.

More direct participation by investors has been called for, though what such activity should be remains obscure. The above-mentioned initiatives also call for a more varied investor base for the capital markets. Unfortunately, measures and evidence for varied investor types are lacking. We next discuss several types of investors, their typical behavior, and the benefits of diversity to the economy. We also summarize the investor typologies presented in current research, and describe earlier research on the activities of non-profit investors.

2.3 Investor types' behavior and activity

If a diverse investor base is beneficial to the capital markets, we are interested in identifying the observable criteria for categorizing investors. In other words, which characteristics signal differences in investors' beliefs and behavior on the stock market[153]?

Bushee (2004) argues against the use of official national taxonomy. According to him, the advantage of such classification schemes is that investors' legal type is readily available in most databases of institutional investor holdings. The key disadvantage is that there is tremendous variation within these legal type groups in terms of investment horizons and sensitivity to short-term news.[154] Bøhren, Priestley, and Ödegaard (2009) argue that different owner types have different incentives and abilities to monitor, and thus the relationship between ownership and firm value depends on owner identity.

We claim that investor groups possess similar within-group motivations in their investment behavior. These motivations may be the result of regulation, taxation, investment time horizon, expertise, use of investment proceeds, or typical risk aversion in the investor group. Since these similarities exist across geographical areas, taxation systems and legal regimes, the typologies thus formed will be relevant for and applicable to most markets. This can hold true for pension funds (investment horizon of several decades), mutual funds (shorter term profit seeking) and non-profits (independence of reporting, often eternal nature). We maintain that some of these investor characteristics can have some bearing on investors' direct

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152 See, e.g., Rose (2010).

153 We concentrate on the equity market which offers a wider variability of asset returns and risk.

154 A vivid example of within-group heterogeneity is legal type "Financial institutions", which includes banks, mutual funds, pension funds and hedge funds.

equity holdings, which we examine in this Essay[155], and generalizations about investment style can be made on the basis of our findings.

We posit, based on earlier literature, that there are three ways for an investor to be "active": active trading, active position taking or diversification, and shareholder activism.

Activity in trading and *activity in asset selection* are significant factors defining investment style (see, e.g., Wermers (2000), Sharpe (1992), Cremers and Petäjistö (2009)). Wermers (2000) notes that the concept of "investment style" actually includes both trading activity and method of stock selection. He emphasizes the importance of detaching trading activity from other factors that affect returns: trading in itself is costly and thus influences returns negatively, but trading can also be associated with changes in the outlook for the investor's stocks, and such "speedy reactions" yield positive returns. Furthermore, stock selection strategies, such as contrarian or momentum strategies, call for trading on the basis of the triggers that define the strategy.

Trading activity is usually measured by portfolio turnover[156]. Asset selection has been defined by Sharpe (1992), who decomposes it into two decisions: firstly, selecting a style and, secondly, selecting the stock. He presents twelve possible asset classes which form the basis for investment styles, characterized by such factors as large cap, growth, value and geographical focus. Cremers and Petäjistö (2009) create a model to measure an equity portfolio's deviation from an index, and use it as a measure of the asset manager's activity. They compare their measure of activity, *Active Share*, to tracking error, the widely used measure of portfolio position taking.

A third dimension of activity is shareholder activism: influencing corporate decisions and governance, often referred to as the use of "voice"[157]. The existing research body examines US proxy contests, activist investors' returns and activists' methods for influencing the companies (Black (1998), Gillan and Starks (2000), Gillan and Hartzell (2003), Becht et al. (2009), McCahery, Sautner, and Starks (2015)). However, our main focus in this essay is not on this type of activity[158].

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155 We omit two well-known equity investor types, family and state owners, from our examination, as they are by nature not likely to trade much, and their ownership tends to be long. Foreign owners are often examined; in our essay, they are included in the large category of "institutions", which cross-border investros are almost invariably (see, e.g., Grinblatt and Keloharju (2000)).

156 We use the measure proposed by Barber and Odean (2001) for turnover, see also Appendix 3.

157 See, e.g., Hirschman (1970).

158 As noted by Becht et al. (2009), understanding activist shareholding would necessitate detailed information about activists' methods and investments, which is not available publicly. McCahery et al. (2015) surveyed 143 respondents, currently the most generizable view of investor activism. We conducted interviews with 16 Finnish non-profits to gain insights into their investment philosophies and ownership strategies, but did not engage in gathering proper clinical data about their shareholder activism.

Referring to our discussion in Section 2.2., we note that all types of activity are beneficial to the capital markets. Long-term ownership may result in better information acquisition and in less one-directional investor trading in times of market failure. In contrast, frequent trading (short-termism) increases liquidity[159] on the market and helps to eliminate mispricing, which is also beneficial.[160]

To summarize, the behavior of equity investor groups may be characterized by equity trading activity, shareholder activity and portfolio allocation. In Figures 4 and 5, we sketch investor typology by placing different investor types into different brackets of behavior, measured by trading and Active Share, or by trading and shareholder activity (or, more accurately, widely held prejudices thereof). These behaviors form the cornerstones of the capital markets: trading is essential for efficient price formation, and both active risk taking and shareholder activism are crucial for efficient capital allocation in corporates.
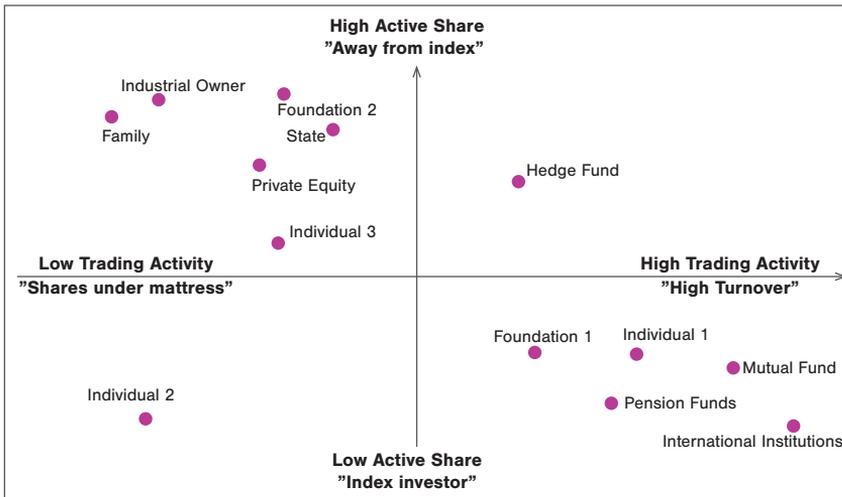
Figure 4. Two meanings of "Activity" on the equity market and the typical prejudices concerning the activity level of different investor types. The positions are illustrative and not quantified. On the vertical axis, high Active Share denotes active risk taking in a portfolio by diverting from the market index weights. Low Active share signifies emulating the market index weights in a portfolio. On the horizontal axis, high trading activity indicates actively changing one's position in the stock. Low trading activity denotes buying and keeping shares for a long period.

As shown in Figure 4, large professional institutions are assumed to be

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159 The liquidity provided by the frequent traders can be even considered a public good (see Introduction, Section 2), as trading keeps the market continuously available for all, infrequent traders included.

160 See McCahery, Sautner, and Starks (2015) for a summary of liquidity vs. intervention findings in research. They confirm that separate investor types either use intervention (or activism,"voice"), or are concerned about stock liquidity.

active traders who diversify along index weights. Individuals may either be index followers, diversifying their portfolio, but some may hold only 1-3 shares that are never traded. State owners typically do not trade much, nor do family owners. Foundations are of many types, either active risk takers with one large (legacy) block holding, or careful diversifiers who trade little. Mutual funds typically diversify, whereas hedge funds take active bets at regular intervals.
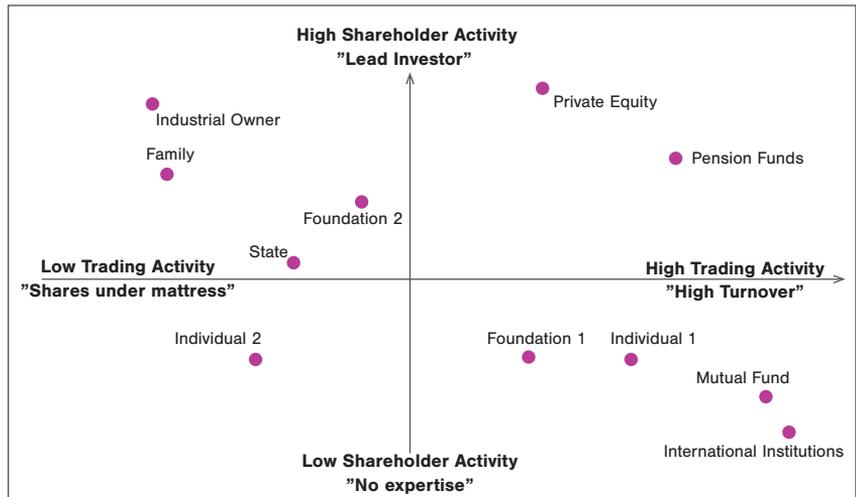

Figure 5. Two meanings of "Activity" on the equity market and typical prejudices concerning the activity level of different investor types. The positions are illustrative and not quantified. On the vertical axis, high shareholder activity denotes active use of shareholder voice in annual general meetings, in conversations with management and possibly in board work. Low shareholder activity signifies little partaking in corporate matters but voting by exiting the ownership. On the horizontal axis, high trading activity indicates actively changing one's position in the stock. Low trading activity denotes buying and keeping shares for a long period.

In Figure 5, we categorize pension funds as activist shareholders. In some countries, pension funds are not activist shareholders, whereas they engage in proxy fights or nominate corporate boards[161] in other countries. It has been proposed by Halim, Miller, and Dupont (2010) that they are not risk-takers (e.g., they have low Active Share), and that they are active in trading. Non-profits may be passive shareholders who vote with their feet, though in some instances they do seize corporate power[162], especially if they

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161 Some American pension institutions initiate votings in general meetings, whereas in Finland pension institutions sit in numerous corporates' boards and board nomination committees.

162 Large Danish "industrial foundations" own majorities in listed companies, and Alfried Krupp von Bohlen und Halbach Foundation has influence on ThyssenKrupp conglomerate.

have legacy block holdings. International institutions may adopt a passive strategy abroad but have a more active role in their home country. The list of possible combinations of characteristics continues.

Our view is that Figures 4 and 5 are interesting and relevant in practice, though there is little empirical evidence supporting these behavioural combinations. The combinations raise further questions. No empirical evidence indicates that investor types would hold assumed pairs of behaviours. Indeed, no studies, to the best of our knowledge, show evidence of both factors: individuals can hold only 1-3 shares in their portfolio, but do they trade them? Mutual funds may be active traders but are they passive in using their vote? Are any two characteristics usually correlated? Nevertheless, we think attempts at this kind of investor typologies should be developed and examined with data, because they have practical implications for the regulation of the capital markets, as discussed in Section 2.2.

Numerous attempts have been made to shed light on actual investor types. The obvious problem in separating realistic investor types is the lack of predefined statistical classification, and hence the lack of separate sets of data for such investor groups. Brickley, Lease, and Smith (1988) depart from customary owner typology by categorizing owners in terms of their relationship with the management. They classify investors into three groups: (1) pressure-sensitive institutions (insurance companies, banks, non-bank trusts owning at least one percent of stock); (2) pressure-resistant institutions (public pension funds, mutual funds, endowments, foundations owning at least one percent); and (3) pressure-indeterminate institutions (corporate pension funds, brokerage houses, investment counsel firms and unidentified institutions owning less than one percent of stock). Bushee (1998) argues that classifying institutional investors based on their investor-specific behavior yields more homogenous investor groups and a more accurate understanding of ownership styles. He develops a methodology to classify institutional investors into groups based on past portfolio behavior, with measures such as trading frequency or the level of diversification. Faccio and Lang (2002) use plausible owner categories, but lump non-profits, cooperatives and foreign minority holders into one category. Kahan and Rock (2007) consider hedge funds that can operate with less regulatory constraints than traditional institutions. Reflecting the US pension institution market, French (2008) separates institutional investors into defined-plan and defined-cost pension plan managers, non-profits and public pension institutions. Bøhren, Priestley, and Ödegaard (2009) differentiate industrial owners from financial institutions, and examine this characteristic in conjunction with the investment time horizon. Almazan, Hartzell, and Starks (2005) divide institutions into two categories, active and passive, and then calculate the concentration of a firm's ownership into active hands. Cronqvist and Fahlenbrach (2009) emphasize the heterogeneity of institutional investors: activists, pension funds, money managers, banks and corporations and especially blockholders among them. Becht et al. (2009) conduct a clinical study

of an activist fund in the UK, further categorizing this investor type into three operating types: collaborative, confrontational or mixed (of the two). Brunzell, Liljeblom, and Vaihekoski (2011) find that among institutional investor types, large private equity investors shield management the most from short-termism.

We now turn to investor activity research and summarize earlier findings by type of activity: trading activity and active portfolio allocation. We do not, however, focus on shareholder activism in this paper. After that, we turn to our main focus, non-profit organizations, and summarize the research describing their investment activity.

2.3.1   Trading activity

Research on asset managers' trading frequency should differentiate pure trading activity from other portfolio management methods, such as stock picking or momentum/contrarian strategies. Pure turnover can be seen as a cost to the portfolio, whereas timely changes in portfolio composition may be a vital element for returns. However, research often treats active trading and stock picking skills as a combined phenomenon (Wermers (2000)).

Lakonishok et al. (1991) examine whether pension funds engage in "window dressing", trading away stocks that have underperformed *before* reporting (regardless of their future outlook). They note that asset managers are evaluated on the basis of their individual stock selection and not only on the basis of portfolio performance. This leads to short-term reallocation which may not be beneficial. Ceteris paribus, such motivation to reallocate increases the turnover of the portfolio, with the authors reporting a yearly average turnover of 50 percent among pension funds.

Seeing turnover as a cost, Carhart (1997) finds that portfolio returns are negatively correlated with expense levels, which are higher for actively managed (e.g., much traded[163]) mutual funds. Carhart also finds a negative relation between a fund's benchmark-adjusted net return to investors and its trading activity. He reports that funds trade 77 percent of the value of their assets yearly.

Barber and Odean (2000) find that individuals trade too frequently and thus forsake returns. They also report that investors tend to prefer stocks in companies that are headquartered near where the investor lives. Barber and Odean (2001) investigate differences in the investment styles of men and women. The authors report that women turn their portfolios over approximately 53 percent annually while men turn their portfolios over approximately 77 percent annually. They also report that the medians are significantly lower than averages, suggesting that among individual investors there are high-frequency traders, though the majority of

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163   This straight-forward definition was later challenged by Wermers (2000). Activity in asset selection does not necessarily mean more frequent trading.

individuals trade relatively little (21 percent yearly).

Reid and Millar (2004) refer to public discussion about whether managers of stock mutual funds trade securities too frequently. The belief has taken hold that stock fund managers turn over securities so frequently that the average holding period is one year or less. The trading activity of fund managers is important because excess trading causes costs to funds (see also Barber and Odean (2001), Carhart (1997)). The authors dissect common methods to assess turnover in mutual funds, and suggest that the correct turnover measure for mutual funds is an "asset-weighted" average. This measure gives more weight to funds with large amounts of assets and, accordingly, indicates the average portfolio turnover actually experienced by the largest pool of fund owners. This turnover ratio was 51 percent in 2004 in the US, whereas a simple average of the turnover for the funds' was 117 percent.

Bushee (1998) classifies investor groups by observing trading activity with strategies that affect trading frequency. He defines three investor groups: "Transient" owners have high turnover and low use of momentum strategies; "Quasi-indexers" diversify but trade relatively little and their trading is not based on momentum; and "Dedicated" owners do not diversify but have a high concentration of holdings, and do not trade actively. Bushee notes that quasi-indexers comprise approximately 70 percent of his sample of 8,000+ investors, while dedicated owners account for only 4 percent. Using a similar investment activity classification, Koh (2007) observes a relation between investor type and short-termist behavior: he finds that only long-term institutional shareholders constrain aggressive earnings management, suggesting that long-term holders try to avoid losses due to short-termism[164].

Treating trading as a method for executing investment strategy, Grinblatt and Keloharju (2000) study the extent to which past returns determine the propensity of various investor types to buy and sell. They examine whether the choice of momentum or contrarian investment style drives the performance of investor types. They note that the behavioural trading patterns are typically strong, suggesting that the behavior is common to a large proportion of the investors in each category. The authors use the EU classification for investor types: households, non-profits, government, finance and insurance institutions, nonfinancial corporations and foreign investors. They further divide households into small, medium and large portfolio holders. Grinblatt and Keloharju find that households are more likely to trade with a contrarian style, whereas governments and non-profits are less contrarian than household investors but more contrarian than nonfinancial corporations and finance and insurance institutions. They show foreign investors to be momentum investors. All in all, more sophisticated investors tend to be less contrarian, and sophistication is also

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164 However, Koh (2007) finds that the presence of transient owners is not systematically associated with earnings management.

related to performance. However, the performance differences were found to be weaker than the behavioral differences[165].

Bushee (2004) classifies investors by the stability of their ownership in companies. He forms three distinct groups: Transient, Dedicated and Quasi-indexer investors. Bushee reports investors' quarterly portfolio turnover and percent of portfolio stocks held continuously for the past two years. Transient owners' turnover (quarterly) is 74 percent and percent of long-term stocks is 25 percent. For Dedicated, turnover is below 1 percent and long-term stock holding account for over 75 percent of portfolio. For Quasi-indexers, turnover is 8 percent and long-term holdings climb to 98 percent of portfolio. The results suggest that index-followers, rather than block holders, are the most stable owners.

Petersen (2006) conducts a survey of 207 Finnish foundations and reports that 103 foundations' equity portfolio yearly turnover in 2004 was 15 percent on average.

McCahery, Sautner, and Starks (2015) survey 142 institutional investors who, as a result of the sampling method, include mostly activist, long-term investors. The authors categorize investors into three holding periods: short (less than six months), medium (six months to two years) and long (more than two years). They find that 29 percent of the investors surveyed belonged to the medium holding period group and 71 percent to the long one. McCahery et al. find that long-term ownership includes a threat of exit, which is seen as a complement to active ownership.

We summarize the evidence on yearly turnover of investors' portfolios in Table 20 below.

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165 Cohen, Gompers, and Vuolteenaho (2002) observe the same: institutions dilute their superior trading skills by reverting back to the market index. Thus, the performance between investor groups does not differ as much as behaviour does.

Evidence on investors' average yearly turnover			
Study	Year	Investor type	Yearly turnover
Lakonishok, Shleifer, Thaler, Vishny	1991	Pension Funds	50 %
Carhart	1997	Mutual Funds	77 %
Wermers	2000	Mutual Funds	59 %
Barber and Odean	2001	Individuals	Women 53 %, Men 77 %, Median 21 %
Reid and Millar	2004	Mutual Funds	117 %
Bushee	2004	Transient institutions	296 %
		Dedicated	below 4 %
		Quasi-indexers	32 %
Petersen	2006	Foundations	15 %
Cremers and Petäjistö	2009	Mutual Funds	95 %

Table 20. Evidence on investors' average yearly turnover. Turnover is measured as half of the sum of the value of buys and sells of a portfolio, divided by the total value of the portfolio. See also Appendix 3.

As evidenced in Table 20, yearly turnovers are well below 100 percent (which would mean that the investor trades the whole value of the portfolio in a year). Mutual funds do trade somewhat more actively than other investor types. Individuals, especially the median individual, trade the least in a year. Available empirical evidence seems to cover only such investor types for whom data has been available.

2.3.2　Active portfolio allocation

An active equity portfolio manager can attempt to outperform the benchmark only by taking positions that are different from the benchmark. This deviation can be a result of either stock picking or factor timing[166] (Cremers and Petäjistö (2009)). Investor activity can be motivated by outperformance and measured by the portfolio's deviation from the market index.

Following the market index is not the same as diversification, and deviating from the market index is not necessarily risk-taking. Diversification means reducing non-systematic risk by investing in a variety of assets, the composition of which need not follow the (local, global, or otherwise relevant) market general index. Nevertheless, if all investors seek to diversify, they can only invest in available securities at market weights: there are fewer Hershey shares to buy than Apple or Exxon, and all investors

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166　Factor timing involves time-varying bets on systematic risk factors such as entire industries, sectors of the economy, or more generally any systematic risk relative to the benchmark index.

cannot decide to diversify only with shares that have a small market capitalization. Furthermore, investing in a variety of shares unavoidably means investing in many (index) shares, whereas deviating from the market index would be achieved by investing in only a few shares, leaving out many index shares. Accordingly, the investment industry customarily refers to the following of the market index composition as "diversification". For instance, the most widespread measure of portfolio's risk-taking (and, roughly, diversification), the tracking error, only measures the deviation of a portfolio's past returns from those of the market index portfolio. Having acknowledged the semantic difference between diversification and risk-taking in a portfolio, we will occasionally refer to the general term of diversification when discussing findings on investors' equity portfolios.

We summarize below previous evidence on investors' choice of equity portfolio allocation and their deviation away from the market index, with special attention given to the trade-off between taking active risks and gaining returns, versus showing short-term returns or less risk.

Building on both the three-factor model of Fama and French (1993) and an additional factor capturing the one-year momentum anomaly presented by Jegadeesh and Titman (1993), Carhart (1997) creates a model of factors contributing to the performance of mutual funds. These factors essentially represent various types of risks taken in order to achieve excess returns. Starting from CAPM[167], risk is measured as a deviation from the market index. Carhart finds that his 4-factor model explains cross-sectional variations in mutual fund returns. Thus, returns are driven by the funds' decisions to deviate from the market index.

Del Guercio (1996) shows that asset managers that are more exposed to the US "prudent man" laws, such as banks managing pension investments, tend to invest more in stocks that are viewed as prudent. This may explain such asset managers' poor performance compared to other asset managers, such as mutual funds that are less exposed to prudent man laws. Del Guercio notes that the legislation is counterproductive. A similar comment by an asset manager is reported by Wong (2010): asset managers are bound by fiduciary duty to their clients. This may lead them to realize short-term gains instead of longer-term value increase.

Cohen, Gompers, and Vuolteenaho (2002) show that institutions are able to trade better than other investors, but in longer term miss out on this return advantage because they converge towards index weights. The authors discuss reasons for following the index: asset managers' rules and regulations limit their risks in single positions or their instruments (short selling, leverage), and asset managers want to offer products that complement investors' overall portfolios well. In a similar vein, Barberis and Shleifer (2003) note: "Institutional investors may move into styles with good past performance simply because such strategies are easier to

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167   Capital Asset Pricing Model, see Sharpe (1964), Lintner (1965).

justify ex-post to those monitoring their actions." The ease of explanation is important in small institutions (and in non-profits where mission expertise often outweighs business expertise). However, this leads to lesser returns (see, e.g., Jegadeesh and Titman (1999)).

Cremers and Petäjistö (2009) start by noting that tracking error, the traditional measure for deviation from market index, does reflect only factor timing in allocation. They suggest a new measure to complement tracking error: the Active Share of a portfolio[168]. Examining mutual funds with both tracking error and Active Share, the authors find that a significant fraction of large funds are "closet indexers" and that a deviation from index should be defined two-dimensionally: with tracking error, which takes into account past return covariances, and with Active Share, which takes into account pure stock selection activity. Cremers and Petäjistö discuss the shift from active to passive management in the 1990s, and how the short-term behavior limits the "invisible hand" operated by mutual funds on the capital markets: "Part of this is due to index funds, but an even larger part is due to closet indexers and a general tendency of funds to mimic the holdings of benchmark indexes more closely. Furthermore, about half of all active positions at the fund level cancel out within the mutual fund sector, thus making the aggregate mutual fund positions even less active."

Cuoco and Kaniel (2009) examine how incentivization methods of portfolio managers affect portfolio selection. They suggest that when portfolio managers are symmetrically rewarded (for both profits and losses), they tend to follow the index more closely.

Halim, Miller, and Dupont (2010) note that pension funds recognize the importance of surplus risk (mismatch between assets and liabilities), but they concentrate their risk management efforts to active management risks (tracking error policy)[169]. The authors note that tracking error has been only 1.3 percent on average in their survey, for USD 2 trillion of global pension assets. Pension insurers seem to follow the index.

Ivković, Sialm, and Weisbenner (2008) find that household owners with large non-diversified equity accounts earn excess returns compared to diversified portfolios. They compare their results to findings showing that specialized mutual funds sometimes perform better than widely diversified funds. The authors accredit this phenomenon to superior stock-picking skills of these non-diversified investors. Such superior skill may be based on expertise acquired from professional life.

In a similar vein, Goetzmann and Kumar (2008) study US individual stockholders' portfolios and their diversification in 1991-1996. They found that while individuals' diversification policies changed over time, evidenced by an increase in the mean number of stocks from four to seven in investors'

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168 Active Share is explained in detail in Appendix 3, and it is used in Section 4.

169 This may be a result of "what you can measure is what you get", but new practical measures, such as ones introduced by Cremers and Petäjistö (2009), may help alleviate one-sided risk measurements.

portfolios during the sample period, diversification was not commonly used. In Goetzmann and Kumar's data diversification increases with investor's age, income, wealth, and education. Sophisticated investors (who, e.g., buy options) also diversify more on average. Furthermore, better diversified investors are more likely to have better returns. However, Goetzmann and Kumar also find that a small subset of investors consistently attains higher returns while diversifying little. The authors suggest such individuals have superior information about the issuers, or better stock picking skills.

Keloharju, Kasanen, and Lehtinen (2015) report that most individual investors hold poorly diversified portfolios: in their sample, 46 percent of individual investors had only one stock in their portfolio and 16 percent held two stocks. However, individuals who had an equity portfolio worth more than 1 million euros owned on average 18 stocks. For small investors, diversification may be a function of diversification costs[170].

McCahery, Sautner, and Starks (2015) survey 142 institutional investors who, as a result of the sampling method, include mostly activist, long-term investors. They find that the respondents held most of their investments – 75 percent on average – in active rather than purely passive (index-weighed) positions. The median for active investments' share was 90 percent.

We collect previous evidence about investors' average diversification, active allocation and deviation from the market index in Table 21 below.

Evidence on average tracking error, Active Share or diversification			
Study	Year	Investor type	Measure
Barber and Odean	2000	Individuals	Average 4 stocks
Cohen, Gompers and Vuolteenaho	2002	Institutions	Tracking error 1.6 %
Ivkovic, Sialm, Weisbrenner	2008	Individuals	Average 3.9 stocks
Goetzmann and Kumar	2008	Individuals	Average 6.3 stocks
Cremers and Petäjistö	2009	Mutual Funds	60 % Active Share
Halim, Miller and Dupont	2010	Pension Funds	Tracking error 1.3 %
McCahery, Sautner and Starks	2015	Long-term institutions	Active Share 90 %
Keloharju, Kasanen and Lehtinen	2015	Individuals	62 % of individuals hold 1-2 stocks

Table 21. Evidence on investors' active allocation and index-following. Tracking error is the standard deviation of the difference between the portfolio and index returns. Active Share is the deviation of the portfolio holdings' weights from the index weights, see Appendix 3.

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170 Keloharju, Kasanen, and Lehtinen (2015) note that their paper does not cover indirect holdings like mutual funds. For small investors it is more cost efficient to diversify by owning mutual funds.

The existing empirical findings on investor active risk taking (away from index weights) are rather clear. Individuals diversify very little: they hold just a handful of shares. Institutions appear to be index investors, whereas mutual funds seem to be fairly active in weighing their bets away from the index.

2.3.3 Non-profits' investor activity

The main body of research about non-profit owners examines the association of non-profit ownership and company performance. In these studies we find indications to the ownership styles of non-profits, as well as specific reasons why non-profits behave differently from institutional or individual investors. However, empirical evidence on non-profits as equity *portfolio* investors is lacking, even though this is the most common type of non-profit investor in the world.

Hansmann (1990) provides a first structured review of various justifications for university endowments and their spending levels. His treatise is an excellent basis for defining intertemporal investment objectives and spending rules of non-profits. Hansmann applies common business investment calculations to the problem of defining how much should be spent now, versus invested for future use. He notes that the demand for intergenerational equity, the often cited reason for endowment accumulation, is justified only if financial investment returns are higher than consumer income growth. In such a case, a university could offer more purchasing power to future generations than to the present one by investing most of its proceeds and accumulating its endowment. However, if investment returns are not higher than income growth, or higher than other yields that one could get from the use of money today (such as a faster invented cure for cancer), university endowments should not limit spending and invest in eternity, but spend confidently today. Hansmann provides an intellectually sound basis for deciding between non-profit spending or saving (=investing), but he does not enter a more detailed discussion about investment strategy choices.

Merton (1993) takes a step further and discusses university endowments as investors. Merton derives optimal investment and expenditure policy for university endowments in a context which takes account of overall university objectives and the availability of other sources of revenue besides the endowment. Thus Merton nods to Hansmann's reminder that the endowment is not the only form of wealth universities possess. He considers the wealth effect as well as the substitution effect of various asset types with different riskiness of cash flow: all nominal wealth is not equally valuable. For instance, if donations vary in line with stock markets, the future cash flows from donations can be considered to include a "shadow" stock market risk. If the conservative investment policies of universities have seemed a paradox, it is resolved once the endowment is recognized

as representing only a part of the wealth of the university. The riskiness of all assets defines the investment policy of the endowment asset. Merton expands his discussion to include not only assets but also the cost base of a university, and the use of endowment as a hedge against cost inflation (in, e.g., rent or heating expenses). Merton's theses are in line with the recommendation made by Carroll and Stater (2008) that a diversified revenue structure for non-profit organizations consists of relatively equal reliance on revenue generated from donative income, earned income, and investment income.

Herrmann and Franke (2002) compared the performance and investment[171] of 65 foundation-owned German firms' with those of 306 listed German corporations over the years 1990-92. They found no significant difference in performance in foundation-owned firms and in listed non-foundation-owned firms. The authors hypothesize that control has been overall weak in German listed companies (until 1995, when capital markets laws were amended). The profit volatility is lower in foundation-owned firms. The authors also compare results with Thomsen's (1999) Danish findings and discuss implications that foundation-owned firms in both countries integrate more operations into themselves, signaling perhaps empire-building.

Thomsen and Rose (2002) compare the stock performance and return-on-assets in foundation-owned Danish corporates to those in other listed companies. They study all listed companies in the Copenhagen Stock Exchange between 1996 and 1999, all in all 171 firms. Of them, 20 were majority-controlled by a foundation. They find no significant difference in performance between foundation-owned and other companies[172]. The authors posit that absence of short-termism may contribute to the success of foundation ownership[173]. They also note that mainstream explanations for foundations' success do not explain their result: creditor control is not significant for these companies, management turnover is low, and competition is not instantly correcting, as shown by high profitability of the corporates[174]. The authors discuss reputation as a strong motive for foundation administrators. They also note the often-quoted advantage of foundation-owners: absence of short-termism. Finally, they suggest

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171 As well as many other characteristics such as payout, depreciation or use of raw material.

172 For stock performance this finding is somewhat self-perpetuating. If foundations are poor owners, this would be reflected already in the share price. However, the ROA measure shows that foundation-owned corporates fare a little better, but not significantly so.Thomsen and Rose (2002), p. 26.

173 Thomsen and Rose suggest, however, that ownership factor may be endogenous on the Danish market.

174 Thomsen and Rose (2002), p. 27.

the companies' ownership may be endogenous[175], given the long-standing ownership patterns on the Danish market.

Eldenburg et al. (2004) study American hospital ownership data in 1980-1996, including 486 hospitals, and compare ownership by for-profit and non-profit owners. They analyze board composition, CEO turnover, ownership type change against performance by several measures. They find that differences between for-profit and non-profit hospitals' performance are not large. Rather, the largest differences are within the non-profit sector, between communal, charitable, religious and other non-profit owners.

Klick and Sitkoff (2008) study the event of attempted sale of Hershey Foods by its controlling non-profit shareholder, the Milton Hershey School Trust, in 2002 in the US. The trust owns some 30 percent of the listed company. On announcement of the sale the share price of Hershey showed a 25 percent abnormal daily return, reflecting improved prospects for governance and possibility of a future takeover. However, the Pennsylvania Attorney General prohibited the sale, and Hershey price slid by 12 percent. The authors consider this event a robust signal of the value-destroying nature of non-diversified foundation owners, who also face the political risk of being regulated by politically motivated officials, in absence of economic owners.

Klick and Sitkoff (2008) conclude that the benefit of a controlling blockholder depends on the blockholder's incentives and the quality of the blockholder's own governance. Benefits from active blockholders are not automatic but depend on the quality and actions of the blockholder. The authors note that among non-profit owners the Milton Hershey School Trust is non-diversified and lacking in its own governance, leading to poor performance as a blockholder[176].

French (2008) estimates the ownership of American listed shares by non-profit organizations in 1980 as 8.3 percent and in 2007 as 6.0 percent of the market capitalization. He combines statistics with anecdotal evidence and concludes that non-profits still have a large part of their wealth in direct equity holdings (34 percent) and that the well-known shift from equity to alternatives has been smaller than believed. Non-profits seem to continue to own legacy shares and direct, easily-understandable holdings.

Hansmann and Thomsen (2013) examine a special situation where foundations are majority-owners of listed companies. There were 117 companies on the Copenhagen Stock Exchange that have a foundation as the majority owner. The authors do not address "investment style" as Danish foundations typically own just one (or a few) stocks for the long term.

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175 Thomsen and Rose (2002) quote, e.g., Loderer and Martin (1997), Cho (1998), Demsetz and Villalonga (2001). However, endogenuity is in contrast with a discussion in a more extensive study on Danish foundations (Hansmann and Thomsen (2013)). Thomsen and Rose suggest ownership structures are historic and random, and do not change in an agile way.

176 Klick and Sitkoff (2008) in, e.g., describing the volatile reactions of the trustees when receiving proper bids.

Hansmann and Thomsen form an overall concept of "Managerial Distance" consisting of six factors perceived to assess separation of foundation owners from companies they own. The components improving the Distance are Board separation from owners, portion of outside ownership, listing, the foundation owning multiple companies, physical separation between foundation and company headquarters, and the existence of a charitable purpose in the foundation. Observations for 96 foundation-owned companies' financial performance vs. Distance index was tested against listed non-foundation owned companies over a five-year period. The authors find statistically significant, positive association between Distance and performance. The Separation and Outside-ownership components are found to be non-linear: while Distance is good, too much of a good thing is not. Company performance is highest for low but non-zero separation from the foundation owner, suggesting that 1-2 owner's representatives – and not more – in the company board is beneficial. For Outside ownership, performance peaks when foundation ownership is between 50 and 75 percent. This is a level where a foundation gets most of the benefits from its owner's activity.

Hansmann and Thomsen (2013) conclude that material incentives do not drive foundations' motivation. The explanation for foundations' good performance as owners must come from behavioral incentives such as influence, identity, cognitive biases[177] or foundations' insulation from short-termism.

It emerges from previous empirical evidence that non-profits have been examined as owners of business, but less so as portfolio investors (only to some extent by Merton (1993), French (2008)). As owners of businesses, foundations are found to be long-term holders, non-diversified and not active in changing their holdings. Their level and style of activity as owners varies, which is shown, e.g., by Hansmann and Thomsen's (2013) Distance-measure.

2.3.4   Summary of previous evidence on investor activity

There have been several attempts to understand institutions beyond official statistics typology. "Institutions" is a somewhat controversial owner category: largely speaking all investors are institutions[178], bar living persons. We adopt the philosophy that "institutions" equals professional

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177 The authors refer to, e.g., Milgrom and Roberts (1988), and Akerlof and Kranton (2005).

178 If limited liability company form is an institution, all kinds of ultimate owners can be behind such façade. Families and states can organize their holdings through investment companies. Industrial owners operate through another company. Pension funds can be mutuals, foundations or cooperatives. "Financial institutions" can include asset managers, but ownership of industry by large banks has decreased in developed countries. Carving out a convincing definition of "an institution" is challenging.

investors who wish and can[179] optimize their portfolio composition on the basis of portfolio theories. According to this logic, we maintain that asset managers, pension funds and investment companies fall into institutions-category. They have, nevertheless, different equity ownership patterns, according to the existent empirical evidence.

Pension fund investors are often assumed to converge towards some reference index. This convergence can be considered to decrease investment risks, especially if index-following is seen as diversification. However, diligent index-following may diminish these institutions' excess returns that they would attain with their superior stock selection capability. Their ownership in company stocks changes actively and most have so far not, in aggregate, taken an active owner role. If they wished to exercise long-term shareholder rights and defer trading, they would need to invest in owner activities and to build proprietary owner capabilities. Activism might also cause limitations to their capability to buy and sell shares, presenting a cost of illiquidity[180].

Hedge funds and institutions that are not subject to strict regulations do not need to consider short-term signaling in their operations and can thus attain higher returns from their investments.

Mutual funds often loosely follow index diversification but can move more or less away from it, depending from their stated strategy. The evidence about mutual funds' trading frequency suggests that on average, mutual funds trade from half to all of the portfolio asset value in a year.

Households and individuals are found not to be as sophisticated investors as other types of investors: they under-diversify and exhibit overconfident investment behavior, which leads to costs and decreased returns. A large majority of individuals trades relatively infrequently, although variance among low and high traders is very high (investors' average turnover is clearly higher than median turnover).

Previous research body presents an interesting take on non-profits as company owners; however, only one researcher studies how non-profits behave as portfolio investors – a role they commonly and increasingly have across the world. We continue by presenting our data that allows us to examine foundations' equity portfolio investment style.

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179 Ability comes from being a large enough investor to carry the necessary information acquisition and transaction costs.

180 Gillan and Starks (2003) presents a summary of the costs of activism.

3. Data, variables and hypotheses

3.1 Data

We set out to examine empirically non-profit foundations' investment style. Our data is from Finland, northern Europe. Finland is a developed, small, open economy with a relatively short history of capital accumulation. In non-profit comparisons Finland is categorized to be an average country both by the size of the non-profit sector as well as by the growth of the sector, according to Anheier (2001). It can be considered as a laboratory for non-profit research, because it possesses the typical mission, wealth, and operational structures of European foundations.

The holdings of Finnish non-profit investors have been documented by Keloharju, Kasanen, and Lehtinen (2015). Their data is a full population of direct, listed securities holdings between January 1, 1995 and January 1, 2015 on the NASDAQ Helsinki Exchange. They report that at the beginning of 2015, non-profit institutions held on average 4.9 listed shares in their (listed) portfolio, whose median value was 295.000 euros. The number of non-profit investors was 5600[181] and they held a total of 3.9 percent of the market capitalisation of listed securities. However, Keloharju et al. do not report details such as trading or diversification activities of investor groups.

Our data on Finnish foundations was obtained from the Finnish Ministry of Justice. There were 2836 registered foundations in Finland at the end of June 2014 and our sample includes 891 of those foundations. The data was collected minutely by the Ministry as a background material for redrafting foundation legislation. It includes detailed information about foundations' objective or "mission industry"[182], rules, year of registration, details about administrative organ formation, and powers, as registered by the end of

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181 The number includes not only foundations but also several other types of non-profits, such as associations, trade unions and churches.

182 What the charitable mission of the foundation is. The classification is UN classification, International Classification of Non-Profit Organisations, ICNPO.

year 2011, as well as the foundations' financial information for the years 2010-2012. The sample is at first randomly collected, then augmented with foundations that have taken part in the Ministry's surveys – such cases tend to be large and/or active foundations. Data collection and content are explained in Appendices 1 and 2.

Our second dataset includes direct, listed share ownership data from Euroclear Finland[183] for 872 foundations[184]. Out of these, 530 turned out to have had direct listed equity ownership between 2000 and 2013. The data includes their ownership of listed shares on the NASDAQ Helsinki – exchange on 31 December in the years 2000-2013, the corresponding share price, and the industry category of each owned share. The time period includes market extremes of the "techno bubble" in the years 2000-2002 and sub-prime crisis in the years 2008-2009, but is not dominated by such events, as the time period extends beyond those time points. Not one share or industry value is dominant during the whole time period.

The old Foundations Act of 1930 was in force during our data period. The Act required foundations to invest in a "secure and profitable manner", which was generally agreed to be contradictory, and which did not guide investment activities of foundations. This guideline was deleted from the new Foundation Act of 2015, and currently foundations are expected to "define an investment plan". It is our belief that the old legislation did not limit or guide the equity investment decisions of foundations, which are studied in this Essay. Similarly, the taxation in force in Finland during our data sample period did not guide the equity trading or diversification decisions of foundations[185].

Our data is limited to direct, listed, domestic[186] shareholdings, excluding thus other equity instruments such as equity funds, private equity investments and direct shareholdings in non-listed companies. In addition, other asset classes such as fixed income, real estate, or cash are not in the data. As a result, we cannot analyse the success of allocation between asset classes. We limit our attention to the change and diversification of direct equity holdings, and draw conclusions about investment style from those.

Admittedly, equity investment style is not necessarily representative of the investor's overall investment philosophy. In euro values, the portion

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183   Keeper of the book-entry settlements infrastructure in Finland. Euroclear handles all share transactions on the Nasdaq Helsinki exchange, as well as on smaller competing market places. All shareholdings are registered in this system, both those of institutions and of individuals.

184   Data was obtained before the final 17 additions to the sample were made (see Appendix 2). Two foundation-conglomerates were dissembled into subsidiary units as they were known to include significant shareholdings on subsidiary level.

185   See Section 4.1.2 of the first Essay of this book for a more detailed discussion about the regulatory environment of foundations. Verotoimisto The Finnish Tax Authority (2002) shows guidelines about charities' investment operations *not* being interpreted as competitive, market-based business operations.

186   Here, domestic means shares that are listed in Finland. Such companies may be domiciled in other countries, such as TeliaSonera and Nordea in Sweden.

invested by sample foundations into equity is estimated to be some 62 percent of their aggregate portfolio value, and of that, over 70 percent is invested in direct equity holdings, and 68 percent is invested in the home market (according to Ahdekivi (2014), based on interviews). The sample population is skewed, with largest foundations representing a majority of investment value. If we take the average of equity-portfolio-to-total-assets ratio for all sample foundations, the direct domestic equity portfolio is 39 percent of total assets on average. Consequently, our sample of direct, listed, domestic equity holdings may represent a significant part of sample foundations overall investments.

A potential limitation of our analysis is that we cannot convincingly establish a causal relation between hypothesized causes of investment behaviour on one hand, and the trading or allocation decision on the other hand. Our foundation characteristics data is from one point of time (the year 2012, see Appendix 2), and our share ownership data is a time-series from the years 2010-12. The first and necessary condition for causality is that the cause preceeds the result. Given our data, we cannot observe the time sequence of establishment of foundation type (or source of finance or governance) and portfolio choices or trading decisions. However, the more permanent nature of finance base and governance model suggest that the causality may run as we have modelled[187]. We can only measure correlations and, whenever appropriate, we use economic reasoning about and anecdotal evidence from foundations, regulators and auditors to conjecture about the potential causal relation.

Another shortcoming of examining foundations' investment style is the absence of comparable empirical research in Finland, in the Nordic countries and in the developed world. Firstly, non-profit investors have not been a focus of research based on finance or investment theories, probably because of their very "non-profit" status, which is seen as an oxymoron for investors. Perhaps due to their alleged conservative-passive behavior, non-profits have not been deemed to be interesting economic agents on the capital markets. Secondly, most of the investor type empiria relies on public statistical classification based on legal status that bundles "financial institutions" or "corporates" into one bracket, while we know that there are vital differences within such groupings (for instance, in the behavior of mutual funds versus activist funds. See, e.g., Bushee (2004)). The classifications available are most often irrelevant to many behavioral research questions. Thirdly, some investor groups are not regulated and not liable to report in a similar way as institutions, banks or corporates: the state and family owners are such unregulated owners, and reliable, representative and relevant empirical information about them is scarce. Indeed, the overall scarcity of investment behavior empiria has motivated our attempt to form empirical comparison points between genuine investor types.

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187 For a more detailed discussion see Section 3.1 in the first Essay of this book.

3.2 Variables

To measure the allocation policies and trading activity of foundations, we choose three measures for their equity investments portfolio: deviation from the overall industry sector breakdown of the stock market as a measure for activity in portfolio allocation; the euro-value turnover and the single-stock-based change-in-ownership as measures for trading activity.

Deviation is measured with Active Share, a ratio developed by Cremers and Petäjistö (2009) and explained in Appendix 3. It is the deviation of a portfolio from market index value weights. We calculated Active Share on the industry level: how much a portfolio deviates from the overall industry breakdown of the market index.

We also want to gain an understanding of frequency of trading. For that, we first employ the measure of turnover of the equity portfolio as in Barber and Odean (2001)[188]. Turnover is calculated as the number of shares sold or purchased during a year, times the beginning-of-year price per share, divided by the total beginning-of-year market value of the foundation's portfolio. This ratio is then divided by two to get an intuitive measure for change relative to portfolio value. It should be noted that turnover is inherently a value-weighted concept, where valuable holdings and their changes drive the ratio.

However, the turnover measure does not answer our questions about investor activity fully. Firstly, unlike most other institutional investors who remain invested rather steadily, there are foundations that seem to have a "love/hate-relationship" with the equity market. Our sample period includes subperiods that may invite extreme behavior from investors who are not bound by investment regulation: hubris during the techno-bubble in 2000-2002, disappointment in 2002-2003 due to rapid decline of the market, new optimism during 2004-2007, collapse of the whole market in 2008 and upturn for most shares in 2009-2013, although 2011 included a smaller market downturn, too (Chart 3a and 3b). Our data includes foundations who have either left the market at several points (50 percent turnover in that year), or have increased their equity investments manifold in one year (typically during 2006)[189]. Their ratios, while rebuilding positions, show, e.g., 1300 percent turnover. These swings tend to influence turnover averages, but the phenomenon is limited to a small number of foundations.

Secondly, if a foundation is a long-term owner in one company, owning typically a large, valuable block, its activity in other smaller (less valuable) holdings produces a relatively modest turnover ratio. We would like to understand foundations' ownership style in those non-legacy stocks as well.

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188   See also Appendix 3.

189   Foundations are not bound by any industry law, code or recommendation about how to invest their assets, other than the general guideline in the Foundation Act about "planned and diligent investment management".

To the best of our knowledge, few researchers have investigated the holding periods of particular, single shareholdings over time. Bushee (2004) classifies investors by the stability of their ownership in companies. He forms three distinct groups: Transient, Dedicated and Quasi-indexer investors. Bushee reports investors' quarterly portfolio turnover and percent of portfolio stocks held continuously for the past two years. Transient owners' turnover (quarterly) is 74 percent and percent of long-term stocks is 25 percent. For Dedicated investors, turnover is below 1 percent and long-term stock holding account for over 75 percent of portfolio. For Quasi-indexers, turnover is 8 percent and long-term holdings climb to 98 percent of portfolio. Bøhren, Priestley, and Ödegaard (2009) separate industrial owners from financial institutions, and examine this characteristic in conjunction with investment time horizon. They report that the largest owners of the companies listed on the Oslo Stock Exchange held their block holdings on average 1.8 years, and stayed among the five largest shareholders for 2.6 years on average (over a sample period of 1989-99). They note that financial and foreign owners stay the shortest, whereas individuals and industrial firms stay the longest. Cheng, Elyasiani, and Jia (2011) define a "nonzero-points duration" which is the number of quarters in which an institutional investor has nonzero holdings out of the 12 quarters over the 3-year sample period. They also define "maintain-stake-points duration" which is the average number of quarters in which institutional investors maintain their stake. Almazan, Hartzell, and Starks (2005) divide institutions into two categories, active and passive, and then calculate the concentration of a firm's ownership into active hands. Cronqvist and Fahlenbrach (2009) emphasize the heterogeneity of institutional investors: activists, pension funds, money managers, banks and corporations and especially blockholders among them.

We simply inquire whether foundations *typically* can be considered a long-term shareholder in companies included their equity portfolio. We do not want to measure this only by the relative change in the portfolio, as the turnover ratio does. Turnover considers the activity from the point of view of the investor, whereas we would like to see activity as seen from the owned company: will this owner own our stock for long? To get an understanding of the propensity to change in any of the share positions, we develop an indicator for change in ownership.

Stock market development 2000–2013
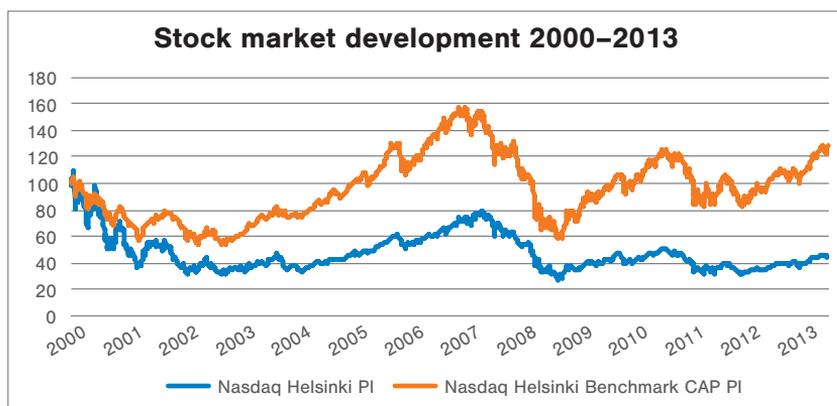
Chart 2 Nasdaq Helsinki Exchange Price index and CAP Price index in 2000-2013. Price index is used for comparability, because our data includes equity portfolios held at year end and their values, but no dividend and other yield items. CAP index limits the weight of one stock to a maximum of 10 percent in the index. The poor performance of the non-capped index (blue line) is largely explained by the decline in value of Nokia plc during the sample period.

Change-in-ownership indicator takes value 1, if the investor's position in one share has changed more than 10 percent from previous year. If not, the indicator for that year is zero. In our data we have strings of timelines such as shown by Table 22:

Number of shares held															
Investor	Share	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
573	Company 1	6521	6521	6521	6521	6521									
638	Company 1	450	450	450	450	450	450	450	450	450	450	450	450	450	450
822	Company 1	750	750	750	750	750	750	750	750	750	750	750	750	750	750
822	Company 2												1160	1160	1160
822	Company 3												720	720	720
1019	Company 1	2500	2500	2500	2500	2500					245	245	245	245	245
1019	Company 2						4500								
1019	Company 3						1800	1000	1000	1000	1000	1000	1000	1000	800
1019	Company 4	24000	24000	12000	8000	8000	8000	8000	6000	6000	6000	3000	3000	3000	2400
1019	Company 5	9600	9600	6000	6000	6000				3000	3000	3000	3000	3000	2400
1019	Company 6										3500				
1019	Company 7	2400	2400							1500	1500				
1019	Company 8	4000	4000	3000	3000	3000					2500	2500	2500	2500	2000
1019	Company 9	1000	1250												

Table 22. Example of share ownership data by year, by investor and by each series of shares held. One investor's holdings are separated by a horizontal line. Investors are anonymized with investor code numbers.

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There are 9817 share ownership rows such as these (by 530 non-profit investors in 2000-2013). They specify the timeline of ownership of each share owned by each foundation in our data. We identify changes of more than 10 percent change of previous year's ownership. If such change has occurred, the indicator for that investor and for that stock is 1, otherwise 0. Acquisition of shares not previously held is considered a change, thus a 1. Sale of all shares is also considered a change, thus a 1. However, years when the investor has not been owning one specific share are not interpreted as a zero but are considered to be non-events (empty data)[190].

Change-in-ownership -indicator															
Investor	Share	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
573	Company 1		0	0	0	0	1								
638	Company 1		0	0	0	0	0	0	0	0	0	0	0	0	0
822	Company 1		0	0	0	0	0	0	0	0	0	0	0	0	0
822	Company 2												1	0	0
822	Company 3												1	0	0
1019	Company 1		0	0	0	0	1				1	0	0	0	0
1019	Company 2						1	1							
1019	Company 3						1	1	0	0	0	0	0	0	1
1019	Company 4		0	1	1	0	0	0	1	0	0	1	0	0	1
1019	Company 5		0	1	0	0	1			1	0	0	0	0	1
1019	Company 6										1	1			
1019	Company 7		0	1							1	0	1		
1019	Company 8		0	1	0	0	1				1	0	0	0	1
1019	Company 9		1	1											

Table 23. Occurrence of share ownership change by year, by investor and by each series of shares held. Example of data. One investor's holdings are separated by a horizontal line. Investors are anonymized with investor code numbers.

The change-in-ownership indicator omits the relative weights of changes in ownership. A 100 percent change is as relevant as a 10 percent change, and a 10 million euro change is as relevant as a 10,000 euro change. Given that, we note that our change indicator is quite strict: most companies would not consider it a drastic change if an owner sold 10 percent of his shares. However, the change indicator is suited for our purpose of looking into passiveness and long-term involvement of foundations as investor: it will detect any small change (at or above 10 percent).

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190 *Absence* of investment in some shares (as on rows showing blanks in Table 23, and in shares that the investor has never owned) cannot be interpreted as "stability" of investment strategy. Only years where the investor has either acquired, owned or sold shares count in our change-data.

Furthermore, the change-in-ownership indicator detects changes in situations where a foundation is a long-term owner in one company, owning typically a large, valuable block, but is an active trader in other stocks. As block holdings' values tend to form a large part of the whole portfolio's *value*, turnover statistics would not detect such investors' other activity.

With the change-in-ownership indicator, we calculate ratios of yearly changes in an investor's portfolio between 2000 and 2013[191].

The descriptive statistics of our data are presented in Table 24 and Table 25.

Descriptive statistics of equity portfolios owned by sample foundations		Average equity portfolio value 2000-13	Average Number of shares 2000-13	Average Active Share, 2000-13	Median Active Share, 2000-13	Turnover1 2000-13	Turnover2 2000-13	Average of changed positions in portfolio 2000-13
Foundation's mission industry								
	N	Euros		%	%	%	%	%
Culture and Recreation	110	19 770 983	10	60 %	60 %	24 %	24 %	22 %
Education and Research	171	7 636 209	12	53 %	54 %	23 %	23 %	21 %
Health	31	3 703 737	10	57 %	63 %	17 %	17 %	17 %
Social Services	64	4 469 217	6	65 %	69 %	18 %	18 %	17 %
Environment	7	728 137	8	54 %	53 %	55 %	54 %	19 %
Development and Housing	32	4 819 802	9	57 %	58 %	27 %	26 %	25 %
Law, advocacy and politics	15	1 282 083	7	64 %	66 %	27 %	28 %	24 %
Philanthropic Intermediaries	18	5 909 548	11	63 %	65 %	13 %	13 %	21 %
International	4	205 916	7	48 %	50 %	24 %	24 %	29 %
Religion	13	854 647	9	54 %	56 %	28 %	35 %	16 %
Business and Unions	39	2 913 192	8	66 %	68 %	12 %	11 %	15 %
Other	26	2 528 961	5	77 %	78 %	20 %	22 %	15 %
Total	530							
Average (weighted)			9,5	59 %	61 %	22 %	22 %	20 %

Table 24. Descriptive statistics of those sample foundations that had equity investments in any year between 2000 and 2013, categorized by mission industry. N=530, except for turnover figures N=343 where outliers with an average turnover of more than 200 percent or turnover of more than 1000 percent in any given year were excluded. All statistics in the Table have been first calculated for each investor (=foundation) and each year. Then an average and a median over 2000-2013, for each investor, has been calculated. The averages presented here are the averages of investors' averages over years. Turnover is calculated from the value of yearly sales and purchases divided by the value of portfolio at the end of the year, divided by two. Turnover1 adjusts only stock splits and bonus issues, Turnover2 adjusts splits, bonus issues and share issues with pre-emptive rights (see Appendix 3). Active Share is deviation from the market index industry

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191   Note that the first change is from year 2000 to year 2001. Thus we have change indicators for years 2001 to 2013, meaning 13 points of time. We still refer to the sample period as 2000-2013 for the change indicator.

breakdown. A high Active Share means higher deviation from the market portfolio. See also Appendix 3.

Descriptive statistics of equity portfolios owned by sample foundations		Average equity portfolio value 2000-13	Average Number of shares 2000-12	Average Active Share, 2000-13	Median Active Share, 2000-13	Turnover1 2000-13	Turnover2 2000-13	Average of changed positions in portfolio 2000-13
Foundation's source of finance								
	N	Euros		%	%	%	%	%
Endowed	349	12 237 463	12	55 %	56 %	13 %	13 %	20 %
Donative	52	572 609	6	63 %	66 %	12 %	12 %	21 %
Operative	81	490 082	4	69 %	71 %	8 %	8 %	22 %
Public sector	48	361 127	4	66 %	71 %	9 %	9 %	17 %
Total sample	530	8 222 039	9	59 %	61 %	12 %	12 %	20 %

Table 25. Descriptive statistics of those sample foundations that had equity investments in any year between 2000 and 2013, categorized by source of finance. N=530, except for turnover figures N=343 where outliers with an average turnover of more than 200 percent or turnover of more than 1000 percent in any given year were rejected. All statistics in the Table have been first calculated for each investor (=foundation) and each year. Then an average and a median over 2000-2013, for each investor, has been calculated. The averages presented here are the averages of investors' averages over years. Turnover is calculated from the value of yearly sales and purchases divided by the value of portfolio at the end of the year, divided by two. Turnover1 adjusts only stock splits and bonus issues, Turnover2 adjusts splits, bonus issues and share issues with pre-emptive rights (see Appendix 3). Active Share is deviation from the market index industry breakdown. A high Active Share means higher deviation from the market portfolio. See also Appendix 3. Turnover averages deviate from the previous Table 24 because near-outliers in various categories have more impact on category-averages and thus to the average of averages in Table 24.

3.3 Hypotheses

We refer to earlier research about motivations for various investment styles, as well as to research about the investments of non-profit investors, as described in Section 2.3.

Foundations have few incentives for short-term signaling. They do not try to attract customers or investors by showing excellent investment results quarterly, so they do not need to trade or window-dress[192] their portfolios at short intervals. They are not subject to industry[193] regulations about allocation or risks, and as a result of this, they do not need to balance their

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192 Lakonishok et al. (1991).

193 Service industries such as asset management industry or pension fund management industry are subject to strict regulations in most countries. This may limit their ability to allocate freely or to keep lucrative positions. Non-profits face no such limitations.

portfolio every year. They can carry active risk in their equity portfolio. They are also impacted by tax regimes which may discourage active trading[194].

Furthermore, many foundations receive legacy donations, for instance large blocks of stocks that they feel they must hold a certain time[195]. Finally, most foundations do not consider investment activities as their core activity.

Based on the above, we hypothesize that more often than with other investor types, foundations' equity portfolios may be concentrated into only a few holdings.

> *Hypothesis 1*
> *Foundations allocate their equity portfolio actively and do not diversify their equity portfolios on the basis of market index.*

Coming back to the view of trading as a cost, we consider the yearly portfolio turnover of foundations. Foundations are frugal by nature and do not consider investment activity as their core activity[196]. They are cost-conscious and given their limited resources for stock analysis, they tend to "bet" on stocks based on long-term factors. They have little need for trading for window-dressing. Consequently, we assume that foundations are not active traders, and that their individual shareholdings remain in the portfolio for several years on average[197].

> *Hypothesis 2*
> *Foundations are, on average, relatively passive traders, with a yearly equity portfolio turnover significantly below one.*

> *Hypothesis 3*
> *Foundations are, on average, relatively long-term shareholders, with an average holding period of stock longer than one year.*

After these basic findings about investment style, we aim to link the observed investment styles to specific foundation characteristics. Below we form hypotheses for such associations between investment style and foundation characteristics.

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194 In Finland, extremely active trading may be considered a business undertaking by the taxman, in which case the normally tax-exempt investment income would be taxed. However, rules as to how much is too much are unclear. As a general rule, trading by foundations does not constitute taxable business undertaking. See Verotoimisto The Finnish Tax Authority (2002).

195 See, e.g., Wiklund (2015), Ahdekivi (2014) for anecdotal and historical evidence.

196 Foundation interviews confirm this view. List of interviewees available from the author.

197 We form our Hypothesis based on the previous empirical research showing that mutual funds' turnover has been between 59 – 117 percent. We expect foundations' turnover to be significantly below those levels. See Table 20 in Section 2.3.1.

We start from the assumption that the source of financing of a foundation is related to the investment style of the foundation. Foundations finance their operations through four often separate but sometimes concurrent sources[198]: yield from an endowment; donations; income from business operations; or support from the public sector. These various income cash flows represent different risks to foundations (see Merton (1993) who discusses all assets' riskiness and their influence of endowment investment style). Endowed foundations are the most dependent on investment income and they have most to lose if capital is unprofessionally managed: losses of income and reputation, because large endowed foundations are likely to be known in the investment community. Managing financial investments can be seen as a core operation in endowed foundations, whereas it may attract less professional attention in other foundations[199].

This characteristic sets endowed foundations apart from other types of foundations, and it is crucial while discussing the investment style of foundations. Having been on the investment market for decades (the average age of endowed foundations in our data is 47 years and median age is 52 years), endowed foundations would be the best candidates to have a sophisticated equity investment style.

The size of an investment portfolio is known to affect investment style (see, e.g., Keloharju, Kasanen, and Lehtinen (2015). Endowed foundations have (by definition) larger investment assets relative to their balance sheet than other types of foundations have. However, non-endowed[200] foundations may have large investments in absolute terms, too: donations are not spent in the same year they are received, but over a period of several years, and operative and public sector foundations usually have some "savings" investments for a rainy day. We wish to control for the investor's size in our tests, and to separate the effect of foundation size from the effect of how the foundation is financed. For this reason, investments and investment income are observed as relative to the total size of balance sheet and yearly revenues when defining the source of finance of the foundation, whereas simply the overall absolute financial investments are used to control for size (see Appendices 1 and 2 for further details).

We formulate our fourth Hypothesis as follows:

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198 See a more detailed discussion in the Introduction, in Section 4.2 of the previous Essay "What determines a non-profit's governance" and in Appendix 2 of this book.

199 A similar argumentation about the sophistication of larger investors can be found in, e.g., Grinblatt and Keloharju (2000): "Institutional investors generally take larger positions than individuals, have more resources to expend on research, and in many cases, view investment as a full-time career.", and evidenced in Keloharju, Kasanen, and Lehtinen (2015).

200 We use the term "non-endowed" here only in reference to our typology: endowed vs. foundations with some other source of finance. As discussed, other types of foundations can have some endowment income, too.

Hypothesis 4
Endowed foundations diversify more and trade more frequently than
foundations financed by other sources.

We include Age and Size as control variables in our tests in order to separate their effects from the effects of our main regressors. We also hypothesize about their impact on investor activity.

As a foundation grows older, it may have had time to fine-tune its investment operations – a part of foundation administration that is typically not the center of focus in the early years of a foundation[201]. Furthermore, an older foundation has a higher opportunity cost if it squanders its investments: more money is lost, and probably reputation is tarnished. Finally, age is likely to correlate with asset size, as foundations are set up for eternity, and they rather accumulate funds than deplete them[202] as their charitable work expands. We suggest that age may be associated with the investment style of a foundation in such a manner that older foundations are more likely to spread investment risk by not concentrating their equity portfolio heavily away from the market index. We also suggest older foundations are more vigilant in managing their equity portfolio, which is seen in their more active trading.

Hypothesis 5
Old foundations have a less active share allocation in their portfolio, and
their portfolio turnover is higher than in young foundations.

The most common traditional explanation for portfolio under-diversification posits that investors fail to diversify appropriately because they hold small portfolios[203]. Moreover, high transaction costs would prevent small investors from diversifying. A foundation's size may be a factor contributing to its investment style.

The question about foundation size is: what makes a foundation "large"? The likely measures are revenues, balance sheet total, number of personnel

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201 See, Wiklund (2015) for anecdotal evidence about a billion-euro foundation's coming-of-age.

202 This may be a prerogative in legislation: careful management of foundation capital has been interpreted to mean preserving and even accumulating foundation capital as a fiduciary duty of the foundation board, unless expressly otherwise stipulated in the foundation rules. Little attention is paid to the most effective and timely use of capital in this philosophy. Lately, this interpretaion has been questioned by the UK charities and regulator alike (see, e.g., Jenkins (2012)). A seminal contribution to this discussion has been Hansmann (1990).

203 See, e.g., Keloharju, Kasanen, and Lehtinen (2015).

or number of projects. None of them is perfect[204]; we have used revenues as a measure for size in our earlier study (Essay 2 in this book). It brings various kinds of foundations on an equal footing (e.g., foundations which do not have a large balance sheet but a steady flow of donations or business income that is used rapidly, versus foundations living off the yield from a large asset base). However, revenues signal the size of the charitable operation of the foundation. We have discussed how a larger size of investments justifies more spending on managing the portfolio professionally. Thus we use the absolute amount of financial investments as a measure for investor size in this Essay.

We discussed above how older foundations may have a higher opportunity cost in reputation, if they mismanage their equity portfolio. We also suggest that larger foundations are better known to the public, and thus their financial operations are better followed. This motivates them to follow the conservative allocation choice of diversifying along the market index. Large foundations can also carry costs of trading.

Hypothesis 6
Large foundations have a less active share allocation in their portfolio, and their portfolio turnover is higher than in small foundations.

Finally, we propose there is an association between foundation governance and its investment style. In Essay 1 of this book we created a measure of concentration of foundation governance, which we call Foundation Governance Index (FGI). It consists of the sum of provisions in foundation rules that concentrate power to the foundation board, and their presence (leading to concentration of power on one level) is considered likely to increase agency costs in foundation governance[205]. With this measure we are able to measure the openness of foundation governance.

A wide research body suggests that poor possibilities to control an agent lead to agency costs in form of inefficiency and lesser effort (see

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204 In many countries, foundations are not required to use market value bookkeeping. As a result, balance sheet items may not be representative of the financial scope of the foundation, especially for old foundations. In most foundation bookkeeping standards, revenues include only cash income and not, for example, latent capital gains. Number of personnel is not available in many national registers that collect only financials and legal information. Furthermore, the personnel measure inflates the size of operational foundations vis-à-vis grantmaking foundations. The number of projects is difficult to verify and many charities do not classify operations into projects. In Essay 1, we chose revenues as the measure of size because the yearly flows of financial income, donations, business income or public support are all reported in revenues, which brings different types of foundations to a comparable footing regardless of the source of income. Revenues are also reasonably representative of a foundation's scope of operations from year to year. We used a foundation's average revenue from years 2010-2012 to smoothe the volatility in revenue and any exceptional years.

205 About the development of foundation FGI and our terminology about "open" and "concentrated" governance, see Essay 1 "What determines a non-profit's governance?", Section 4.1.

e.g., Holmström (1979)). We propose to test if the presence of oversight in an investor's organization has any relation to investment style. More specifically, we test whether a foundation's governance index is associated with active position taking or trading activity of the foundation's equity portfolio. We hypothesize that a less concentrated governance leads to efficient financial management, which manifests itself – among other things – in risk minimization through more diversification (i.e., following the index) and more timely and active trading.

> *Hypothesis 7*
> *Openly[206] governed foundations tend to follow the index in their allocation and their portfolio turnover is higher than in foundations that are less openly governed.*

It must be noted that in the first Essay of this book, we document a statistically significant association between foundation source of finance, age, size and its governance. Thus our Hypotheses 4, 5, 6 and 7 are somewhat parallel.

We next present the empirical results of tests on our Hypotheses.

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206 See Section 4.1 in the first Essay of this book. We build a non-profit governance index by adding one point for every rule provision that increases the non-profit board's powers. In absence of owners, this means concentration of power to the board level. The concentration of the power is a scale variable where 5 points means concentrated power and 0 points signifies an open governance with several outside controls to the board.

4. Empirical results

4.1 Active Share in allocation of equity portfolio

We start by presenting the overall Active Share level for our sample foundations, by foundation type, in our sample period 2000-2013. In this section we refer to the activity in allocation also as "diversification" even though the terms are not completely synonymous[207]. Strictly speaking, Active Share reflects deviation from the market portfolio. Such a portfolio can be somewhat diversified: it includes numerous shares, but with different weights compared to the market index. However, a high Active Share is best achieved by concentrating into a few stocks, because the high weight of a few shares, combined with the absence of many other index shares, leads to a strong deviation from the market index weights[208]. Concentrating a portfolio on a small number of shares is equivalent to lesser diversification.

Our first Hypothesis was already confirmed by the descriptive statistics in Table 24: Average Active Share for all foundations is 59 percent. We cite Cremers and Petäjistö (2009) on reference levels for Active Share: "Funds with an Active Share less than 20% consist of pure index funds. When we refer to "closet indexers" [...], we generally mean non-index funds with relatively low Active Share, [...] of only 20%-60%. [...] A fund with an Active Share less than 50% is always a hybrid between a purely active and purely

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207 See Section 2.3.2. Following the market index is not a synonym for diversification and deviating from the market index is not necessarily risk-taking. Diversification means reducing non-systematic risk by investing in a variety of assets, which variety does not need to follow the (local or otherwise relevant) market general index. However, it has been argued that if all investors seek to diversify, they can only invest in available securities and with market weights. It has become customary to refer to diversification and to the following the market index in a same sentence.
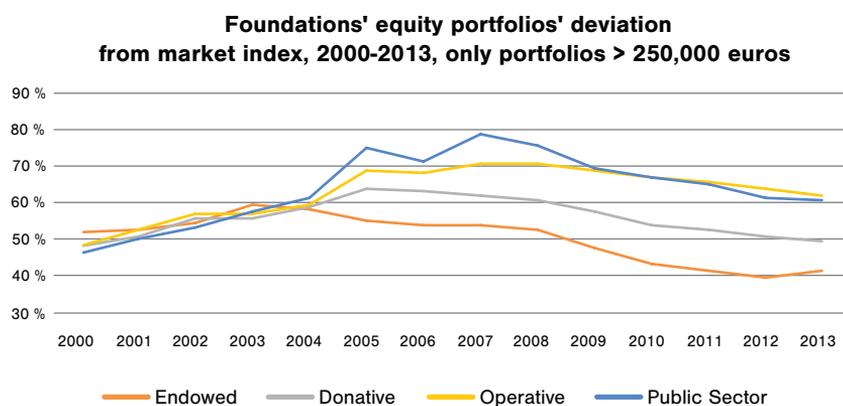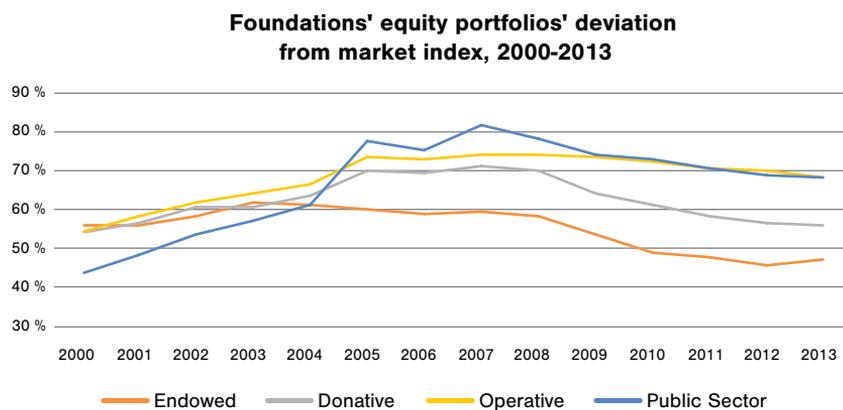
208 This is especially true for our method of calculating Active Share based on market *industry* breakdown: if an investor has a high Active Share, he is deviating from the market industry breakdown instead of only disregarding some shares by weighing some other shares. To us this seems an even higher deviation from diversification.

passive portfolio." It would seem that our sample foundations are not index trackers. In Table 26 we present the yearly evolution of Active Share during our sample period for our sample foundations, categorized on the basis of their source of finance.

Yearly Active Share -measures of foundations' average equity portfolio allocation					
	year	Endowed	Donative	Operative	Public Sector
	2000	56 %	54 %	54 %	44 %
	2001	56 %	57 %	58 %	48 %
	2002	58 %	61 %	62 %	54 %
	2003	62 %	61 %	64 %	57 %
	2004	61 %	64 %	67 %	61 %
	2005	60 %	70 %	73 %	78 %
	2006	59 %	70 %	73 %	75 %
	2007	60 %	71 %	74 %	82 %
	2008	58 %	70 %	74 %	78 %
	2009	54 %	64 %	73 %	74 %
	2010	49 %	62 %	72 %	73 %
	2011	48 %	59 %	71 %	71 %
	2012	46 %	56 %	70 %	69 %
	2013	47 %	56 %	68 %	68 %
	Average	55 %	62 %	68 %	67 %

Table 26. The yearly average Active Share of sample foundations' equity portfolios. Active Share is the portfolio's deviation from the market index weights, see Appendix 3. Active Share is calculated here on the basis of industry deviation: how much the portfolio's industry breakdown deviates from the industry sector breakdown of the stock market. The higher the Active Share ratio, the less the portfolio follows the market in general. Active Share takes values between 0 and 1 and can roughly be interpreted as a percentage of portfolio deviating from market industry breakdown. The source of finance is defined from foundations' financial statements, based on their main source of income, see Appendix 2. Number of portfolios (investors who invest in equities) in a given year varies from 390 to 470, with a total number of investors appearing at some point during the years 2000-13 being 530.

We notice that active allocation policies have evolved differently over time. In the early 2000's all types of foundations had almost similar concentration levels, with Public sector foundations actually taking least active positions. During the turbulent 2000s policies diverged: Public sector and Operative foundations markedly increased their Active Share (i.e., decreased their diversification), whereas Endowed foundations moved towards greater diversification (i.e., lower Active Share). Donative foundations' diversification level has remained between these groups since 2005, and has also increased. We present our findings visually in Chart 3a and 3b.

**Foundations' equity portfolios' deviation
from market index, 2000-2013**

**Foundations' equity portfolios' deviation
from market index, 2000-2013, only portfolios > 250,000 euros**

Chart 3a and 3b. The evolution of sample foundations' equity portfolio concentration, 2000-2013. N=530 in a, and N=371 in b where only portfolios larger than 250,000 euros are included. The deviation from market industry breakdown is measured by Active Share, see Appendix 3. The higher the Active Share ratio, the more concentration (less diversification) in a portfolio. Active Share is calculated on the basis of industry deviation: how much the portfolio's industry breakdown deviates from the industry sector breakdown of the stock market. Active Share takes values between 0 and 1 and can roughly be interpreted as a percentage of portfolio deviating from market industry breakdown. The source of finance is defined from foundations' financial statements, based on their main source of income, see Appendix 2.

Our main finding from Chart 3a and 3b is that Endowed foundations have increased their diversification the most after the techno-bubble in the early 2000s. Their Active Share started decreasing in 2004 and went down to 40 percent by 2010 (when including only equity portfolios over 250,000 euros). This agile adaptation of investment style may be a sign of sophistication: seasoned investors are more likely to learn from stock market downturns and adjust their investment style after negative experiences. Other foundations started to diminish their portfolio concentration only after 2008, with Donative foundations proceeding more rapidly than Operative and Public sector foundations, whose diversification effort still remains

modest (Active Share is above 60 percent).

Filtering out foundations that have less than 250,000 euros in equities (as in Chart 3b) does not change our finding about differing evolution of portfolios. Now foundations' diversification behavior is even more pronouncedly uniform at the beginning of the decade. Policies of wealthy foundations diverge in a similar way after 2004 (3b) as for foundations of all levels of wealth (3a). For larger foundations' sample (3b) the level of diversification increases – i.e., Active Share decreases – for all foundations towards 2013 (the lines on right-hand graph are on a lower level). This suggests that small foundations typically own only a few shares that stay in the portfolio for a long time[209].

We proceed to test the association between foundation source of finance, age, size and diversification. The averages for different types of foundations show a typical allocation policy, but we do not know if the relation is consistent over the whole sample. For that, we test the existence with an ordinary least squares regression where the Active Share is the dependent variable, defined by independent variables (source of finance type, age and size). Table 27 summarizes the regressions[210].

Foundation source of finance and equity diversification (Active Share)	A		B		
	β	Sig.	β	Sig.	St. Dev.
Endowed	0.000		0.000		
Donative	0.075	0.016	0.061	0.047	
Operative	0.133	<0.001	0.117	<0.001	
Public sector	0.104	0.001	0.096	0.002	
Foundation age			-0.076	0.075	23
Foundation size (financial investments)			0.000	<0.001	63 170 816
Constant	0.555	<0.001	0.603	<0.001	
Method	OLS		OLS		
N	529		529		
R²	0.062		0.096		
Adj. R²	0.057		0.087		

Table 27. Active Share of a foundation's equity portfolio as a function of the

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209 Reasons for this may be that the foundation inherits a block of shares but does not engage in equity investments otherwise; a local foundation may invest in local companies (telephone, sports companies), or when large mutual societies are de-mutualized and turned into limited liability companies, a foundation becomes a shareholder even if it does not invest in listed stock.

210 Our dependent variable is a scale variable, our independent variable is categorical and our control variables are scale. We use ordinary least squares regression with a dummy variable for foundation categories.

foundation's source of finance, age and size. Ordinary least squares regression with a foundation type dummy and two scale control variables. Active Share is the portfolio's deviation from the market index weights, see Appendix 3. Active Share is calculated on the basis of industry deviation: how much the portfolio's industry breakdown deviates from the industry sector breakdown of the stock market. The higher the Active Share ratio, the more concentration (less diversification) in a portfolio. Active Share takes values between 0 and 1 and can roughly be interpreted as a percentage of portfolio deviating from market industry breakdown. The source of finance is defined from foundations' financial statements, based on their main source of income, see Appendix 2. Foundation age and size are control variables, with size measured as the average value of the foundation's financial investments on its balance sheet in the years 2010-2012. Note that financial investments include all asset classes, not only equity. Values are corrected to market values. For foundation financial statements, see Appendix 2. In the second regression B, we report standardized Betas as our control variables' scales differ much. Foundation size variable takes large values, so the coefficient is positive but very small.

First we note the positive constant: 0.555 in column A and 0.603 in column B. This is close to the Endowed foundations' average in Table 26 (55 percent). The constant is interpreted as the starting level for all foundations' Active Share, above which other foundation types' Active Share seems to be (β coefficients are above zero for other foundation types in column A). This level of Active Share, approximately 56-60 percent, is considered to be on the side of an active risk-taker and not an index tracker[211]. The constant is statistically significant (ρ below 0.01 level). We are able to confirm our Hypothesis 1.

A foundation's source of finance is statistically significantly associated with the foundation's diversification level (measured by Active Share). Looking at column A, we note that Endowed foundations' Active Share is lower than that of the others (the coefficients for other foundation types are positive, with Endowed being the reference group). Thus Endowed foundations are on average more diversified than other types of foundations. Their financial investment assets are – by definition – relatively larger than other types' financial investments.

In column B[212] we include age and size as control variables to investigate whether the differences between foundation types persists, controlling for age and size. They do: the measure for statistical significance, ρ, remains below 0.05 level for all foundation types, and the effect of foundation type remains similar to column A, with Operative foundations diversifying the least.

Concerning our Hypotheses 5 and 6 about the effect of foundation age and size, we note from the negative coefficients that Active Share decreases as age and size grow; thus older and larger foundations concentrate their

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211 See Cremers and Petäjistö (2009) and the beginning of this section.

212 In column B we report standardized β because our size variable has a wide scope. Now the coefficients show the size of the change in the predicted variable when the predictor changes one standard deviation. Standardized betas are comparable to each other in the regression and illustrate the influence of different variables on the outcome.

holdings less than younger and smaller foundations. In other words, older and larger foundations allocate their equity holdings closer to the index breakdown than younger and smaller foundations.

Thus we can confirm part of our Hypothesis 4: Endowed foundations diversify more than foundations financed with other sources. Endowed foundations have learned from financial crises and have adjusted their investment style more than other foundations during the years 2000-2013. Based on the above coefficients of our control variables, we can also confirm part of our Hypotheses 6 and 7: Larger and older foundations have less Active Share allocation in their portfolios than smaller and younger foundations.

Our results are interesting on many accounts. We noted earlier that Endowed foundations often own "legacy shares" that they may be reluctant to sell. Our finding shows that Endowed foundations diversify more. Given the existence of legacy blocks, Endowed foundations must perform even more assiduous diversification in their remaining portfolio. The stickiness of blockholdings may be related to the age of the foundation: legacy shares are not sold soon after acquisition, but over time there may be more acceptance to the idea[213]. Thus older foundations may have more freedom to let go of legacy blocks and reduce their risk level through diversification. Similarly, if a foundation has superior understanding of the issuer's business (as suggested by Goetzmann and Kumar (2008)), such advantage is likely to disappear in the long run and the share becomes an ordinary stock in the portfolio[214].

At the start of this Essay we ask whether foundations are conservative investors. Regardless of our evidence there may be opposing answers to this. Mainstream financiers consider diversification as conservative (that is, not deviating much from an index), but for a foundation, "conservative" may be tantamount to conserving legacy portfolio intact (and disregarding any notion of diversification). Conservative may also mean reflective, careful and slow-moving to foundations, whereas for financiers carefulness might mean more presence on the day-to-day stock market and trading. Thus, characterization of foundations as investors requires more nuances and understanding of the capital markets than a casual discussion allows. We return to this questions in our concluding remarks in Section 5.

One of the limitations to our findings is that our data does not capture all asset classes, only equity listed domestically. Other elements than listed

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213   Wiklund (2015) presents evidence from a 150 year-old foundation. A donor may stipulate that he/she will receive cash yield from a block of shares during his/her lifetime. This, of course, limits a foundation's capability to sell shares. On the other hand, when such limitations are no longer valid, rapid action may be taken to change positions in blocks (e.g., p. 308 about Nokia share sales). Nowadays few foundations accept eternal legacies from other than the founder of the foundation.

214   For instance, superior knowledge may be vested in people who have worked in the company or its industry. Experts grow old, or their expertise becomes obsolete, and the superior knowledge is no more.

equity in a foundation's portfolio may balance the whole, when it comes to diversification. Another explanation for our results may be that many larger foundations have typically received legacy stakes in companies that they are reluctant to sell. At the same time, larger foundations are on average better governed than smaller ones[215]. Thus it is possible that low diversification and open governance co-exist (see Section 4.4 below).

4.2   Equity portfolio turnover

We proceed to examine empirical findings about our second research interest: are foundations active traders? On a general level, our first Hypothesis is confirmed by the descriptive statistics in Table 25, which shows the average turnover for all sample foundations to be 12 percent. Furthermore, on average only a fifth of positions is changed in any given year (rightmost column presenting our change-in-ownership indicator). Comparing to studies of turnover for other investor types (see Table 20), this seems a relatively low trading frequency.

Proceeding to more detailed analyses on turnover, we present yearly equity portfolio turnover ratios, by foundation type, for our sample period 2000-2013 in Chart 4.

Foundations' yearly equity portfolio turnover, average per type, 2000-2013
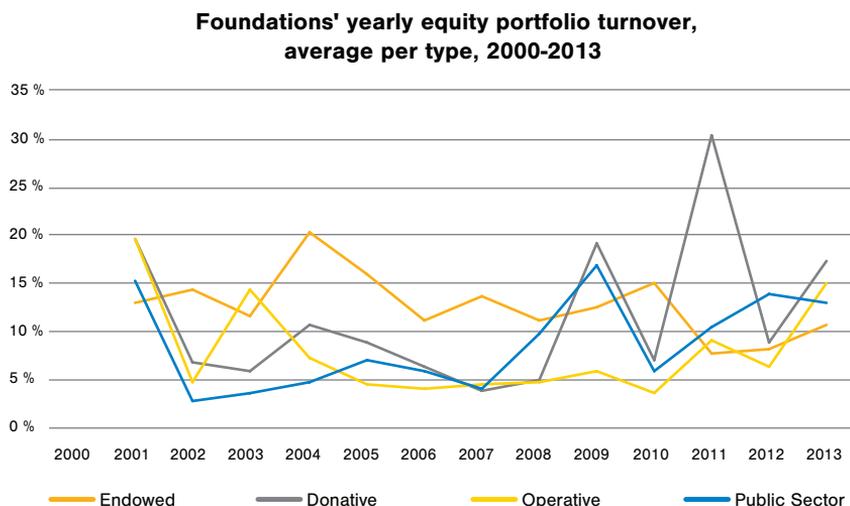
Chart 4. The average turnover of sample foundations' equity portfolio, by foundation type, in 2000-2013. N=343. Outliers whose yearly average turnover is above 200 percent for the sample period, or whose turnover for any year is above 1000 percent are rejected. We correct splits and share issues on the basis of philosophy 1 as described in Appendix 3.

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215   See the first Essay in this book: "What determines a foundation's governance", section 5.1.

Foundations' yearly portfolio turnover has mostly been low in our sample period 2000-2013: at or below 20 percent for most years and foundations, except for one year. The overall average for all sample foundations' average turnovers and over all the sample years is 12 percent[216]. Endowed foundations have changed their trading activity level relatively less than other foundations, and their trading activity is higher on most years of our data. It appears that Endowed and Operative foundations fared though the sub-prime crisis of the years 2008-2009 without blinking an eye, keeping to the same trading levels as in the last several years. Donative foundations have changed their positions more actively than other foundation types in post-subprime crisis years. Their activity seems to rise after stock market crashes (after techno bubble 2001, subprime crisis 2009 and market downturn 2011). This finding would suggest that donors are the most vigilant, opinionated or critical followers of the investment policies of the foundations they finance.

Table 28 presents the average turnover levels for each foundation type in several of the sub-periods of the sample time period.

	N	Average turnover 2000-2013	Average turnover 2000-2005	Average turnover 2006-2010	Average turnover 2011-2013
Endowed	237	13 %	15 %	12 %	10 %
Donative	28	12 %	10 %	9 %	16 %
Operative	46	8 %	10 %	5 %	9 %
Public support	32	9 %	7 %	9 %	11 %
All foundations	343	12 %	13 %	11 %	11 %
One-sample T-test significance (two-sided) ρ <0.001					

Table 28. Foundations' average turnover in the years 2000-2013, for foundations with different sources of finance. N=343. For the test if turnover = 1, a one-sided t-test was conducted. The statistical significance of value different from 1 is <0.001 (the average shown by our data is 0.12). For means test between groups ANOVA ρ=0.087. Outliers whose yearly average turnover is above 200 percent for the sample period, or whose turnover for any year is above 1000 percent are excluded. We correct splits and share issues on the basis of philosophy 1 as described in Appendix 3.

Firstly we note from Table 28 that t-test confirms that foundations' average turnover for the years 2000-2013 is below one: the average across all foundations is 12 percent. T-test significance for this obtained average is high, with ρ<0.001. Our Hypothesis 2 is confirmed: foundations' average yearly turnover is clearly below one.

We can see from Chart 4 that on average, Donative and Endowed

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216 We exclude outliers whose turnover average over the sample period is above 200 percent or whose turnover for any year is above 1000 percent, disregarding thus 186 foundations.

foundations have been more active traders than other foundations. In Table 28 the group means are statistically significant with ANOVA ρ below 0.1 level. Endowed foundations were the most active traders in the early part of the 2000s, and they have not radically changed their trading frequency in our sample period. Operative and public sector foundations have increased their trading activity during our sample period to match that of Endowed and Donative foundations. Donative foundations change their trading activity level the most. However, all foundations are relatively passive traders, when compared to other investor types (see Table 20).

Finally, we test our Hypotheses 2 and 4 with an ordinary least squares regression that separates Endowed foundations against other types of foundations when explaining equity turnover (Table 29)[217].

Foundation source of finance and equity turnover		
	β	Sig.
Endowed		<0.001
Donative	-0.010	0.710
Operative	-0.050	0.022
Public support	-0.041	0.099
Foundation age	-0.001	0.020
Foundation size (financial investments)	0.000	0.692
Constant	0.169	<0.001
Method	OLS	
N	342	
R²	0.035	
Adj. R²	0.021	

Table 29. The results of Ordinary least squares regression of foundations' average yearly equity turnover as a function of a foundation's source of finance. N=262. Outliers whose average yearly turnover is above 200 percent for the sample period, or whose turnover for any year is above 1000 percent are excluded. We correct splits and share issues on the basis of philosophy 1 as described in Appendix 3. Foundation size variable takes large values, so the coefficient is positive but very small.

First we note from Table 29 that the constant, 0.169, is significantly below one. This is the starting level of portfolio turnover in Endowed foundations, to which we compare the turnover level in the other types of foundations. The constant is statistically significant with a ρ below 0.01. We can confirm our Hypothesis 2: foundations' basic turnover level, 16.9 percent, is clearly

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217 When regressing all foundation-type dummies (for each source of finance) on turnover no statistically significant associations emerged for donative, operative or public sector foundations.

below one.

Endowed foundations have a statistically higher turnover that other types of foundations (other foundations' coefficients are negative)[218]. Based on the above, we are able to confirm the latter parts of our Hypothesis 4: Endowed foundations are more active traders than other foundations. Foundation age seems to reduce (minimally, coefficient negative and close to zero) turnover, whereas foundation size is not associated with trading frequency. Thus we confirm Hypothesis 5 concerning foundation age, and reject Hypothesis 6 concerning size.

Our regression result is important because Endowed foundations are often receivers of "legacy stock", large blocks of shares in one company. Blocks are not sold soon: blockholders typically reduce liquidity in that stock as they do not trade (Brockman, Chung, and Yan (2009)). Until recently, foundations kept these blocks intact in portfolio. The size of holding prevents foundations from unloading blocks rapidly, even if they would prefer to reduce the risk of the position. Foundations who own blocks also try to avoid "overhang" (anticipation by the market of price pressure due to large block sales) and choose to reduce their holdings slowly over time[219], which does not cause price pressure. The high weight of such slow-moving or non-moving blocks in portfolio reduces the turnover of Endowed foundations' equity portfolios.

Generally for all foundations, tax treatment may lead to a relatively passive investment style. Finnish tax authorities may assess the tax position of a charity by its trading activity: very active trading may be deemed as professional investment operation, which is not exempt from taxes (unlike non-profits in general). Taxmen also typically pay attention to realized gains, not latent ones[220], when they compare the charitable spending with the accumulated wealth of a foundation. These facts may cause foundations to be careful, even passive in their trading. However, the levels of trading activities found in our Essay are low even for the standards of the taxman, suggesting that taxing is not a boundary constraint. In addition, general cost avoidance in foundations leads to a passive style, because foundations want to save on trading costs. This passivity may be detrimental to portfolio management, if foundations' true investment view is not reflected in their portfolios.

As discussed in Section 3.2, turnover can be a wildly volatile measure for investors who are not bound by investment regulations or by the necessity to stay invested in all asset classes. Foundations may exit and enter the

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218 We also tested endowed foundations as a separate group from all other foundations and the resulting coefficient 0.047 was statistically significant (ρ=0.015). When regressing all foundation-type dummies (for each source of finance) on turnover the statistically significant difference to donative foundations disappears but remains for other types.

219 Anecdotal evidence from interviews with foundations that own or owned blocks of 2 to 20 percent of listed companies.

220 See also French (2008) on taxes and trading costs.

equity market in radical steps, which results in very high relative turnover levels. To understand trading and long-termism in foundations' investment strategies we turn our focus to ownership of single stocks and their change over time.

4.3 Changes in single equity holdings: the change-in-ownership indicator and duration of holdings
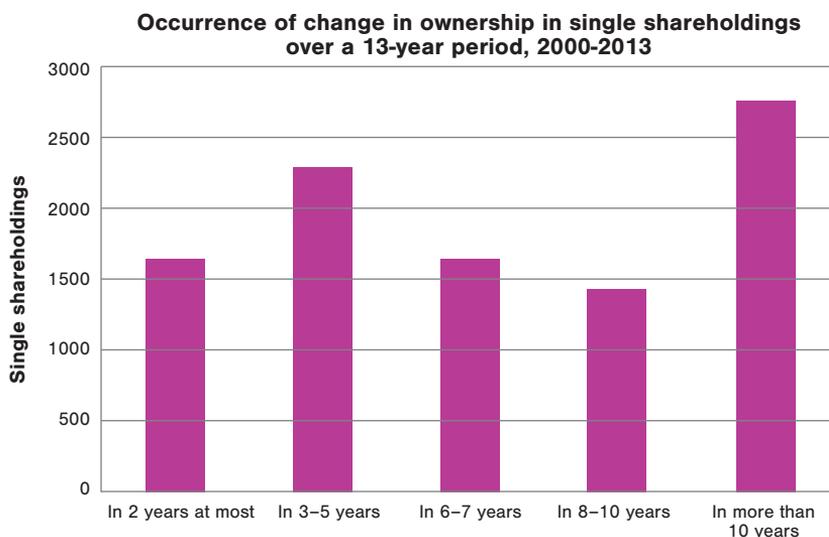
Given our change-in-ownership indicator, we are able to construct various averages and statistics of the change in share ownership. We start by examining the changes that took place in all single shareholding time series, in different single stocks held by different investors. It emerges from Chart 5 below that changes in foundations' single equity holdings are relatively rare. A majority of shareholdings in any given year does not change in sample foundations' portfolios (non-changed holdings amount to over 50 percent of all holdings in all our sample years).

Stability of foundations' holdings over all single holdings 2000-2013
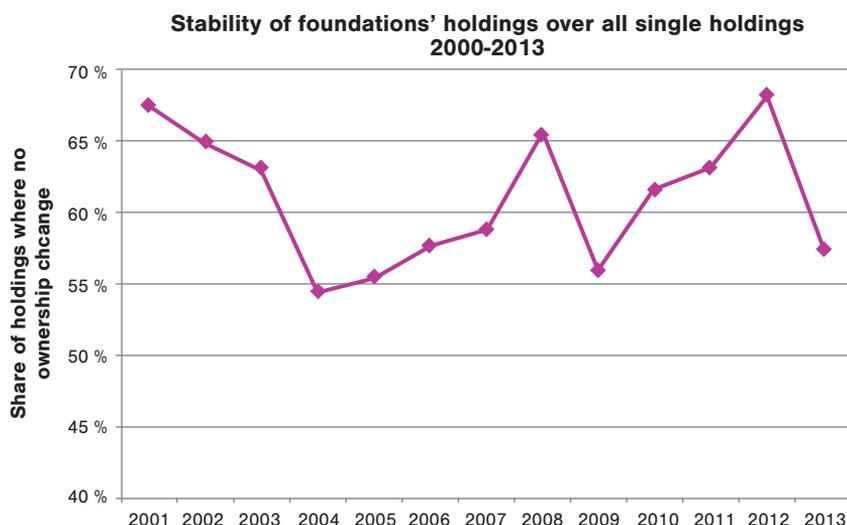
Chart 5. The portion of shareholdings where the ownership change was zero, of total holdings that year. N=9817, which are rows of shareholding time-series in 2000-2013 of different single stocks owned by different investors. We identify change as a more than 10 percent change of previous year's ownership. If such change has occurred, the indicator for that investor and for that stock is 1, otherwise 0. Only years where the investor has either acquired, owned or sold shares count in our change-data (non-ownership of a share is not recorded as a 0). See Section 3.2. We correct splits and share issues on the basis of philosophy 1 as described in Appendix 3.

The average of change-in-ownership indicator for each stock held in period 2000-2013 is shown in Chart 6 below. We recall that the indicator takes value 1 if there has been a change of more than 10 percent in a

single stockholding in a year, and otherwise the indicator is zero. For each stockholding we calculate the average over 2000-2013; average is calculated simply from the zeroes and ones in the time series of holding for each stock. Over the total of all stocks held, the change took place in the following frequency[221].

Occurrence of change in ownership in single shareholdings over a 13-year period, 2000-2013

Chart 6. The occurrence of change in each shareholding in the 13-year period of 2000-2013. N=9817, which are rows of shareholding time-series of different single stocks owned by different investors. Our change-in-ownership indicator takes value 1 if there has been a change of more than 10 percent in a single stockholding (number of shares) in a year, otherwise the indicator is zero. Only years where the investor has either acquired, owned or sold shares count in our change-data (non-ownership of a share is not recorded as a 0). See Section 3.2. For each stockholding, we calculate the average over 2000-2013; average is calculated simply from the zeroes and ones in the time series of holding for each stock. See our example of single shareholdings, per investor and per year, in Table 23. Change is defined as a more than 10 percent change in the number of shares from the previous year. Changes reported in the chart can occur in any year, the average frequency refers to the number of years when change occurred, not the timing. We correct splits and share issues on the basis of philosophy 1 as described in Appendix 3.

The average change falls into 6-7 years (over 13 years), indicating that on average in half of the years in our sample period, any single shareholding stayed intact.

We also aggregate the indicator to investor level. We calculate, for each year, the number of stocks held by the investor. We then sum this investor's

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221 We have divided the change averages into quintiles: at or below 0.2 of years, above 0.2 to 0.4, above 0.4 to 0.6, above 0.6 to 0.8 and above 0.8. But these quintiles do not tell us much as such, so we interpret them. If the indicator average is, say, 0.33, it means that a change occurred in a third of years in our period of 13 years, in one single stock holding. This means on average 4.29 times during the 13 years. Thus this average falls into our category "change occurred in 3-5 years" out of 13 years.

indicator values, and compare the sum to the total number of stock held by the investor. Intuitively, this ratio tells us how many stocks the investor has traded in his portfolio, in one year[222]. Such ratio may be, for instance, 0.33 meaning that the investor has made a change in a third of items in his equity portfolio, and two thirds of his stock holdings have remained on the previous year's level. We have these ratios for all years 2001-2013. We can then calculate investors' averages over our sample period.

Chart 7 below shows these investor averages over years 2000-2013, for all our 530 sample foundations. Foundations are given an identity number in the order of their entry to the Euroclear securities' clearing system. We have ordered our data from smallest to largest identity codes. Thus foundations that have come to the market only in later years of our sample period are the last foundations in our ordering (right hand side of Chart 7). A dot on the level 0.5 tells us that this particular foundation made a change in (on average) half of his shareholdings every year when he owned shares during our sample period 2000-2013. It may be that he did not own shares in all the years, in which case our average counts only years when there was ownership or change. One illustrative example could be an investor who owned 6 stocks and during one year bought more shares in one stock and sold some shares of two stocks; there was change of numbers of three stocks, which represents half the items in his equity portfolio.

Among the latecomers (right hand side) the average propensity to trade is higher: there are less foundations which do not trade at all or very little, and there are more foundations whose average change is more than 0.5. This may be a sign of a learning curve: new foundations learn by trial and error (trading more frequently), whereas older foundations have settled their portfolio to a tested composition (trading less frequently).

Towards the right hand end there are more foundations that have "come and gone" from the market, showing an average change of 100 percent (=1 on our scale) every year. This may be a sign of overconfidence among younger investors as suggested by Barber and Odean (2000).

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222 Our 10 percent threshold applies to the discussion here: a change is defined as a change on or above 10 percent.

Change-in-ownership -indicator
Average for each investor in period 2000-2013
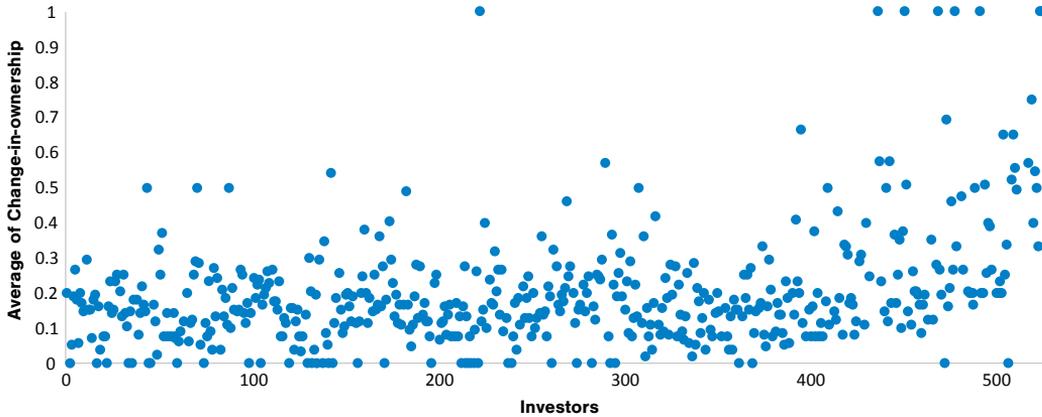
Chart 7. The average of the change-in-ownership –indicator for the years 2000-2013. N=530. The change-in-ownership -indicator takes value 1, if the investor's position has changed more than 10 percent from the previous year. If not, the indicator for that year is zero. Foundations (dots) are in the order of their entry to the Euroclear securities' clearing system: the earlier come, the more left hand side a foundation is. On the right hand side are new-comers. A dot on the level 0.5 signifies that this particular foundation made a change in (on average) half of his shareholdings every year when he owned shares during our sample period 2000-2013. On the left hand side ("oldies", most of whom existed and invested for the whole period of 2000-13), there are many dots on the zero level, indicating those foundations who did not trade at all. Among the latecomers (right hand side) the average propensity to trade is higher: there are less foundations which do not trade at all or very little, and there are more foundations whose average change is more than 0.5.

It is clear that on average the majority of foundations do not change their ownership in most of their stocks in any given year. Most of our sample foundations fall below 0.2 indicator level, and indeed the average of all investor averages is 20.2 percent. This can be interpreted that most foundations trade in only every fifth stock in their portfolio in a given year, or less. Most of their holdings (item-wise, not necessarily value-wise) stay intact in any given year. This finding tells us that foundations are stable owners in companies in whose equity they choose to invest.

The simple, most interesting question to companies and regulators, who are keen on having long-term shareholders, reads "how long do foundations own a stock on average?" or, especially for companies and their management, "how long will this foundation own our stock?" With our

change-in-ownership indicator we can calculate a strict measure for this[223]. Change-in-ownership indicator takes value 1, if the investor's position has changed more than 10 percent from the previous year. If not, the indicator for that year is zero. We collect the positions "0" showing no change over at least two consecutive year-ends and calculate the durations in years of such positions ("unbroken series of zeroes").

Some positions have remained unchanged for 2 years, some for 13 years. The average duration of such long-term holdings in our data is 3.6 years and the median is 3 years, *within our sample period* where the maximum holding period is 13 years[224]. We can say that in the 2000s, if a foundation remains an owner for longer than one year, it will typically own the stock for 3.6 years. Considering that we only include positions which have not *changed*[225], we estimate that the average term of (some level of) ownership is likely to be longer than this.

All in all, from our statistics we can already conclude that foundations are not frequent traders but long-term holders of stock, which is in line with the previous evidence about investors' turnover (Section 2.3.1, Table 20). Our Hypothesis 3 is corroborated.

We finally test the relation between the source of finance of foundations, and their average change-in-ownership indicator. The higher the indicator average, the more the investor changes his positions during our sample period (measured by the number of stock positions he has changed in this portfolio). Table 30 presents the regression results. We divide the sample period into two sub-periods: from the year 2000 to 2008 (column A), and from the year 2009 to 2013 (column B).

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223 The indicator signals "change" when the investor changes a position by more than 10 percent. Thus we avoid LIFO/FIFO bookkeeping discussions and situations that would be open to questions such as: is an investor a long-term owner if he buys minimal numbers over several years, then suddenly acquires a large block, and finally sells the block next year? In the data, the investor would be considered a long-term owner as long as it has owned one share in the company. In our data, a "new" stable ownership period begins once the investor "is fully in". Our method catches only ownership levels which are likely to be meaningful to the investor's portfolio size. Our method also disregards position-building over a longer time (time-diversification). However, if a position is a long-term part of the portfolio, it will appear in our data once the position is "built".

224 Many foundations have owned the same stock from early 1900s, so in any time series data of foundation equity portfolios a significant problem will persist: averages do not catch the longest ownership periods. In our data, there were 324 holdings that remained intact for the whole sample period 2000-2013.

225 Excluding thus positions that have increased by, say, 15 percent each year, or that have been halved but have nevertheless remained substantial. These too are long-term holdings, and thus our findings are biased downwards.

Foundations' source of finance and their average change-in-ownership indicator)	A 2000-2008		B 2009-2013	
	β	Sig.	β	Sig.
Endowed				
Donative	-0.043	0.018	-0.030	0.234
Operative	-0.037	0.014	-0.058	0.007
Public sector	-0.065	0.001	-0.083	0.002
Foundation age	-0.001	0.006	-0.001	0.001
Foundation size (financial investments)	0.000	<0.001	0.000	0.217
Constant	0.186	<0.001	0.261	<0.001
Method	OLS		OLS	
N	442		462	
R^2	0.084		0.057	
Adj. R^2	0.074		0.046	

Table 30. The results of Ordinary Least Squares regression of foundations' average change-in-ownership –indicator portfolio as a function of a foundation's source of finance. Change-in-ownership -indicator takes value 1, if the investor's position has changed more than 10 percent from the previous year. If not, the indicator for that year is zero. We calculate the average over the years indicated in columns A and B: an average of 0 means that no stock holding was changed in the investor's portfolio in that period; an average of 1 means that all positions were changed by more than 10 percent every year. The higher the average, the more active trader the investor is. A 100 percent change in a stock is as relevant as a 10 percent change, and a 10 million euro change in a portfolio is as relevant as a 10,000 euro change. Only years where the investor has either acquired, owned or sold shares count in our change-data (non-ownership of a share is not recorded as a 0). See Section 3.2 and Appendix 3. Foundation size variable takes large values, thus the coefficient is positive but very small. Investors with only 1 or 2 yearly observations in sample periods were discarded, N=442 and 462 in the later period.

The equity markets had, during our sample period, two distinct sub-periods: 2000-2008, which we call the pre-subprime crisis market, and 2009-2013, which we call post subprime crisis market. Regressing foundation types on change indicator produces statistically significant coefficient estimates for those sub-periods. Endowed foundations change their direct shareholdings more than foundations financed by other means (coefficients for other types of foundations are negative) in both periods. Our Hypothesis 4 is further corroborated: Endowed foundations change their stock holdings more frequently than other foundation types (coefficients in Table 30 are negative). However, the coefficient difference of Donative foundations, compared to Endowed foundations, is decreasing in regression B (2009-2013), suggesting that on average, these foundations were catching up in trading frequency with the Endowed foundations, compared to pre-subprime crisis period 2000-2008. (In addition, the coefficient for Donative foundations is no longer statistically significant

for the latter period, and there is no statistically significant difference to Endowed foundations.)

Older foundations change their holdings less than younger ones (negative coefficient in both periods; see also Chart 7). This holds for both periods, and especially in the later period older foundations changed their positions less than young ones. This may be a sign of longer experience on the capital markets: old foundations kept relatively still over and after the financial crisis turbulence. The influence of the foundation size varies: in 2000-2008, the change increased with foundation size (the coefficient is positive but very small, as the variable takes large absolute values). However, in 2009-2013 foundation size is not statistically significantly related to shareholding changes. This may be the consequence of all foundations, small and large alike, awakening to active position changes in the aftermath of financial crisis at the end of 2008. Size does not seem to bring the same advantage in experience as age does. Hypothesis 5 can be confirmed whereas Hypothesis 6 is rejected for the trading part.

The change-in-ownership indicator is suited for the purpose of looking into passiveness and long-term involvement of foundations as investors: it will detect any small change (at or above 10 percent). The change indicator omits the relative value weights of changes in ownership and detects "closet activeness" where a foundation is a long-term block-owner in one company, but an active trader in other stocks, which remains invisible when examined with the more commonly known portfolio turnover measure. In the western world, most foundations are portfolio investors who hold several, if not numerous equity positions. Looking from the listed companies' perspective, it is not interesting whether their shareholder happens to be an evergreen owner in some other company; they are interested if the shareholder can be expected to be a long-term owner in their company. For that, the change indicator gives change statistics that are not weighted by values but calculated uniformly for all sizes of investments, giving companies information about their foundation owners.

Finally, we refer to our discussion in Section 2.2 about long-termism. We noted the concern that the third sector's likely motive for eternal preservation of endowed assets may decisively differ from the normal first sector value-creating motive. If investment decisions are not driven by economic interests, the long-term investment horizon alone does not make an investor beneficial to the capital markets. There is also a fundamental difference between a "laissez-faire" passivity towards trading, and a conscious and analysed decision not to trade. As long as we do not know the true thinking behind long ownership periods, general inferences about benefits of long-termism remain uncertain.

4.4 Quality of governance and investment style in foundations

We now turn to our Hypothesis 7 and test if foundation governance is associated with foundation investment style. We first test the association between a foundation's governance and the allocation of its portfolio. Table 31 shows the regression results.

Foundation governance index and equity portfolio allocation (Active Share)	A		B		C	
	Exp β	Sig.	Exp β	Sig.	Exp β	Sig.
FGI	-0.007	0.098	-0.009	0.097	-0.011	0.090
Foundation age	0.000	0.485	-0.001	0.124	-0.001	0.246
Foundation size (financial investments)	-0.034	<0.001	-0.026	<0.001	-0.018	0.005
Constant	1.092	<0.001	0.987	<0.001	0.848	<0.001
Method	OLS		OLS		OLS	
N	517		370		263	
R^2	0.213		0.076		0.049	
Adj. R^2	0.209		0.068		0.038	

Table 31. The results of an Ordinary Least Squares regression of diversification of a foundation's equity portfolio as a function of foundation governance quality. In column B, only foundations with an equity portfolio larger than 250,000 euros are included, and in column C, only Endowed foundations with an equity portfolio larger than 250,000 euros are included. Active Share is the portfolio's deviation from the market index weights, see Appendix 3. Active Share is calculated here on the basis of industry deviation: how much the portfolio's industry breakdown deviates from the industry sector breakdown of the stock market. The higher the Active Share ratio, the more concentrated (less diversified) the portfolio. Active Share takes values between 0 and 1 and can roughly be interpreted as a percentage of portfolio deviating from market industry breakdown. The governance quality is measured with a sum of provisions in foundation rules that concentrate power to the board; the higher the index, the less openly governed the foundation is, see Section 4.1.1 in the first essay of this book. Foundation age and size are control variables, with size measured through 10 truncated size categories, see Appendix 3. Note that financial investments include all asset classes, not only equity. Values are corrected to market values.

The results are ambiguous: in column A, governance index is weakly significant ($\rho<0.10$) in determining level of Active Share, and its coefficient is close to zero. Foundation age has no statistical significance whereas foundation size is highly significant. All coefficients are close to zero. However, coefficient of determination R^2 is 0.21 and total model significance $\rho < 0.01$. The coefficient signs suggest that a) less openly governed foundations (high FGI) would have higher diversification (low Active Share) than less openly governed ones, and b) larger foundations would have higher diversification (low Active Share).

When we test the model with foundations whose equity portfolio is larger than 250,000 euros in column B, we obtain slightly better statistical significance but R^2 deteriorates to 0.07. The coefficients of the explanatory variables remain similar to column A. The Age variable has a negative coefficient, suggesting that older foundations have a lower Active Share, e.g., higher diversification. Finally, in column C we test the effect of governance within the group of Endowed foundations; our results do not change much, and the explanatory power decreases.

With some caution we suggest that open governance does not seem to be related to the allocation of a foundation's equity portfolio, contrary to our Hypothesis 7.

We also hypothesized about the association between governance and trading activity. We tested this by regressing (separately) our measures of trading activity on foundation governance index, and further on age and size.

With both outcome variables, we divided the period in sub-periods (2000-2003, 2000-2007, 2004-2007, 2009-2013, and 2010-2013) and regressed the sub-period outcome variable on our explanatory variables. We also regressed each single year's turnover or change indicator on explanatory variables. We did not detect any statistically significant relation between the active trading of various owned stocks (measured by turnover or the change indicator) and the quality of governance (measured by foundation governance index).

We thus reject the latter part of our Hypothesis 7, and conclude that foundation governance is not statistically related (as far as we detected with our rudimentary tests) with portfolio turnover or propensity to alter single stock holdings. We conclude noting that foundation governance does not seem to be strongly related to portfolio allocation, either, and reject Hypothesis 7 based on our admittedly limited model.

4.5 Observations on favorite stocks

Our data allows us to observe which stocks have been the largest components of the foundations' equity portfolios. We calculate the yearly aggregate holdings of all stocks, in euros, and rank the stocks by the euro value owned[226] in aggregate. A clear preference for "blue chip" stocks emerges from the data.

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226 Another way to measure "favorites" would be to see how many foundations owned each stock. This would correct the value bias caused by many legacy holdings in foundations who have held significant holdings in single stocks during our sample period 2000-2013 (e.g., Kone, Huhtamäki, Stockmann). This has been examined by Ahdekivi (2014) and the same stocks emerge as favorites, measured by number of foundations holding the stock. At the end of 2013 the most popular stocks were held by some 250 foundations and each top ten company had 200 foundation owners or more (N=472 in 2013).

The most held stocks in foundation's portfolios, yearly preference ranks, 2000-2013
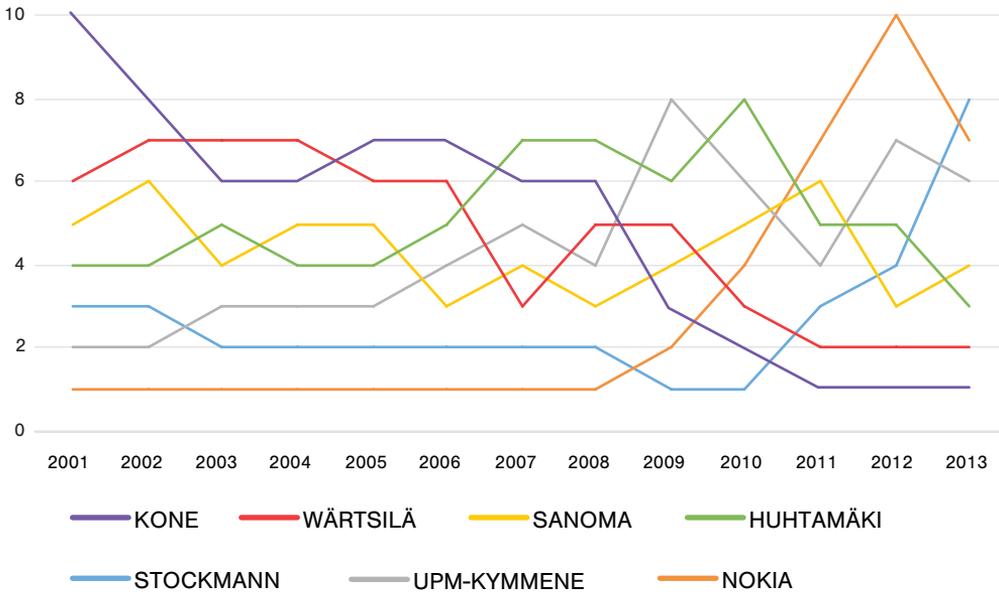
Chart 8. The ranks of seven most favored stocks in foundations' equity portfolios in 2000-2013. Rank 1 is the most favored stock in a given year. Foundations N=530, stocks N=146. Ranking was done by listing the aggregate euro-values of each stock held each year by the total foundation sample base. Stocks were then sorted in value order, with the largest stock holding ranked with 1, second as 2 and so forth. The ranks 8-10 have risen into top ten only in the later years of the sample period, and are thus not included in the graph. We then calculated the average of these ranks over the years 2000-2013, and ranked the final top ten on the basis of that average.

Stock	Industry
Stockmann	Retailing
Nokia	Telecommunications
UPM-Kymmene	Forest industry
Sanoma	Media
Wärtsilä	Engineering
Huhtamäki	Packaging
Kone	Engineering
Nordea	Finance
Metso	Engineering
Fortum	Energy

The top seven of the ten most popular stocks have been in the top ten during the whole of our sample period, 2000-2013. All seven are large

cap companies and have been listed for decades[227]. The share of top ten favorites in foundations' portfolios is large, but has decreased from 91 percent in 2000 to 69 percent at the end of 2013. We found that foundations have mainly held to their stockholdings, both in case of downturns (Nokia in 2000-05, Stockmann 2006-13) as upturns (Kone). Nokia's business downturn is strongly reflected in its loss of favorite position in foundations' portfolios from 2008 onwards, and the same applies to Stockmann share in the recent years 2011-13.

We were also interested to know whether foundations have altered their preferences when stock prices of the favorite stocks have changed. The values of ownership have varied, but does this variation come from the share price or from changes in ownership? We examined the holdings of favorites by foundations and compared it to the stock price development. All charts are included in Chart 9, but we illustrate our point by one general graph of selected cases.

Favorite stocks' ownership by foundations and share price development, 2000-2013
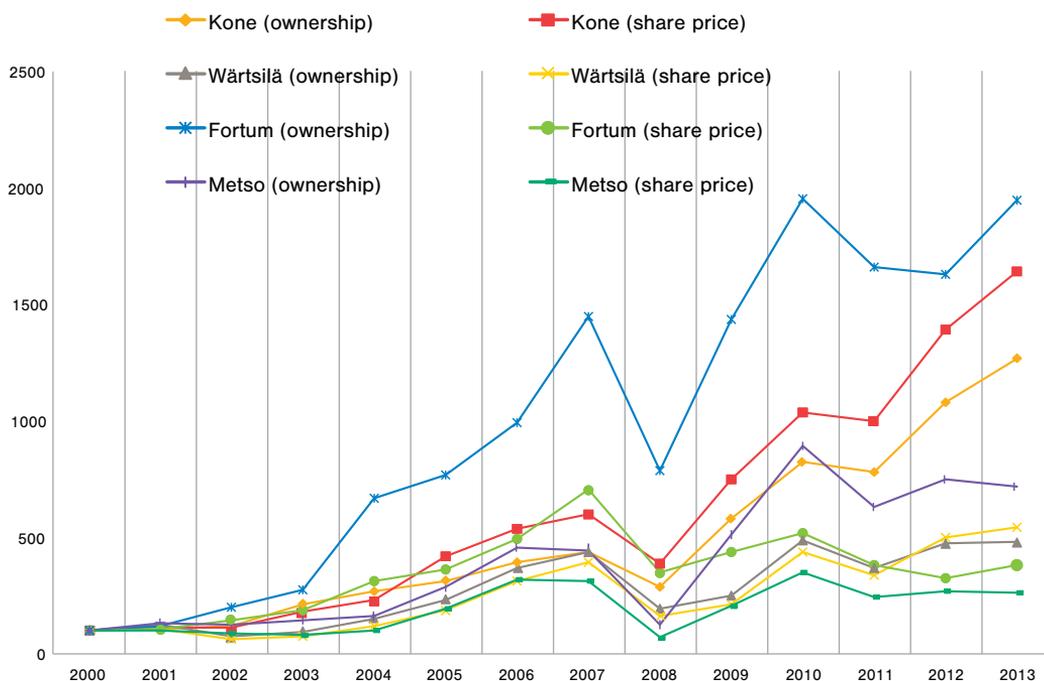
Chart 9. Example of divergence between the aggregate value of stocks held by sample foundations, and the stock price of the share. Ownership indicates the total value of shares held by foundations. Share price is the price quoted on the Nasdaq Helsinki Stock Exchange. All values are indexed to 100 at the beginning of the sample period, 31 December 2000.

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227 With the exception of Fortum which was listed in 1998.

From Chart 9 we can see that increase in Fortum ownership exceeded its share price development. Fortum was a favorite stock even though its share price did not quite live up to the highest expectations. In contrast, the ownership of Kone shares did not increase as fast as Kone share price; foundation investors did not fully detect the winner in the 2000s. Wärtsilä ownership and value moved quite much in unison. Metso ownership increased more than Metso share price.

Similarly (but not depicted in the chart), we found that Stockmann and Nordea holding increases faster than the share price, indicating that foundations actively increased owned number of shares. Stora Enso and Orion were popular stocks whose ownership did not quite follow their share price.

We note the anecdotal evidence of a persistent habit of foundations to invest in dividend-paying stock in Finland. Hansmann (1990, page 11) reports preference in university endowments for cash yields and spending rules limiting the charitable use of funds to such cash yields. He notes: "Such a rule tends to accumulate the real value of endowment over time even without the addition of further funds." Such spending rules were prevalent in the US in the 1960s. Since then, a more liberal spending strategy has been adopted in many universities[228], and the public debate has shifted towards the need for university endowments to limit their endowment accumulation, often leading to the setting up of a spending rule related to some measure of the total endowment yield (and not only cash yield). The discussion about the rationale for the endowment accumulation continues (see, e.g., Olkowski (2015), Weisbrod and Asch (2010)).

In Finland, our sample period shows preference for dividend-paying stocks (as opposed to growth stocks). This may be an outcome of the perceived (but perhaps not actual) threat of unfavourable tax treatment. The Finnish tax regime is discussed in Section 4.2: extremely active trading may be seen as professional investment income, but as a general rule, the investment activities of foundations do not constitute a business activity[229]. Another reason may be the simplicity of dividend income: it is easy to limit a foundation's spending to the yearly dividends; total returns are more difficult to follow[230]. In our admittedly short sample period (13 years) though, investing in dividend stocks did not accumulate foundation wealth. Three of the favorite dividend stocks in foundations' portfolios in the beginning of the period lost in market value and cut down their dividend payments (Nokia, Stockmann and Sanoma) during the sample period.

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228 A certain level of spending is also required by the US taxman if foundations wish to hold the tax exempt status.

229 See Verotoimisto The Finnish Tax Authority (2002).

230 There are no requirements as to the level of yearly charitable spending by tax exempt foundations in Finland. Therefore a foundation is not obligated to follow its yearly total return or accumulation of net asset value, and simple rules such as "we distribute only the dividends received" are possible. Dividends are not treated differently as such: foundations do not pay taxes on either capital gains or dividend income.

There are two-level lessons to learn from both the American debate and the domestic experience: firstly, that it is not an absolute virtue to accumulate funds (for instance, through limiting charitable use to cash yields or less), and secondly, that many foundations should consider separately objectives for investment *returns* on one hand, and for dividend and other investment *cash flows* on the other hand[231].

4.6   Summary of hypotheses and results

We summarize our empirical findings in Table 32 below.

Summary of hypotheses and empirical results		
Hypothesis		Result
1	Foundations allocate their equity portfolio actively and do not diversify their equity portfolios on the basis of market index.	Confirmed
2	Foundations are, on average, relatively passive traders, with a yearly equity portfolio turnover significantly below one.	Confirmed
3	Foundations are, on average, relatively long-term shareholders, with an average holding period of more than one year.	Confirmed
4	Endowed foundations diversify more and trade more frequently than foundations financed by other sources.	Confirmed
5	Old foundations have a less active share allocation in their portfolio, and their portfolio turnover is higher than in young foundations.	Confirmed
6	Large foundations have a less active share allocation in their portfolio, and their portfolio turnover is higher than in small foundations.	Confirmed concerning allocation. Not confirmed concerning trading.
7	Openly governed foundations diversify more and their portfolio turnover is higher than in foundations that are less openly governed.	Not confirmed

T**able 32.** Summary of hypotheses about the determinants of foundation equity ownership patterns and trading, and empirical results.

We confirm <u>Hypothesis 1</u> with our finding that the average Active Share for all foundations is 59 percent, indicating a relatively high active allocation according to Cremers and Petäjistö (2009) (see Table 26).

<u>Hypothesis 2</u> is confirmed by our finding that foundations' yearly portfolio turnover has mostly been low during our sample period 2000-2013: at or below 20 percent for most years and most foundations, except for one year (see Chart 4). The overall average for all sample foundations' average turnovers and over all sample years is 12 percent, which is low

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231 According to information theoretic approach, dividend payment may signal good outlook for a company. However, if foundations were relying on information aspects, at some point analysts' reports and decline in market value should have some signaling effect on their decisions, too. Ownership of shares is, however, quite sticky.

comparing to previous findings on other investor types' turnover (see Table 20).

Hypothesis 3 is confirmed with our data showing changes in stock ownership, per single shares and per foundation. The average term of holding a position unchanged is 3.6 years and the median is 3 years, *within our sample period* where the maximum holding period is 13 years[232]. We can say that if a foundation remains an owner for longer than one year, it will typically own the stock for 3.6 years (see Section 4.3). Considering that we only include positions which have not *changed*[233], we estimate that the average term of ownership may actually be longer than this.

A foundation's source of finance is statistically significantly associated with the foundation's active diversification level (measured by Active Share). This confirms our Hypothesis 4 (see Table 27). Endowed foundations' Active Share is lower than that of the other types of foundation. Thus Endowed foundations are on average more diversified, or allocated along the market index allocation, than other types of foundation. We also investigate if the allocation differences between foundation types persist when controlling for age and size. They do: the measure of statistical significance, ρ, remains below the 0.05 level for all foundation types, implying that the foundation type has a bearing on the activity of diversification. Further confirming our Hypothesis 4, we find that Endowed foundations have a statistically significant, higher turnover that other types of foundations (see Table 29). Moreover, Endowed foundations change their direct shareholdings more frequently than foundations financed by other means (see Table 30).

Concerning Hypothesis 5 about the impact of the age of the foundation, we note that the Active Share of foundations' portfolios decreases as a foundation grows older; older foundations concentrate their holdings less than young foundations. In other words, older foundations allocate their equity holdings closer to the index breakdown than young foundations. Foundation age seems to reduce turnover. Thus we confirm Hypothesis 5 concerning foundation age.

Concerning Hypothesis 6 about foundation size, we note that Active Share decreases as size grows; large foundations allocate their equity holdings closer to the index breakdown than small foundations. Foundation size is not associated with trading frequency (see Table 28). Thus we confirm Hypothesis 6 only for allocation and not for trading: foundation size is associated with portfolio allocation but not with trading activity.

Hypothesis 7 is rejected. The results are ambiguous as either statistical significances or explanatory powers are not strong (see Table 31). Our

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232 Many foundations have owned same stock from early 1900s, so in any foundation equity portfolio time series data set this problem will persist: averages do not catch the longest ownership periods. In our data, there were 324 holdings that remained intact for the whole sample period 2000-2013.

233 Excluding thus positions that have increased by, say, 15 percent each year, or that have been halved but have nevertheless remained substantial. These too are long-term holdings, and thus our data is biased downwards.

model for all sample foundations tested if firstly, (1) less openly governed foundations (high FGI[234]) would have higher diversification (low Active Share) than less openly governed ones, and secondly, (2) within this FGI model, larger foundations would have higher diversification (low Active Share) and older foundations have higher diversification (a lower Active Share). When we test the model with foundations whose equity portfolio is larger than 250,000 euros, or with only Endowed foundations, the model's explanatory power decreases. Concerning governance quality and trading activity, we did not detect any statistically significant relation between active trading of various owned stocks (measured by turnover or by the change-in-ownership indicator) and quality of governance (measured by FGI). We thus reject the latter part of our Hypothesis 7 and conclude that foundation governance is not statistically related (as far as we detected with our rudimentary tests) with foundation turnover or propensity to alter single stock holdings. We conclude noting that foundation governance does not seem to be strongly related to diversification, either, and are inclined to reject Hypothesis 7 based on our admittedly limited model.

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234 FGI is foundation governance index, developed in the first Essay of this book, Section 4.1.1.

5. Conclusion and discussion

In this Essay we argue for the need to better understand the investment behavior of various investor types. In a world of winding ownership chains through asset management, increasing short-term signaling, and increasing sensitivity to market malfunction, the regulators need to understand the behavior of market participants. However, empirical evidence on the investment behaviour of many relevant investor groups is scarce. In this Essay we study one distinct investor group, the foundation investors, and present empirical evidence on their equity ownership style.

We report findings that overall, foundations are active risk-takers in the sense that they can carry equity risk by not diversifying towards the market index industry breakdown. Foundations turn out to be infrequent traders, with relatively low equity portfolio turnover. If they decide to own a stock for longer than one year[235], they remain owners for 3.6 years on average (in our 13-year sample period). In addition, the majority of their single shareholdings stay intact from year to year. Foundations do not adjust their positions frequently.

Even though discussion on short-termism is gaining more nuanced tones (see The Economist (2015)) and short-term signaling may not be as rampant as suggested, the calls for owners, who own stock for longer than one year and who take interest in the company's outlook and strategy, are valid. Foundations show two investor characteristics which match this predicament. Firstly, our findings confirm the common belief that foundations are investors who do not need to change their positions frequently. They can remain invested in an unchanged equity portfolio through market turbulence, making them a valuable market participant in times of market failure. Foundations seem to fit the long-termist investor type, as their ownership period of single equity stocks is relatively long. Secondly, our findings about the active allocation of the equity portfolio to relatively few holdings suggest that at least some foundations can

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235 Our data includes only yearly observations which complicates estimating overall ownership period; see Footnotes 223-225.

concentrate holdings to core holdings that they follow for years. Compared to pension funds, foundations are active risk takers, whereas pension funds seem to stay close to reference indexes. Although our study did not examine shareholder activism, we claim it is likely that some foundations do participate in corporate decisions in their core portfolio companies, if their holdings are heavily concentrated into such blockholdings or if a block is large in value[236].

The source of finance of a foundation is associated with the foundation's active risk taking and diversification policy, as well as with trading activity. Endowed foundations emerge as the most sophisticated investors, with higher diversification levels and more trading frequency. Endowed foundations also learned from the stock market downturn in the early 2000s and adjusted their diversification thereafter more rapidly than other foundations.

Foundation age and size are related to foundation equity portfolio allocation: older and larger foundations take less active allocation risk, i.e., diversify more. However, only foundation age is statistically significantly associated with trading activity and foundation size is not. Older foundations trade less frequently than younger ones.

Our results confirm the belief that the investment behavior of non-profit investors differs from other investors' behaviour and forms its own identifiable investor type. This makes non-profits a valuable complement to the capital markets. They bring long-term investment capability and risk appetite to markets which increasingly seek to avoid short-term malfunctions due to all investors behaving in the same direction. As non-profit investors are not subject to quarterly reporting obligations, and do not need to signal about their financial success, they are relatively little constrained or motivated by short-term interests. This increases the balancing role of non-profits on the capital markets. At the same time, some attention should be paid to the concern that the third sector's motivation of eternal preservation of endowed assets may decisively differ from the normal first sector value-creating motivation.

With our evidence, one owner group is now somewhat better known, and our findings offer a reference point to other owner types[237]. Similarly, we contribute to the general non-profit research, where the main research focus has been on charitable work or on the behavior of foundation-owners of businesses, while the understanding of non-profits as economic agents, not to mention portfolio investors, has remained almost non-existent. Finally, to our knowledge no researcher has investigated holding periods of

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236 We interviewed 16 largest foundations and learned that many of them participate in, e.g., choice of board members or strategy discussions in companies in which the foundation owns a significant block.

237 One constant endeavour in our research has been to find evidence about other investors' trading or allocation activity, in order to be able to answer the question "trades/diversifies much – *compared to whom*?".

single shareholdings over time, even though studies on portfolio turnover are numerous. These two measures offer slightly different views to the trading activity versus ownership span of institutional investors.

There are evident limitations to our conclusions. We have yearly data on domestic listed shares held, and no trading or cash flow data of these equity investments. Our assumption that a share held at the end of several years has not been traded during these years may be too simplifying. Similar simplifying assumptions were necessary when adjusting portfolios for share issues and splits. While we remain confident that our data is sufficient to give an understanding of foundations' behavior, we would welcome a more thorough treatment of non-profits as an investor group in subsequent research where more detailed trading data is available.

Our data does not permit us to observe the yields of portfolios. We have only yearly observations on shares held. We do not have data about the amount of dividends, the value of pre-emptive rights, or the price at which shares have been bought or sold during a year. Thus we do not have even a rudimentary knowledge about the yields attained by foundations as equity investors.

Furthermore, our analysis does not tell much about the success of foundations' investment activities as a whole. Firstly, our data is limited to direct shareholdings, excluding thus other equity instruments such as equity funds, private equity investments and direct shareholdings in non-listed companies. Secondly, other asset classes such as fixed income, real estate or cash are not in the data. We cannot analyze the success of allocation between asset classes. However, the portion invested by sample foundations into equity is estimated to be some 62 percent of aggregate investment asset value, majority of it domestically and into listed shares. Thus our sample of direct listed domestic equity holdings may be to some extent representative of the investment style of foundations.

There are several policy implications in our research. Firstly, foundation investors enjoy unique investment time horizons and risk preferences that complement those of other investor types on the capital markets. This is beneficial for the resilience of the capital markets, especially in times of short-term shocks. Thus the regulators should understand and encourage foundations' investment activities.

Secondly and following from above, governments should consider tax rules or – more generally - the granting of charitable status to a foundation independently from the foundation's investment activity. Regulatory status interpretations or tax rules should not limit trading or risk diversification efforts in foundations. The taxman should consider the sophisticated investment management as a natural core operation of foundations. Even if foundations are not financial institutions, managing financial assets such as donations, endowment or operative income is an unavoidable, growing part of their operations and should be considered such. Tax treatment should not depend on spurious interpretations about the nature of a foundation's investment activity.

Practical implications of this study are the following. Foundations and general public alike should acknowledge investment operations as a routine operation in charities. In foundations, more discussion and managerial time could be allocated to the philosophy guiding investments and endowment use, and to the efficient investment management. Further diversification of portfolios, both to a wider asset, industry and geographic base, could be actively considered. The general public should pay attention to the management of foundation assets as part of the overall efficiency of a foundation. Perception of overall efficiency affects donors' decisions to donate to charities, and more generally, the public opinion about foundations affects governments' benevolence towards the third sector.

Future research ideas are numerous. Foundations' holdings in all asset classes is of great interest, if detailed information about full balance sheet composition can be collected. A longer time series of holdings would be beneficial, especially because foundations do not alter their rules, management, modus operandi or mission very frequently. Over a longer period of time we could observe how foundations adjust their investment policies and which events are likely to drive such change.

On a more general note, more accurate evidence about homogeneously motivated investor groups could be reached by inspecting clearly defined and carefully sampled investor types in more detail than official statistics can offer. In practice, this would most likely mean concentrating on one investor type sample at a time.

Finally, event studies around significant publications (mergers, issuance) in companies where foundations hold blocks would be informative, as well as event studies around foundation legislation changes.

We view this Essay as an important step in a broader effort to understand non-profits as economic agents. As defined in the Introduction of this book, foundations are "chests of funds" that are set aside for carrying out a charitable mission. It follows that their behavior in managing such funds must be a core function of the foundation. Our new empirical evidence about such behaviour, as well as our newly developed approaches to evaluate the nature of foundations financed through different means and our measure of the persistence of ownership of single shares in a portfolio, will allow researchers to investigate foundations, as well as other investor types, from a practical and meaningful perspective.

References

Ahdekivi, E. (2014). *Säätiöt omistajina - Foundations as Investors*. Finnish Foundation for Share Promotion, Helsinki.

Akerlof, G. A., & Kranton, R. E. (2005). Identity and the Economics of Organizations. *The Journal of Economic Perspectives*, *19*(1), 9–32.

Allen, F., & Gale, D. (1999). Diversity of Opinion and Financing of New Technologies. *Journal of Financial Intermediation, 8*(1-2), 68–89. doi:10.1006/jfin.1999.0261

Almazan, A., Hartzell, J. C., & Starks, L. T. (2005). Conflicts of Interest and Monitoring Costs of Institutional Investors: Evidence from Executive Compensation. *Financial Management, 34*(4), 5–34.

Anheier, H. K. (2001). Foundations in Europe: A comparative perspective. In A. Schulter, V. Then, & P. Walkenhorst (Eds.), *Foundations in Europe: Society, Management and Law* (1st ed., pp. 1–31). London.

Asker, J., Farre-Mensa, J., & Ljungqvist, A. (2015). Corporate Investment and Stock Market Listing: A Puzzle? *Review of Financial Studies, 28*(2), 342–390.

Aumann, R. J. (1976). Agreeing to disagree. *The Annals of Statistics, 4*(6), 1236–1239.

Barber, B. M., & Odean, T. (2000). Trading is Hazardous to Your Wealth: The Common Stock Investment Performance of Individual Investors. *The Journal of Finance, 55*(2), 773–806. doi:10.2139/ssrn.219228

Barber, B. M., & Odean, T. (2001). Boys will be boys: gender, overconfidence, and common stock investment. *Quarterly Journal of Economics*, (February), 261–292.

Barberis, N., & Shleifer, A. (2003). Style investing. *Journal of Financial Economics, 68*(2), 161–199. doi:10.1016/S0304-405X(03)00064-3

Becht, M., Franks, J., Mayer, C., & Rossi, S. (2009). Returns to shareholder activism: Evidence from a clinical study of the Hermes UK Focus Fund. *The Review of Financial Studies, 22*(8), 3093–3129. doi:10.1093/rfs/hhn054.ra

Black, B. S. (1998). Shareholder activism and corporate governance in the United States. *The New Palgrave Dictionary of Economics and the Law, 3*(November 1997), 459–465.

Brickley, J. A., Lease, R. C., & Smith, C. W. (1988). Ownership structure and voting on antitakeover amendments. *Journal of Financial Economics, 20*, 267–291. doi:10.1016/0304-405X(88)90047-5

Brockman, P., Chung, D. Y., & Yan, X. (Sterling). (2009). Block Ownership, Trading Activity, and Market Liquidity. *Journal of Financial and Quantitative Analysis, 44*(6), 1403–1426. doi:10.1017/S0022109009990378

Brunzell, T., Liljeblom, E., & Vaihekoski, M. (2011). Short-Term Expectations in Listed Firms: the Mitigating Impact of Private Equity Owners. Working Paper. Stockholm/Helsinki.

Bushee, B. J. (1998). The Influence of on Institutional R & D Behavior Investors Myopic Investment. *The Accounting Review, 73*(3), 305–333.

Bushee, B. J. (2004). Identifying and Attracting the "Right" Investors: Evidence on the Behavior of Institutional Investors. *Journal of Applied Corporate Finance, 16*(4), 27–36. doi:10.1111/j.1745-6622.2004.tb00671.x

Bøhren, Ø., Priestley, R., & Ödegaard, B. A. (2009). *Investor Short-Termism and Firm Value*. Working Paper. Oslo.

Carhart, M. M. (1997). On persistence in mutual fund performance. *Journal of Finance, 52/1*(March), 57–82.

Carroll, D. A., & Stater, K. J. (2008). Revenue Diversification in Nonprofit Organizations: Does it Lead to Financial Stability? *Journal of Public Administration Research and Theory, 19*(4), 947–966. doi:10.1093/jopart/mun025

Cheng, J., Elyasiani, E., & Jia, J. J. (2011). Institutional ownership stability and risk taking: Evidence from the life-health insurance industry. *Journal of Risk and Insurance, 78*(3), 609–641. doi:10.1111/j.1539-6975.2011.01427.x

Cho, M.-H. (1998). Ownership structure, investment, and the corporate value: an empirical analysis. *Journal of Financial Economics, 47*, 103–121.

Cohen, R. B., Gompers, P. A., & Vuolteenaho, T. (2002). Who underreacts to cash-flow news? Evidence from trading between individuals and institutions. *Journal of Financial Economics, 66*(2-3), 409–462. doi:10.1016/S0304-405X(02)00229-5

Copeland, T. E., & Weston, J. F. (1992). *Financial Theory and Corporate Policy* (3rd ed.). Reading, Mass.: Addison Wesley.

Cremers, K. J. M., & Petäjistö, A. (2009). How Active Is Your Fund Manager? A New Measure That Predicts Performance. *Review of Financial Studies, 22*(9), 3329–3365. doi:10.1093/rfs/hhp057

Cronqvist, H., & Fahlenbrach, R. (2009). Large Shareholders and Corporate Policies. *The Review of Financial Studies, 22*(10), 3940–3976. doi:10.1086/261385

Cuoco, D., & Kaniel, R. (2009). Equilibrium prices in the presence of delegated portfolio management. *Journal of Financial Economics, 101*(2), 264–296. doi:10.1016/j.jfineco.2011.02.012

Del Guercio, D. (1996). The distorting effect of the prudent-man laws on institutional equity investments. *Journal of Financial Economics, 40*, 31–62. doi:10.1016/0304-405X(95)00841-2

Demsetz, H., & Villalonga, B. (2001). Ownership structure and corporate performance. *Journal of Corporate Finance, 7*(3), 209–233. doi:10.1016/S0929-1199(01)00020-7

Derrien, F., Kecskés, A., & Thesmar, D. (2014). Investor Horizons and Corporate Policies. *Journal of Financial and Quantitative Analysis, 48*(06), 1755–1780. doi:10.1017/S0022109013000628

Eldenburg, L., Hermalin, B. E., Weisbach, M. S., & Wosinska, M. (2004). Governance, performance objectives and organizational form: evidence from hospitals. *Journal of Corporate Finance, 10*(4), 527–548. doi:10.1016/S0929-1199(03)00031-2

Faccio, M., & Lang, L. H. P. (2002). The ultimate ownership of Western European corporations. *Journal of Financial Economics, 65*(3), 365–395. doi:10.1016/S0304-405X(02)00146-0

Fama, E. F., & French, K. R. (1993). Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics, 33*(1), 3–56. doi:10.1016/0304-405X(93)90023-5

Fisher, I. (1930). *The Theory of Interest* (1. ed.). New York: McMillan.

French, K. R. (2008). Presidential address: The cost of active investing. *Journal of Finance, 63*(4), 1537–1573. doi:10.1111/j.1540-6261.2008.01368.x

Gaspar, J. M., Massa, M., & Matos, P. (2005). Shareholder investment horizons and the market for corporate control. *Journal of Financial Economics, 76,* 135–165. doi:10.1016/j.jfineco.2004.10.002

Gillan, S. L., & Hartzell, J. C. (2003). Industries, Investment Opportunities, and Corporate Governance Structures. *TIAA-CREF Institute*.

Gillan, S. L., & Starks, L. T. (2000). Corporate governance proposals and shareholder activism: the role of institutional investors. *Journal of Financial Economics, 57*(2), 275–305. doi:10.1016/S0304-405X(00)00058-1

Gillan, S. L., & Starks, L. T. (2003). Corporate Governance, Corporate Ownership, and the Role of Institutional Investors : A Global Perspective. *Journal of Applied Finance*, 44. doi:10.2139/ssrn.439500

Goetzmann, W. N., & Kumar, A. (2008). Equity portfolio diversification. *Review of Finance, 12*(3), 433–463. doi:10.1093/rof/rfn005

Graham, J. R., Harvey, C. R., & Rajgopal, S. (2005). The Economic Implications of Corporate Financial Reporting. *Journal of Accounting and Economics, 40*(1), 3 – 73. doi:10.1016/j.jacceco.2005.01.002

Grinblatt, M., & Keloharju, M. (2000). The investment behavior and performance of various investor types: A study of Finland's unique data set. *Journal of Financial Economics, 55,* 43–67.

Grossman, S. J., & Hart, O. D. (1980). Takeover bids, the free-rider problem, and the theory of the corporation. *The Bell Journal of Economics, 11*(1), 42–64. doi:10.2307/3003400

Halim, S., Miller, T., & Dupont, D. (2010). How Pension Funds Manage Investment Risks: A Global Survey. *Rotman International Journal of Pension Management*, *3*(2), 30–38. doi:10.3138/rijpm.3.2.30

Hansmann, H. B. (1990). Why do universities have endowments? *The Journal of Legal Studies*, *19*(1), 3–42.

Hansmann, H. B., & Thomsen, S. (2013). Managerial Distance and Virtual Ownership: The Governance of Industrial Foundations (No. 372/2013). *ECGI Finance Working Paper*. Brussels.

Harris, M., & Raviv, A. (1993). Differences of Opinion Make a Horse Race. *The Review of Financial Studies*, *6*(3), 473–506. doi:10.1093/rfs/6.3.473

Herrmann, M., & Franke, G. (2002). Performance and Policy of Foundation-owned Firms in Germany. *European Financial Management*, *8*(3), 261–279. doi:10.1111/1468-036X.00189

Hirschman, A. O. (1970). *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States*. Cambridge, Massachusetts: Harvard University Press. doi:10.1017/CBO9781107415324.004

Holderness, C. G. (2003). A Survey of Blockholders and Corporate Control. *Economic Policy Review*, (April), 51. doi:10.2139/ssrn.281952

Holmström, B. (1979). Moral hazard and observability. *The Bell Journal of Economics*, *10*(1), 74–91.

Holmström, B. (1999). Managerial Incentive Problems: A Dynamic Perspective. *The Review of Economic Studies*, *66*(1), 169–182. doi:10.1111/1467-937X.00083

Ivković, Z., Sialm, C., & Weisbenner, S. (2008). Portfolio Concentration and the Performance of Individual Investors. *Journal of Financial and Quantitative Analysis*, *43*(03), 613. doi:10.1017/S0022109000004233

Jegadeesh, N., & Titman, S. (1993). Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency. *The Journal of Finance*, *48*(1), 65. doi:10.2307/2328882

Jegadeesh, N., & Titman, S. (1999). Profitability of Momentum Strategies: an Evaluation fo Alternative Explanations (No. 7159). *NBER Working Papers*. Cambridge, Massachusetts.

Jenkins, R. (2012). *The Governance & Financial Management of Endowed Charitable Foundations*. London: Association of Charitable Foundations.

Jensen, M. C. (1989). Eclipse of the Public Corporation. *Harvard Business Review, 67*(5), 61–74. doi:10.2139/ssrn.146149

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*, 305–360.

Jones, C. M., Kaul, G., & Lipson, M. L. (1994). Transactions, Volume, and Volatility. *The Review of Financial Studies, 7*(4), 631–651.

Kahan, M., & Rock, E. B. (2007). Hedge Funds in Corporate Governance and Corporate Control. *University of Pennsylvania Law Review, 155*(5), 1021–1093. doi:10.1016/j.jcps.2015.01.001

Kay, J. (2012). *The Kay review of UK equity markets and long-term decision making*. Report for the UK Government, Department for Business, Innovation and Skills, London.

Keloharju, M., Kasanen, E., & Lehtinen, A. (2015). *Shareownership in Finland 2015* (Vol. 2). Helsinki.

Klick, J., & Sitkoff, R. H. (2008). Agency costs, charitable trusts, and corporate control: Evidence from Hershey's kiss-off. *Columbia Law Review, 108*(4), 749–838.

Koh, P.-S. (2007). Institutional investor type, earnings management and benchmark beaters. *Journal of Accounting and Public Policy, 26*(3), 267–299. doi:10.1016/j.jaccpubpol.2006.10.001

Lakonishok, J., Shleifer, A., Thaler, R., & Vishny, R. (1991). Window dressing by pension fund managers. *American Economic Review, 81*(2), 227–231. doi:10.1126/science.151.3712.867-a

Lintner, J. (1965). The valuation of risk assets and the selection of risky investments in stock portfolios and capital budgets. *The Review of Economics and Statistics, 47*(1), 13–37. doi:10.2307/1924119

Loderer, C., & Martin, K. (1997). Executive stock ownership and performance - Tracking faint traces. *Journal of Financial Economics, 45*(2), 223–255. doi:10.1016/S0304-405X(97)00017-2

McCahery, J. A., Sautner, Z., & Starks, L. T. (2015). Behind the scenes: The corporate governance preferences of institutional investors. *Journal of Finance, Forthcoming*, *June*. doi:10.1111/jofi.12393.

Merton, R. C. (1993). Optimal investment strategies for university endowment funds. In C. T. Clotfelter & M. Rothschild (Eds.), *Studies of supply and demand in higher education* (pp. 211–242).

Milgrom, P., & Roberts, J. (1988). An Economic Approach to Influence Activities in Organizations. *American Journal of Sociology*, *94*(s1), S154. doi:10.1086/228945

Miller, M., & Rock, K. (1985). Dividend Policy under Asymmetric Information. *The Journal of Finance*, *XL*(4), 1031–1051. doi:10.1111/j.1540-6261.1985.tb02362.x

Olkowski, T. S. B. (2015). Study Proposes Excise Tax on Harvard's Endowment. *The Harvard Crimson.*

Petersen, T. (2006). Investments of Finnish foundations. Helsinki School of Economics master's thesis.

Reid, B., & Millar, K. (2004). Mutual Funds and Portfolio Turnover. *Investment Company Institute*, *Nov 17*, 1–5.

Rose, P. (2010). Common Agency and the Public Corporation. *Vanderbilt Law Review*, *63*(5), 1355–1417. doi:10.2139/ssrn.1470086

Sharpe, W. F. (1964). Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk. *The Journal of Finance*, *19*(3), 425–442. doi:10.2307/2977928

Sharpe, W. F. (1992). Asset allocation: Management Style and Performance Measurement. *The Journal of Portfolio Management*, *18*(2), 7–19. doi:10.3905/jpm.1992.409394

Shleifer, A. (1998). State versus private ownership. *NBER Working Paper Series,* No. 6665.

Shleifer, A., & Vishny, R. W. (1986). Large shareholders and corporate control. *The Journal of Political Economy*, *94*(3), 461–488.

Shleifer, A., & Vishny, R. W. (1990). Equilibrium short horizons of investors and firms. *The American Economic Review*, *80*(2), 148–153.

Shleifer, A., & Vishny, R. W. (1994). Politicians and firms. *The Quarterly Journal of Economics*, *109*(4), 995–1025.

Shleifer, A., & Vishny, R. W. (1997). The Limits of Arbitrage. *The Journal of Finance*, *52*(1), 35–55.

Stein, J. C. (1996). Rational Capital Budgeting in an Irrational World. *The Journal of Business*, *69*(4), 429–455.

Summers, L. H. (2015). Taking a long view on corporate reform. *Washington Post*. Washington, D.C.

The Economist. (2015). Hyperactive, yet passive. *The Economist Magazine*, Dec 5th.

Thomsen, S. (1999). Corporate ownership by industrial foundations. *European Journal of Law and Economics*, *136*, 117–136.

Thomsen, S., & Rose, C. (2002). Foundation ownership and financial performance: do companies need owners? *European Journal of Law and Economics*, 1–32.

Verotoimisto The Finnish Tax Authority. Tax clauses on non-profit securities trading - Verohallituksen yhtenäistämisohjeet (2002). Finland: Edilex.

Weisbrod, B. A., & Asch, E. (2010). Endowment for a Rainy Day. *Stanford Social Innovation Review*, *Winter*, 42–47.

Wermers, R. (2000). Mutual Fund Performance: An Empirical Decomposition into Stock-Picking Talent, Style, Transactions Costs, and Expenses. *The Journal of Finance*, *55*(4), 1655–1695. doi:10.1111/0022-1082.00263

Wiklund, H. (2015). *Uppdraget som växte - Mission that grew* (1st ed.). Helsinki: Svenska litteratursällskapet i Finland.

Wong, S. (2010). Why stewardship is proving elusive for institutional investors. *Butterworths Journal of International Banking and Financial Law*, *July/Augus*(August), 406–411.

Appendix 1. Sampling of data

Data is based on the Finnish Ministry of Justice sampling of Finnish foundations. The data was prepared for the needs of legislation redrafting in 2015. There were 964 foundations in the Ministry of Justice sample. The sample was selected by:

- Taking every fourth foundation in the Register in 2011. The foundations are ordered by their registration year, so the sample covers foundations founded between 1930 and 2010, otherwise random in their characteristics. This resulted in 699 foundations;
- Adding the members of a leading association in foundation field, Council of Finnish Foundations. This resulted in 120 foundations in all (some of which were already in the sample); and
- Adding the largest foundations by balance sheet total, equity or debt capital or by operational result.
- Adding those foundations that had answered to the Ministry of Justice interview in 2011. These were some 600 in total, many of which were already in the database.

After receiving this original data from the ministry, the researcher did the following:

- Adding significant associations or funds that have historically organized as such legal entities but who consider to be foundations-in-character. A sign of this is their membership and active participation in the Council of Finnish Foundations (as it happens, some "foundations" are also in the Register even if they are legally funds or associations). There were 22 such cases. These will all be called "foundations" in the study. At this point the sample included 964 foundations.
- Cleaning away foundations where either the rules were unclear or financial information was not adequately available. This brought the number of foundations in the sample down to 871.
- Adding randomly selected foundations into ICNPO-categories

that had small samples (around a dozen entries): Environmental (category 5), International (9) and Religious (10) foundations. In all, 20 such additions were made, thus the relative size of the categories was not distorted but the statistical significance of some categories was improved.

This resulted in a sample of 891 foundations.

We reviewed this database and screened financials to catch irregularities. Mistakes were corrected by checking the original filings in the company registrar. The 200 largest sample foundations were checked each against their own filing, and market values of investments for the 200 largest foundations were collected by hand. These 200 largest foundations represent 95 percent of sample foundations' aggregated market value of assets at the end of 2012, 92 percent of revenues and 98 percent of financial investments. Fourteen largest foundations were also interviewed to get accurate data about their non-listed holdings and to increase general understanding of foundations' allocation policies and bookkeeping.

Appendix 2. Foundation financial statements

According to the Finnish GAAP, foundations report in their profit and loss statement

1. Operations: revenue, costs and net income
2. Investment activities: revenue, costs and net income
3. Donative activities: revenue, costs and net income
4. General support received (=public sector support)
5. Total net profit for the period
6. Grants made are reported separately.

We base our categorization of different sources of income on the profit and loss statement. We calculate and use the average for 2010-2012 for each relevant item. We then look at

a) *Net* income from four main income sources for each foundation, and their share of total net income of the foundation.
b) *Gross* income from four main income sources for each foundation, and their share of total revenues of the foundation.

We emphasize the alternative a). In foundations where operations are loss-making the net income actually secures the going-concern of the foundation. Example:

Foundation operates a cheap-food kiosque and has an endowment of 10,000 euros. The operative revenue from food is 1000 euros, but the net loss from selling food is -100 euros. This is covered from endowment yield. Is the foundation financed by operations or endowment? We have categorized it into Endowed foundations as the continuity of the foundation work (making food accessible to all) is made possible by the endowment.

However, in some cases where all income is scarce or it seems that all the years 2010-2012 have been exceptional we have used also gross revenue information to judge and categorize a foundation.

Balance sheet includes, e.g.,

- Tangible and intangible assets
- Long-term Investments
- Securities (not classified as long-term holding)
- Cash and marketable securities
- Debt.

Appendix 3. Data on foundations' equity ownership and calculation of ratios

Data was obtained from Euroclear Finland, the book entry system registrar of securities trading. Euroclear Finland maintains the infrastructure for issuance and trading on the Nasdaq Helsinki Exchange, the leading securities market exchange in Finland. It keeps records of all transactions on the Helsinki Exchange and the ownership of book-entry-form equities by all domestic investors. The book-entry share form is obligatory for all listed companies, and voluntary for other limited liability companies; some have adopted it instead of printed paper share certificates.

Equity ownership data was requested for a random sample of 872 Finnish foundations (see Appendix 1 about the collection of the sample). Of these, 530 turned out to have had listed equity ownership during the research period. Data includes all shares in an investor's portfolio at 31 December of each year. The years included in the data are 2000-2013, which makes fourteen observations points.

Details include share issuance reference (exact code for the security), name of the issuer, ISIC-industry code for the issuer, Nasdaq Helsinki Exchange industry category for the issuer, number of shares held, share price and date of ownership. There are 62,689 single shareholding entries (rows) in the years 2000-2014 and the number of original data cells is over 752,000. Share price is the actual closing price on the date of ownership. We also calculate the value of each owned share lot by multiplying the number of shares by the share price.

Data on investors' portfolios was available as strictly anonymized. Thus we had to change some foundation characteristics into non-identifiable ranks. For instance, all exact financial values were ranked into 20 size categories, with 20 representing the largest figures and 1 the smallest. We could use the new ranks as a scale variable (in some instances it is similar to logarithmic

alteration), and in some cases we use each rank's average original euro value as the value for all foundations in that category. We lose some accurateness of the financial data, but maintain the rough scale distances between different ranks. Furthermore, we had to convert foundation exact age into a decade when the foundation was founded; we created a rough age equivalent by deducting the decade from the year 2012, obtaining a right age with an error marginal of plus or minus five years. These alterations apply when we refer to foundations' financial investments, revenues or age in the second paper ("Are non-profits active equity investors?").

To calculate some of our variables, we make the following corrections to the data. We first correct share splits and bonus issues ("free shares") in the ownership history, to obtain a split-adjusted number of shares held. There were 86 such issues between the year end of 2000 and the year end of 2013 on the Helsinki market. In addition, we made corrections due to unification of share classes or change of company name (there were 8 cases).

Concerning share issue with pre-emptive rights[238] for old shareholders, we had two alternative philosophies for our research purpose. We seek to understand whether an investor is "passive" or "active". What constitutes activity in case of a share issue, and what is a "neutral" act from an investor?

1. It is neutral not to take part in share issues. The portion of an investor's portfolio invested into a share remains the same. The allocation of the investor does not change.

2. It is neutral to take part in share issues for the pro-rata amount of one's previous ownership. The relative ownership in the company remains the same, however the allocation to that particular share increases in the investor's portfolio.

Following these two philosophies[239], we calculated our ratios with two datasets. For philosophy 1, we used the split-corrected ownership data as such. No corrections for rights issues were made, as we consider it to

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238 Only rights issues influence the value of shareholding in a company. Share issues with no pre-emptive rights are priced at (or close) current value and are thus neutral to old shareholders. In case of rights issues, a part of company value is attached to the issue rights. Thus participation by the old shareholders requires less capital input, and may be an encouragement to them.

239 There is a third philosophy that could be considered neutral. Investors might invest "cash-neutrally": selling enough rights to finance the subscription with the remaining rights. No new cash is needed as the subscription of new shares is financed with sale of rights. We discarded this option for two reasons: such neutral number of subscribed shares is complicated to calculate and would require rights' market prices; and given the complicated calculation, we had strong anecdotal evidence that foundations do not make sophisticated calculations so as to neutralize their cash flow. They simply subscribe or do not, based on their view on the company.

be "neutral" not to subscribe shares in share issues. Those investors who showed increased numbers of shares after a rights issue were thus deemed to having made active investment decisions in their portfolio.

For philosophy 2, we corrected ownership history by rights issue multiple for each company and rights issue. There were 51 rights issues between the year-end 2000 and the year end 2013 on the Helsinki market. After such correction, investors who had invested their pro-rata share in rights issues showed "neutral increase" in holding, whereas investors who did not take part in share issue were deemed to have decreased such shares.

To summarize, we used varying datasets to calculate our variables:

- Investor's diversification (Active Share) is calculated from share allocation values, with actual number of shares and actual share price at the year end. No adjustments are made to data.

- Investor's trading activity is calculated with either philosophy 1 (only splits, bonus issues adjusted) or 2 (also rights issues adjusted).

Calculation of portfolio turnover

We calculate the yearly portfolio turnover for each foundation as one-half the yearly sales turnover plus one-half the yearly purchase turnover.

At the end of each year in our sample period, we identify all single stocks held by each foundation at the end of the previous year from our Euroclear data. We then calculate the difference in held number of shares between positions at two consecutive year ends. Each single stock holding may show either sales (held number has decreased), purchases (number increases) or no change (number intact). All changes are calculated as absolute numbers.

Turnover is calculated as the number of shares sold or purchased, times the beginning-of-year price per share, divided by the total beginning-of-year market value of the foundation's portfolio. This ratio is then divided by two, to have an intuition of "how much the portfolio has changed":

If a foundation sells all shares in his portfolio and purchases new stock with the proceeds, the turnover amounts to 100 percent, because sales is – 100 percent of the previous year's value and purchases are + 100 percent. Both are turned into absolute values and summed up, making 200 percent. This is divided by two, to arrive at an intuitive ratio of "100 percent turnover of portfolio".

Note that turnover can take indefinite values as purchases can multiply the value of a portfolio.

There are 13 time series data points for Turnover because it is measured as a change from the previous year, with the first change occurring in the year 2001.

Calculation of Active Share

We calculate Active Share on the basis of deviation from market index industry breakdown, as follows:

Portfolio's Active Share $= \frac{1}{2} \sum \left| w_f - W_x \right|$,
for each foundation (N=530) and for each stock held,

where w_f is the weight of an industry in foundation's portfolio, and W_x is the weight of an industry in the stock exchange general index.

The Active Share has values between 0 and 1 by definition, and is intuitively the percentage deviation from market index of a portfolio. More accurately, Cremers and Petäjistö (2009) describe: "The long-short portfolio represents all the active bets the fund has taken. Active Share measures the size of that long-short portfolio as a fraction of the total portfolio of the fund."

Calculation of Change-in-ownership –indicator

Number of shares held														
Investor	Share	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
573	Company 1	6521	6521	6521	6521	6521									
638	Company 1	450	450	450	450	450	450	450	450	450	450	450	450	450	450
822	Company 1	750	750	750	750	750	750	750	750	750	750	750	750	750	750
822	Company 2												1160	1160	1160
822	Company 3												720	720	720
1019	Company 1	2500	2500	2500	2500	2500					245	245	245	245	245
1019	Company 2						4500								
1019	Company 3						1800	1000	1000	1000	1000	1000	1000	1000	800
1019	Company 4	24000	24000	12000	8000	8000	8000	8000	6000	6000	6000	3000	3000	3000	2400
1019	Company 5	9600	9600	6000	6000	6000				3000	3000	3000	3000	3000	2400
1019	Company 6										3500				
1019	Company 7	2400	2400							1500	1500				
1019	Company 8	4000	4000	3000	3000	3000					2500	2500	2500	2500	2000
1019	Company 9	1000	1250												

In our data there are 9845 share ownership rows for foundations (by 530 non-profit investors in 2000-2013). They specify the timeline of ownership of each share owned by each foundation. We identify changes of more than 10 percent to the previous year's ownership. If such change has occurred, the indicator for that investor and for that stock is 1, otherwise 0.

Acquisition of shares not previously held is considered a change, thus a 1. Sale of all shares is also considered a change, thus a 1. However, the years when the investor has not been owning one specific share are not interpreted as a zero but are considered to be non-events (empty data): absence of investment in most shares in the market (such as some rows showing blanks in Table above) cannot be interpreted as "stability" of investment strategy. Only the years where the investor has either acquired, held or sold all shares matter in our change-data. We get all yearly changes per each stock and each investor, and calculate the averages of time series of zeroes and ones, which gives us the number of years with occurrence of change.

Change-in-ownership -indicator																
Investor	Share	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
573	Company 1		0	0	0	0	1								
638	Company 1		0	0	0	0	0	0	0	0	0	0	0	0	0
822	Company 1		0	0	0	0	0	0	0	0	0	0	0	0	0
822	Company 2												1	0	0
822	Company 3												1	0	0
1019	Company 1		0	0	0	0	1				1	0	0	0	0
1019	Company 2						1	1							
1019	Company 3						1	1	0	0	0	0	0	0	1
1019	Company 4		0	1	1	0	0	0	1	0	0	1	0	0	1
1019	Company 5		0	1	0	0	1			1	0	0	0	0	1
1019	Company 6										1	1			
1019	Company 7		0	1						1	0	1			
1019	Company 8		0	1	0	0	1				1	0	0	0	1
1019	Company 9		1	1											

We also aggregate change-in-ownership at foundation level. We calculate the portion of ones to the number of shares held by the foundation to see how many shareholdings changed in a given year in a foundation's portfolio. We also calculate average of such portion over the years 2000-2013.

There are 13 time series data points for change indicator because it is measured as a change from previous year, with the first change occurring in the year 2001.

Increasing amounts of wealth are being accumulated in non-profit foundations. This book examines these foundations as economic agents and investors. The first essay offers insights into their governance: the source of financing of a foundation is associated with the governance choices. The second essay profits from broad data about their equity portfolios; empirical results show that foundations are long-term investors that can deviate from the market index allocation. Foundations profit from lack of regulation of their investments, as well as from the absence of signaling pressure. This renders them an important element in the varied investor base on the equity markets.

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