Political Representation and Governance: Evidence from the Investment Decisions of Public Pension Funds*

Aleksandar Andonov
Erasmus University

Yael V. Hochberg
Rice University, MIT
and *NBER*

Joshua D. Rauh
Stanford University
and *NBER*

September 13, 2016

Abstract

We examine how political representatives affect the governance of organizations. Our laboratory is public pension funds and their investments in the private equity asset class. Representation on pension fund boards by state officials or those appointed by them—often determined by statute decades past—is strongly and negatively related to the performance of private equity investments made by the fund. This underperformance is driven both by investment category allocation and by poor selection of managers within category. Funds whose boards have high fractions of members who were appointed by a state official or sit on the board by virtue of their government position (*ex officio*) invest more in real estate and funds of funds, explaining 20-30% of the performance differential. These pension funds also choose poorly within investment categories, overweighting investments in small funds, in-state funds, and in inexperienced GPs with few other investors. Lack of financial experience contributes to poor performance by boards with high fractions of other categories of board members, but does not explain the underperformance of boards heavily populated by state officials. Political contributions from the finance industry to elected state officials on pension fund boards are strongly and negatively related to performance, but do not fully explain the performance differential.

JEL classification: G11, G23, G28, H75, D83.

Keywords: Politicians, Governance, Public Pension Funds, Private Equity, Underperformance, State Officials, Pension Fund Boards.

How do politicians affect the governance of the organizations with whom they are associated as board members or fiduciaries? A number of studies in the economics and finance literature suggest that political connections can be extremely valuable for firms, leading to higher firm value (Fisman, 2001; Johnson and Mitton, 2003; Faccio, 2006; Cooper, Gulen, and Ovtchinnikov, 2010; Akey, 2015; Acemoglu et al, 2016). A less explored aspect of political connections, however, is how the political and personal incentives of politicians may affect the governance of the public organizations with which they are associated. In this paper, we explore the effect of political representatives on the decisions and performance of the public organizations on whose boards they serve.

While existing literature has focused on cost of capital and procurement as channels for political influence, we identify a third channel through which political influence can affect outcomes, namely asset management. On the one hand, politicians with influence over asset management might be able to use their influence or expertise to gain access to and direct assets into higher performing investments. Alternatively, conflicts of interest or a lack of financial expertise might lead them to pursue political goals in their trustee capacity, at the cost of the financial returns of the investments. The latter would be consistent with the behavior of overtly political investors such as sovereign wealth funds (Bernstein, Lerner, and Schoar, 2013).

Our setting is the universe of U.S. public pension funds. Public pension fund boards of trustees—whose composition is mostly fixed over time and set decades in advance—are characterized both by high average levels of political representation and by considerable heterogeneity in the extent of political representation across boards. This provides us with a laboratory for exploring whether political representation on boards affects decisions and outcomes, and whether on balance politicians improve or detract from public board investment performance.

The decisions and performance we examine are the pension fund's investment allocations and investment performance in the private equity (PE) asset class, specifically buyout, venture capital, real estate, natural resources, funds-of-funds, and other miscellaneous private investment categories. PE offers an inviting setting for examining investment performance for a number of reasons. First, the investment

policies of state and local government pension systems have shifted markedly towards alternative investment classes such as buyout, real estate and venture capital. For example, in January 2016, the California Public Employee Retirement System had invested almost 20% of its $276 billion portfolio in these asset classes, compared to 13% in 2001. Second, PE exhibits a large inter-quartile spread in manager performance, even within relatively narrowly defined investment types. Finally, each investment has a clear investment date at which it is entered into – the fund's initial closing, commonly referred to as a vintage year. We can therefore attribute each investment decision to the pension fund board members who served on the pension fund board in that year. Were we to focus on investments in public equities or fixed income, making such an attribution would be difficult, if not impossible.

There is substantial heterogeneity across public pension systems in the performance of the asset classes of private equity, venture capital, and real estate investments. Prior literature has examined differences in private equity performance of different classes of institutional investors (Lerner, Schoar, and Wongsunwai, 2007; Sensoy, Wang, and Weisbach, 2014). To the extent that there are differences, these have been attributed to differences in investment objectives, incentives, or investor sophistication. All public pension funds should in theory, however, share at least one objective: to provide the benefits promised to the participants as efficiently as possible for taxpayers. But pension fund governance and the relative representation of different categories of board members on the board of trustees or investment board introduce differences in incentives across the trustees of different pension systems. In our analysis, we therefore focus on the relationship between the fraction of state officials or appointees that sit on the board, and the performance of the PE investments made by the pension fund.[1]

We find that the performance of public pension funds' private equity investments is strongly related to the relative representation of political representatives on the public pension funds' boards. Specifically,

---

[1] There are generally three types of individuals who sit on public pension fund boards. First, there are government officials, who may sit on the board by virtue of their office (ex officio) or are appointed by other government officials. Second, there are members of the pension systems themselves, who may be elected by participants or appointed as trustees. Third, there are members of the general public, who also may be elected or appointed. The relative representation of these different categories on each pension fund board is dictated by statutes and charters of pension systems, many of them instituted decades ago.

each additional ten percentage points of the board who are government officials reduces performance by 0.9 net IRR percentage points if the official is appointed by another government official, and by 0.5 net IRR points if the official sits on the board by virtue of her office (*ex officio*). While relative representation by other categories of trustee also exhibit performance differences, these are of much smaller magnitude; for example, an additional ten percentage points of the board being made up of elected members of the pension plan reduces performance by 0.2-0.4 net IRR points, and appointed members of the general public do not perform better than appointed members of the plan itself. The relationship between the share of political representation on the board and performance is mirrored in analysis of cash-on-cash multiples as a performance measure. It is observed in all the investment categories we examine, and is strongest within the venture capital and real estate categories.

Why might pension funds whose boards contain greater representation by state officials or those appointed by them underperform? Certainly, we may have expected that political connections could lead to benefits for public pension funds investing in PE, particularly in the form of connections to successful fund managers that may lead to investment access that otherwise would not have been enjoyed. Furthermore, prior empirical studies suggest that such connections can be valuable in a corporate setting. In this public asset management setting, however, we observe a negative relationship between political connections and performance.

Shleifer (1996) summarizes three theoretical sources of poor policy-related decision-making on the part of public officials. The first, termed *Control*, recognizes the possibility that a politician may exercise political favoritism and therefore direct decisions in order to gain political support, such as through legislation, regulation, or other political action to advance the interests of industries, unions, or trade groups. These forces underlie Stigler (1971). The second, *Corruption*, concerns the potential for a politician to make sub-optimal decisions in return for quid pro quo, bribes or kickbacks (see e.g. Shleifer and Vishny, 1994; Fisman, Schultz and Vig, 2014). In our setting, this may correspond to outright bribes, future jobs in the private sector, or political contributions to the extent such funds are used for personal gain. Finally, the

third suggested channel for bad policies is *Confusion*—the use of incorrect models of the economy in making decisions (i.e. lack of knowledge, expertise or ability). The results of our analysis speak to the roles of these three channels in the public pension fund setting.

These channels guide us towards several possible hypotheses that might explain our finding that variation in investment performance is associated with political representation on the board of trustees. Boards with political appointees who face conflicts of interest due incentives to invest for political gain (the *Control* hypothesis) or for personal gain (the *Corruption* hypothesis) may not allocate assets to maximize financial return for a given risk level. Board members receive very small remuneration and some members may simply not have an incentive to invest effort to select well-performing investments, if they realize no gain from doing so. Instead, they may be more inclined towards certain types of opportunistic behavior due to personal career and/or political contribution considerations.[2] Additionally, if state officials are characterized by less financial skill or investment experience, they may be expected to underperform relative to boards with less knowledgeable or experienced trustees, *ceteris paribus*.

We examine several implications of these hypotheses for our basic findings. First, under the *Control* channel, boards with larger fractions of state officials may be more likely to allocate disproportionately into asset categories related to economic development, such as real estate or venture capital. Similarly, within a given asset category, such boards may be more likely to direct investments into funds that can be perceived as beneficial to the state or local economy, such as funds based in the LP's own state.

We find that the more state government officials and elected plan participants a board has, the more the fund invests in real estate and funds-of-funds, conditional on board and LP size. This provides only

---

[2] For example, Paul J. Silvester, a former Connecticut state treasurer, held a CFA, bachelor's degree in finance and MBA, and had worked as an investment banker, but was convicted in 2003 of taking bribes to direct public pension fund money to certain private equity funds. During the testimony in front of Connecticut District Court, Paul J. Silvester admitted that he "devised a scheme to deprive the State of his honest services in connection with the investment of pension funds with a fund known as Keystone." In 1998, Connecticut Retirement Plans and Trust Funds invested $27.5 million in Keystone Venture V fund and this investment delivered a net IRR of -34.4% and a multiple of invested capital of 0.08.

partial evidence for the *Control* hypothesis, as such boards do not overweight venture capital funds. Overall, controlling for asset class categories only attenuates the results by around 20-30%. The remaining performance differentials are explained by substantial differences in performance within these asset classes, most strongly within venture capital and real estate.

Within fund types, we also find that the share of state government officials and the share of elected participants is strongly correlated with the LP's tendency to bias the fund towards in-state investments, using the local bias measures developed by Hochberg and Rauh (2013). In addition, these types of boards are strongly associated with other known proxies for poor investment selection in private equity: lower numbers of other investors in the PE fund besides the public pension LP itself, and lower fund sequence numbers (Kaplan and Schoar, 2005; Phalippou and Gottschalg, 2009).[3] These proxies for poor selection decisions explain an additional 20-30% of the underperfomance by board members who are state government officials or elected participants. This set of findings suggests a role for the *Control* channel, but also suggests that other channels may be at play as well.

Next, we explore the extent to which the results are driven by varying financial expertise and experience across the types of board members (Shleifer's *Confusion* channel). The lower financial expertise of elected plan members explains most or all of their underperformance. It does not, however, explain the performance of state appointed and ex officio members, who on average score moderately well on financial expertise but display the largest underperformance of the groups in the sample. *Confusion* is therefore unlikely to be the force driving the underperformance of pension funds whose boards have higher representation of state officials, although it does explain the underperformance of boards with a large share of elected plan members.

---

[3] Private equity managers raise fixed-term funds in overlapping sequences, with a new fund typically raised 3-5 years after the last. The typical fund term is 10-12 years with an option of 1-2 year extension. Funds are numbered in sequence order, with a fund "I" representing the manager's first fund, "II" representing its second, and so forth. Funds with higher sequence numbers indicate a longer history of performance for the fund managers, and, since managers who's initial funds underperform are unlikely to be able to raise further funds in the sequence, higher sequence funds generally indicate higher quality PE managers.

Finally, corresponding to the *Corruption* channel, we examine the relationship between fund performance and political contributions to the campaigns of elected officials, especially from the finance industry. We find that political contributions matter and explain part, but not all, of the negative performance effect that government officials have on boards. These results indicate that at least some of the underperformance of the elected officials relates to political incentives, and to the extent that politicians derive personal gain from political contributions, support the *Corruption* channel.

In sum, our findings suggest a role for two out of the three theoretically-posited channels for poor decision-making and policy on the part of political officials: political favoritism towards state-related investments and potential quid pro quo. We find little support for the *Confusion* channel among political officials, as poor performance on the part of pension funds whose boards have high state official representation is not driven by a lack of financial knowledge or expertise. In contrast, however, much of the underperformance of boards with higher fractions of other types of trustees can be explained by lower expertise levels.

Given that we observe substantial differences in performance across boards with different levels of state officials or appointees, an important question is whether political representation on the board indeed affect investments and performance, or whether the board structures have endogenously emerged as a result of the styles and outcomes of the investments the systems have made. We find that there is a great deal of stability in fund structures, and that regulations pertaining to the board composition of most plans were adopted long ago.[4] To the extent that board structures were established long before private equity became an important part of investor portfolios, concerns regarding reverse causality are less plausible, and our results are robust to excluding boards where there were changes to board structure during the sample period.

---

[4] For example, the Texas Teachers fund was established in 1937 and state law defined the current board composition in 1974. The composition of the New York State Teachers Retirement System board has remained the same since at least 1976, despite two changes in the election process for participant-elected trustees. The Florida State Board of Administration was established in 1970 and the composition has not changed since then. Furthermore, the board composition of county retirement systems in California (Los Angeles County ERS, Orange County ERS, San Diego County ERS etc.) was defined by the County Employees Retirement Law of 1937 and has not changed since at least 1947.

We further note that the results are robust to the inclusion of fixed effects for the state of the LP, so that the performance differentials emerge between pension funds in the same state that have differences in board composition in their charters.

This paper proceeds as follows. Section 1 relates this paper to existing literature. Section 2 provides an overview of pension fund governance and boards. Section 3 describes the data and sample. Section 4 provides results on political representation on boards and private equity performance. Section 5 investigates how the performance differences relate to specific investment choices, both of asset classes and of individual private equity investments within asset classes. Section 6 examines direct evidence of variation in financial expertise, and Section 7 explores political connections to sitting trustees. Section 8 concludes.

1. Relation to existing literature

Understanding whether and how political representation on boards can affect decision making and the creation and preservation of value for organizations is of high importance. The literature on boards in corporate settings has demonstrated that governance structures can have large impacts on outcomes (see Adams, Hermalin, and Weisbach (2010) for a survey). In addition, a large literature has explored the potential for benefits to firms from political connections, but little consideration has been given to how political incentives may affect decisions taken by the institution itself.

The first and foremost contribution of our paper, therefore, is to the question of the impact of political influence on boards, decisions and outcomes. The earlier papers in this literature focused on developing and middle income countries (e.g. Fisman, 2001; Johnson and Mitton, 2003; Chaney, Faccio, and Parsley, 2011) or across countries (Faccio, 2006; Faccio, Masulis, and McConnell, 2006), generally finding strong benefits to firms, though often at a cost to other stakeholders such as employees (Fisman and Wang, 2015) and taxpayers (Khwaja and Mian, 2005). More recent work has examined the role of political connections in the U.S., also finding strong private benefits of firms' political connections, again often at public cost (Goldman, Rocholl, and So, 2009, 2013; Cooper, Gulen, and Ovtchinnikov, 2010; Duchin and

Sosyura, 2012; Akey, 2015; Acemoglu et al, 2016). In these papers, the benefits to political connections generally accrue to firms through one of two sources: either the politically connected firms are more likely to receive procurement contracts (Amore and Bennedsen, 2013; Goldman Rocholl and So, 2013; Brogaard, Denes and Duchin, 2015), or their cost of capital is lowered through preferential access to loan markets (Dinc, 2005; Khwaja and Mian, 2005; Claessens, Feijen and Laeven, 2008) or the promise of bailouts (Faccio, Masulis, and McConnell, 2006; Duchin and Sosyura, 2012). While earlier studies focused on countries with weak institutions, more recent empirical evidence suggests that access to government officials is beneficial in richer countries as well, and the existence of a large lobbying industry in the United States provides further *prima facie* evidence.

Our paper builds on this topic in the U.S. context by considering whether political influence affects investment selection and performance through state officials' roles on pension fund boards. While the literature shows that politicians on corporate boards add value for shareholders, our setting allows us to examine whose interests politicians typically advance when they service on public boards, specifically whether their presence helps the interests of taxpayers and pension beneficiaries (the analog to shareholders in the public context) or not. The ability of politicians to advance their own political interests in managing public money opens the possibility for substantial costs of political connections, rather than benefits.

Furthermore, we highlight an additional channel through which political influence can act: the direction of assets to private investments through a board's asset management role. To the best of our knowledge, our paper is the first to demonstrate the connection between political representation on public boards responsible for the management of pension assets and the underperformance of those assets. In Bernstein, Lerner, and Schoar (2013), the authors find that sovereign wealth funds under stronger political influence tend to invest in companies and industries with high price-earnings ratios that decline in the period after which the investment is made, as well as evidence of negative cumulative abnormal returns in publicly-

traded target companies.[5] Also closely related is the work by Duchin and Sosyura (2012), where one can think of the TARP funds as a large base of assets that is deployed ("managed") by politicians.

Second, our setting—public pension systems—is one of extreme importance both to sponsoring governments and their employees. Political representation on public pension fund boards is particularly common and pronounced. Moreover, large amounts of taxpayer and public employee money are at stake. Public pension systems in the U.S. had $3.8 trillion in assets at the end of 2014 according to the Federal Reserve Flow of Funds (Federal Reserve, 2015). Their unfunded liabilities are of a similar magnitude (Novy-Marx and Rauh, 2009, 2011). Finally, other research has suggested that pension funds do not always pursue pure value maximization (Del Guercio and Hawkins, 1999; Agrawal, 2012; Hochberg and Rauh, 2013).

Our paper contributes to the literature on public pension underfunding and the investment incentives in current accounting and regulatory regimes (Novy-Marx and Rauh, 2011; Andonov, Bauer, and Cremers, 2016). It additionally relates to a literature that examines the empirical relationship between certain characteristics of pension fund boards and overall fund performance (Mitchell and Hsin, 1999; Useem and Mitchell, 2000; Coronado, Engen, and Knight, 2003; Mitchell and Yang, 2008). More recently, this literature has examined pension fund governance characteristics and the allocation of pension fund assets to equity and other risky asset classes versus bonds and safe asset classes. Cocco and Volpin (2007) document agency conflicts among the corporate executives acting as trustees of UK private pension funds and relate the share of insiders on boards to the share of the fund allocated to equity. Andonov, Bauer, and Cremers (2016) find that pension funds governed by boards heavily populated by with more state officials invest more in risky asset classes such as equity and alternatives. Finally, Bradley, Pantzalis, and Yuan (2016) study the effects of pension board composition, including the extent to which trustees in 16 state

---

[5] Other papers that examine sovereign wealth funds and their investment strategies include Dewenter, Han, and Malatesta (2010), Kotter and Lel (2011), and Bortolotti, Fotak, and Megginson (2015). Relative to sovereign wealth funds, pension funds have more homogeneous objectives, especially given that each sovereign wealth fund by definition belongs to a different country and thus differences between sovereign wealth funds can arise from differences between countries.

pension plans are politically affiliated, on the tendency to tilt the fund's public equity portfolio towards politically-connected local stocks. We examine private equity investments of a larger set of funds with deep information on trustees and direct measures of their political connections.

A third contribution of our paper is to the asset management literature on the relationship between investment performance and characteristics such as education, age, and experience of the decision-makers. This literature has primarily focused on mutual fund managers or individual investors (Chevalier and Ellison, 1999; Korniotis and Kumar, 2011; Kempf, Manconi, and Spalt, 2014). Our contribution includes the study of the importance of relevant prior professional experience and education in the context of pension fund boards, a setting that introduces group dynamics.

Finally, we add to the finance literature on drivers of differences in private equity performance among types of limited partners (Lerner, Schoar, and Wongsunwai, 2007; Hochberg and Rauh, 2013; Sensoy, Wang, and Weisbach, 2014) by considering the role of political representation on public pension fund boards and documenting differences in performance within public pension funds, the most important type of limited partner based on the number and size of investments.

2. Overview of Pension Fund Governance and Boards

The board of administration for a public pension fund is responsible for the management and control of the pension fund. For example, the CalPERS Board has exclusive control of the administration and investment of funds. The board's responsibilities include setting employer contribution rates, determining investment asset allocations, providing actuarial valuations, and much more. Similarly, The Teacher Retirement System (TRS) of Texas was established pursuant to Article 16, Section 67 of the Texas Constitution, which requires Texas TRS to have a Board of Trustees to administer TRS and invest its funds. The Board of Trustees of New York City ERS is responsible for investing the assets of the retirement system, establishing the administrative budget of the system and promulgating rules and regulations

11

necessary to carry out provisions of law. Overall, pension fund board members have the power and responsibility to make investment decisions on behalf of the fund.

If a pension fund has a separate board that makes the investment decisions, we analyze the composition of this investment board. For example, the assets of multiple pension funds from the State of Washington, like Washington PERS 1/2/3, LEOFF 1/2, School Employees 2/3 and Teachers 1/2/3 are pooled together and managed by Washington State Investment Board (SIB).[6] In our analysis, we collect data on Washington SIB trustees, who are responsible for the investment decisions. Similarly, we analyze the board composition of Illinois State Board of Investment, Massachusetts Pension Reserves Investment Management Board, Nebraska Investment Council, and so on. If the separate investment committee only makes recommendations, however, we collect the composition of the main board that votes and approves the investments.[7]

The compensation of pension fund board members differs substantially from the compensation packages received by directors of corporations. For instance, the board members of the State Teachers Retirement System of Ohio serve without compensation other than actual, necessary expenses. Similarly, board members of Washington SIB who are public employees serve without compensation, while board members who are not public employees are compensated in accordance with RCW 43.03.240 (currently $50 per day).

Board members can be classified into 9 categories. We first classify board members into three over-arching categories: state, public and participant. State board members are government officials of the state, county, city or other appropriate public entity. State trustees can be appointed by a government executive (*State-appointed*), serve as an ex officio member by the virtue of holding another government position

---

[6] According to the Board Charter, the board of Washington SIB is "responsible for establishing the investment philosophy and policies for each fund that the WSIB manages and for periodically reviewing, confirming, or amending said philosophies and policies. These policies include, without limitation, an asset allocation policy, a proxy voting policy, and a portfolio rebalancing policy, as applicable to the funds managed by the SIB."

[7] An example is the Teachers Retirement System of Illinois, whose investment committee makes recommendations but the Board of Trustees takes the ultimate decision on allocations.

(*State-exofficio*) or be elected to the board by plan participants (*State-elected*). Participant board members are trustees who are currently-employed or retired plan participants. Board members representing plan participants can be appointed to the board (*Participant-appointed*), serve as an ex officio member (*Participant-exofficio*), or elected by plan members (*Participant-elected*). Public trustees are members of the general public and do not work for the state or participate in the pension plan. General-public board members can be appointed to the board (*Public-appointed*), serve as an ex officio member (*Public-exofficio*), or elected to the board by plan members (*Public-elected*). Of these 9 categories of pension fund board of trustee members, 5 categories represent the vast majority of all pension fund board members: state-appointed, state-exofficio, participant-appointed, participant-elected and public-appointed. Overall, we observe a great deal of heterogeneity in board composition across pension funds.

The vast majority of state board members is either appointed by a governmental executive or serves as an ex officio member. Typical examples of state-exofficio board members are: state treasurer, controller, comptroller, personnel director, director of finance, superintendent of public instruction etc. State-appointed trustees are usually appointed by the Governor, Mayor, Speaker of State House of Representatives or President of State Senate etc., and frequent examples are state senators, state representatives, elected officials of local government, school board representatives etc. State-elected board members participate in the boards of only four funds in our sample. They are also governmental officers, but the main characteristic is that they are elected by plan participants. For example, in Michigan Municipal Retirement System, three officers of a municipality or court are elected as state (employer) trustees by the plan participants at the annual meeting.

Trustees representing plan participants are present on the board of almost all public pension funds, but their proportion and appointment procedure varies across funds. The majority of these trustees are either elected by plan participants or appointed to the board. Additionally, nine pension plans in our sample have

ex officio plan board members, who are usually (but not always) union representatives.[8] In case of elections, active and retired plan participants either vote at the annual meeting or receive the ballots containing each candidate's biographical information by post.

The appointment procedure of trustees representing plan participants involves two groups of stakeholders. Typically, plan participants nominate several candidates and a governmental official appoints one of them to the pension fund board. For instance, in Texas Teachers Retirement System, two board members are appointed by the governor from the three public school active member candidates who have been nominated by employees of public school districts, while one board member is appointed by the governor from the three higher education active member candidates nominated by employees of higher education institutions.

General public board members typically work in the local financial industry and are appointed to the board by governmental officials. In our sample, only four pension funds have general public board members that are elected by plan participants and one fund has general public *ex officio* board members.[9] In all other funds these trustees are appointed to the board. For example, CalSTRS has three general public representatives on the board appointed by the Governor and confirmed by the Senate and, in 2014, these trustees worked at a brokerage and investment banking firm, venture capital firm, and insurance company, respectively.[10]

State trustees, both appointed and ex officio, would be expected to have a moderate level of financial sophistication, and some may have extensive knowledge, particularly those who serve as state treasurer. Moreover, state officials may bring to bear social and political connections that could benefit the

---

[8] For example, the heads of the three unions with the largest number of participating employees sit on the board of New York City ERS.

[9] Kentucky Teachers Retirement System is one example of a pension fund that has two general public board members elected by plan participants. The only pension fund with general public *ex officio* trustees is the University of California. The president and vice-president of the Alumni Associations of the University of California are always represented on the Board of Regent of the University of California and we classify them as general public *ex officio* board members.

[10] The information has been retrieved from the biographies of CalSTRS retirement board members posted on CalSTRS website.

pension funds on whose boards they sit, in particular in the realm of access to PE investment opportunities, which are not always open to any investor and are strictly controlled by the PE fund managers. However, state trustees might have incentives to overweight companies contributing money to their political parties or otherwise lending support to their personal career prospects. On the one hand, their incentives to improve pension fund performance should be strong, as the better the investment performance, the fewer resources taxpayers will need to devote to pension funding. On the other hand, states can exercise substantial discretion in their application of governmental accounting to postpone contributions that would be necessary for economic funding of pension liabilities (Novy-Marx and Rauh, 2014).

Other types of pension fund trustees, such as plan participants and members of the public, may have a different set of skills and incentives. Plan participants would be expected to have the least financial experience, as their careers are in teaching, public safety, or another area of public service. However, conflicts of interest are likely low for this group, as their connections to the financial industry are presumably minimal. They may or may not have an incentive to exert effort and care about fund performance, depending on whether they view taxpayers or beneficiaries as residual claimants for surpluses or shortfalls (Novy-Marx and Rauh, 2009). On the one hand, in many states there are strong constitutional or legal provisions that protect vested and even prospective pension benefits from being reduced, suggesting participants are to some extent insulated from the effects of poor investment performance.[11] On the other hand, legislatures in many states have increased pension benefits following periods of high asset returns.[12] Furthermore, in states with weaker legal protections of pension benefits, some governments have implemented reforms such as reductions in cost of living adjustments and increases in required employee contributions.

---

[11] For example, in Illinois, the non-impairment constitutional provision was interpreted broadly and Illinois Supreme Court decision No.2014 MR1 declared the pension reform unconstitutional. The court ruled that "membership in any pension system shall be an enforceable contractual relationship, the benefits of which shall not be diminished or impaired. (Illinois Constitution, Article XIII, §5.) This constitutional language is unambiguous and the Pension Protection Clause is given effect without resort to other aids for construction."

[12] For instance, in 1999, one year before the dot-com bubble burst, CalPERS had an actuarial funding ratio of 128 percent and California Senate Bill 400 increased the retirement benefits of highway patrol, police, firefighters, and other public safety workers retroactively to the date of hire.

Public trustees are the group that we would expect to have the most financial or investment experience, as they are often chosen or appointed on the basis of their expertise. On the other hand, the fact that they themselves are finance practitioners may give rise to potential opportunistic behavior. In some instances, pension systems place explicit restrictions on public employees, such as San Diego Country ERS which stipulates that trustees "must not have any personal interests which would create a conflict of interest with the duties of a board member and trustee." Public trustees receive no direct benefits from pension funding, but presumably would prefer to avoid having to increase the tax dollars devoted to pension funding if investment returns can serve as a partial replacement (Novy-Marx and Rauh, 2011, 2014).

If we observe substantial differences in performance based on the relative share of the board of trustees that is composed of sitting politicians or political appointees, an important question is whether these trustees indeed affect investments and performance, or whether the composition of these boards (and therefore the extent of political representation) have endogenously emerged as a result of the styles and outcomes of the investments the systems have made. For all of the LPs in our sample, we were able to collect the year when the fund was established. For some funds, particularly the largest, we also know when state laws defined the current board composition. For all funds, we check whether the board composition changed during our sample period.

We find that there is a great deal of stability in fund structures and that regulations pertaining to the board composition of most plans were adopted long ago. For example, among large funds, the Texas Teachers fund was established in 1937 and state law defined the current board composition in 1974. The composition of the New York State Teachers Retirement System board has remained the same since at least 1976, despite two changes in the election process for participant-elected trustees.[13] The Florida State Board of Administration was established in 1970 and the composition has not changed then.[14] Furthermore, the board composition of county retirement systems in California (Los Angeles County ERS, Orange County

---

[13] See New York State, Article 11 of the Education Law, Section 504.
[14] See Florida Statutes, Title XIV Taxation and Finance, Chapter 215 Financial Matters: General Provisions, 215.44 Board of Administration.

ERS, San Diego County ERS, San Bernardino County ERS etc.) was established by the County Employees Retirement Law of 1937 and has not changed since at least 1947.

We identified only 37 instances of changes to board structure during the sample period. Some of these were relatively minor changes for the purposes of this study, such as a 1998 constitutional amendment in Minnesota. This amendment abolished the position of State Treasurer effective in 2003, and therefore reduced the number of ex officio board members on the Minnesota State Board of Investment from 5 members to 4 members, but the percentage of state ex-officio board members remained the same. An example of a more major change is Ohio's changes during the mid-2000s that significantly reduced the number of state trustees and increased the number of general public trustees.

To the extent that board structures (and therefore relative political representation) were established long before private equity became an important part of investor portfolios, the possibility of reverse causality is less plausible. On the other hand, in cases where there were board changes, such changes may have been affected by investment performance. We check the robustness of the results to excluding boards where there were changes to board structure during the sample period and find that the results remain strongly significant.

3. Data and Sample

Our data is collected from four primary sources. First, we collect data on public pension fund board composition from their Comprehensive Annual Financial Reports (CAFRs). The board composition is reported in the CAFRs Introduction section and the exact regulation is clarified in the Financial section (Notes to the Basic Financial Statements – Plan Description). We also look at the state or municipal codes and statues to verify the board composition, the number of seats held by each trustee type, and to understand the election and appointment procedures.[15] The time series variation of board composition is limited as only

---

[15] For example, the board composition of Texas state pension funds (Texas ERS, Texas Teachers RS, Texas County and District RS etc.) is defined in the Texas Government Code Title 8: Public Retirement Systems.

37 public pension funds experience a change in overall board composition during our sample period, while 173 funds maintain the same board structure over time.

Second, we utilize a generalized web search to collect biographical information regarding each public pension fund board member who served on the board of one of the largest 41 pension funds in our sample. These funds represent almost 15% of the total assets under management for the U.S. pension fund world and around 34% of the assets managed by U.S. defined-benefit pension funds in 2011.[16] Online Appendix Table A.4 lists these 41 funds with collected background data.

We categorize the biographical information into a number of variables representing educational background, union membership, executive experience, financial experience, asset-management experience, and other related experience (real estate, insurance, etc.). Asset management experience is defined as having prior experience in asset management, alternative investments, hedge funds, pension funds (investments, not administration), private equity, commercial real estate or venture capital. Financial experience is defined as having prior experience in banking, risk management, insurance, serving as CEO/CFO/CIO in a large corporation, or practicing financial law (cases in M&A, bond issuance, commercial real estate, private equity, securitization). Related experience is defined as having prior experience in public finance (budget analyst, head of budget committee), as treasurer or similar position, actuarial experience, employee benefit management, or managing a credit union. We record the trustee as having director experience if the person held a high executive position in private sector or managed an own business, and as having private sector experience if the person has a prior private sector experience more generally.

Within the public sector, we distinguish between generalized experience in public service and having served either as a candidate in political elections or as an elected official prior to or during board service. We classify a board trustee as having public sector experience if the person has prior public section experience, but has not participated in political elections. (We do not consider experience as a teacher, public educator, police officer or firefighter as public sector experience.) Having classified public sector

---

[16] The comparison is based on the Global Pension Asset Study 2012 conducted by Towers Watson.

officials in this manner, we then utilize the website Follow the Money (www.followthemoney.org) to determine whether the candidates received political donations from institutions, particularly financial industry-related institutions, during their election campaigns. We compute the sum of all contributions received by a pension fund trustee up to the year in question, and the total political donations received by the trustee during the last election cycle.

Finally, we obtain data on PE funds and performance from Preqin. The bulk of institutional investment in private equity is made via legally separate funds run by professional managers (referred to as the GPs), as the selection of appropriate direct investments requires resources and specialized human capital that few institutional investors have (Fang, Ivashina, and Lerner, 2015). PE funds are raised for a specified period (typically 10-12 years, with possible short extensions) and are governed by partnership agreements between the investors and the fund's principals. The agreement specifies the nature of the fund's activities, the division of the proceeds, and so forth. Private equity groups typically raise a fund every few years. Investments are made by the limited partners at the start of the funds life, often referred to as the fund's vintage year. Using the vintage year, we can attribute each investment decision to the pension fund board members who served on the pension fund board in that year.

We collect the set of investments made by public pension funds into PE funds raised in vintage years 1990-2011. Our sample contains 13,405 investments by 210 unique public pension fund LPs investing in 3,923 PE funds managed by 1,416 GPs. Table 1 presents summary statistics for pension fund board composition and investments.[17] The public pension funds in our sample have an average of $43.83 billion in assets under management (AUM), and average 9.3 board members. Panel A of Table 1 presents summary statistics for the number of funds and number of investments that have at least one board member belonging to the different categories of pension fund board trustees. On average, state-appointed and state-exofficio trustees represent around 7.6 and 25.4 percent of the board members. Trustees representing plan participants

---

[17] Online Appendix Table A.1 presents the percentage of Preqin observations (investments) matched with board composition data over time. In Online Appendix Table A.2, we present the distribution of pension funds (LPs) and investments on a state level.

are present in the board of 197 out of 210 U.S. public pension funds and hold on average 40.3 percent of the board positions. The average proportion of participant-elected board members is 27.0 percent, whereas plan members appointed to the board account for 11.6 percent. General public board members hold, on average, 25.5 percent of the pension fund board seats, and almost all of them are appointed. Figure 1 complements the data with histograms of board composition and shows that there is significant cross-sectional dispersion in the representation of the different categories of pension fund board members.

Panel B presents summary statistics for the key performance measures – net IRR and multiple of invested capital – for the subsamples of the 13,405 total investments for which these performance related data items are available. The mean fund in our sample has a net IRR of 10.4%, a net multiple of committed capital of 1.43, and a total committed capital base of $2.24 billion. On average, the PE funds in our sample have a total of 26.3 LPs, and a sequence number of 4.1. The average investment size by a public pension fund in a PE fund is $60 million.[18]

In Table 2, we present summary statistics for the fraction of investment allocated to each PE sub-category (private equity = buyout + VC, real estate, natural resources, etc.), at the LP-vintage year level. Computing allocation fractions by number of investments results in 1,570 LP-vintage observations, whereas using data on the dollar amount committed by the LP results in 1,334 LP-vintage observations. Using the number of investments essentially assigns equal weight to every investment. The advantage is that we do not need the commitment data, which is missing for some investments. A disadvantage is that this approach overweights smaller fund types, such as VC investments. Using the commitments data results in a lower number of observations. The number of observations decreases because smaller pension funds (which typically make fewer investments) are less likely to have complete commitments data. Using the commitments data, the number of LPs that have at least one LP-vintage observation decreases from 210 to 174.

---

[18] Online Appendix Table A.3 presents the unconditional performance for the different categories of board members.

We present our data first at the category level (PE, real estate, natural resources) and then at the sub-category level (buyout, VC, real estate direct, real estate fund-of-funds, fund-of-funds, other PE).[19] At the category level, allocation percentages are roughly the same for both investment and committed capital calculations. The public pension funds in our sample allocate 71% of both their investments and dollar committed capital to private equity (VC and buyout). Between 25 and 26% of investments and committed capital is allocated to real estate funds, and a little over 3% of both investments and dollars is allocated to natural resources. Within private equity, 42% of investments and 46% of dollars are allocated to buyout. 23% of PE investments, representing 17% of investment dollars, are allocated to VC. The remainder is split nearly equally between fund-of-fund and other PE investment categories.

Table 3 presents summary statistics on the experience and political engagement of public pension fund board members. Panel A shows summary statistics for the skills and professional experience of pension fund board members that served during the 1990-2011 period. We collect background data for the trustees of 41 pension funds (LPs) and match it to the 9,064 investments made by these LPs (8,393 investments with return data).[20] When presenting the summary statistics by person, we assign an equal weight to every trustee in the sample. Of the 1,057 unique trustees in the subsample, 21.0% have experience in asset management, 14.7% have experience in finance more generally, and 37.0% have other related experience. 2.3% of board members hold a CFA (Chartered Financial Analyst), 12.8% have an MBA degree, and 37.5% have a bachelor, master or PhD degree in finance, economics, business management, business administration, accounting or insurance. More detailed statistics on educational attainment and experience types are provided in the table.

A few patterns emerge from the statistics in Table 3. Pubic-appointed board trustees appear to have more relevant experience than the other groups, followed by state political trustees. Over 42% of public-appointed trustees have experience in asset management, 30% have other general financial experience, and

---

[19] Other funds capture investments in distressed debt, secondaries, coinvestments, hybrid and balanced funds.
[20] In Online Appendix Table A.5, we replicate Table 1 for the sub-sample of 41 pension funds with collected background data. These pension funds have a representative board composition, but they are relatively larger.

23% have other related experience. Participant-appointed trustees tend to have more relevant experience than participant-elected trustees; this difference is especially notable for related experience. Participant-appointed trustees have also more executive experience in the private sector. Participant-elected trustees are more likely to be union members or supported by labor unions. Unions typically nominate or recommend candidates during trustee elections. Notably, public-appointed members are more likely to obtain a relevant educational degree or to complete an MBA program.

Unsurprisingly, state trustees are more likely to participate in political elections (many of them become trustees after winning political elections that automatically make them ex officio trustees). The variable *Political Elections* measures the percentage of pension fund trustees who participate in political elections before or during their tenure as pension fund board members. For a subset of these trustees, those who serve as elected officials or participate in political elections *during* their tenure as a pension fund board member, we collect data on political contributions received by their campaign. Thus, the existence of financial contributions data is conditional on matching the tenure of a board member to simultaneous involvement in politics. As a result, the *Political Elections* variable is broader than the contributions data.[21] In general, state-exofficio trustees receive more total contributions and more contributions from the finance industry than other trustee candidates.

4. Political Representatives on Boards of Trustees and Investment Allocation

We begin our empirical analysis in Table 4 with a simple regression of investment performance on board composition. The observation level is LP-investment. In models (1) to (4) performance is measured using net internal rate of returns (IRR), whereas in models (5) to (8) performance is measured using multiple of invested capital. As independent variables, we utilize the percentage of trustees falling into 4 of the 5

---

[21] For example, John W. Douglass served on the Board of Trustees of the Maryland State Retirement and Pension System from 2004 to 2015, while he was an elected member of the Maryland House of Delegates from 1971 to 1994. In the analysis, we classify John W. Douglass as a trustee with political elections experience, but we do not match his tenure as a pension fund board member with political contributions data.

large categories of board member (state-appointed, state-exofficio, participant-elected and public-appointed) for the pension fund board in the year of the observation. The omitted category is participant-appointed. We control for the natural logarithm of LP assets under management, board size, and the natural logarithm of the commitment as a percentage of the assets under management. In each model, we include vintage year fixed effects and independently double cluster the standard errors by pension fund and by vintage (Petersen, 2009).[22]

In models (2), (3), (4), (6), (7), and (8) we include additional fixed effects for the state of the LP. LP state fixed effects capture state specific factors that are relatively constant over time, like union power or importance of the financial industry. Specifications (4) and (8) exclude in-state investments, to demonstrate that the findings are not simply a reflection of the in-state bias documented in Hochberg and Rauh (2013) and Bradley, Pantzalis, and Yuan (2016). The number of observations in columns that include the control for the commitment size is lower as some investments do not have commitment size information.

A clear pattern emerges from the estimates in the table. Recalling that the omitted category is participant-appointed, pension funds with boards that have higher percentages of state-appointed, state-exofficio, or participant-elected trustees exhibit consistently lower performance, in terms of both net IRR and multiple of invested capital. Public-appointed members have negative coefficients in some specifications but there is not a robust, statistical difference between their performance and that of the omitted category, participant-appointed.

Of the four categories, state-appointed board members are associated with the lowest performance: an increase of 10 percentage points in the proportion of the board that consists of state-appointed members is associated with a decrease of roughly 0.9 percentage points in annual net IRR investment performance. State-exofficio board members have the next lowest performance. An increase of 10 percentage points in

---

[22] In Online Appendix Table B.6, we show our results are robust to independently double clustering the standard errors in two alternative ways. First, we double cluster the standard errors by PE fund (instead of pension fund) and by vintage. Second, we double cluster the standard errors by general partner (GP) and vintage. These robustness tests account for the fact that multiple pension funds can invest in the same PE fund or in multiple PE funds managed by the same GP.

the proportion of the board that consists of state-exofficio members is associated with a decrease of between 0.53 and 0.68 percentage points in annual net IRR, depending on the model estimated. The effects for higher levels of participant-elected board trustees are lower, but remain negative and statistically significant across specifications. An increase of 10 percentage points in the proportion of the board that consists of participant-elected members is associated with a decrease of between 0.19 and 0.41 percentage points in annual net IRR, depending on the model estimated. An increase of 10 percentage points in the proportion of the board that consists of public-appointed members is associated with negative coefficients of between 0.05 and 0.26 percentage points in annual net IRR, but this effect is statistically insignificant once we add commitment sizes and LP state fixed effects. In Online Appendix B Tables B.1-B.5, we show that these results are robust to analyzing only the 2000-2011 period, excluding four pension funds that only have a single board member, excluding California-based pension funds (state with most observations – 29 large funds with 2,818 investments) and excluding Massachusetts-based pension funds (49 small pension funds). Our results are also robust to analyzing only the sub-period 1990-2004. PE funds started in this period are more than 10 years old and most of them are liquidated or distributed. Thus, the returns on these investments are not driven by inflated accounting valuation (Phalippou and Gottschalg, 2009).

Table 4 Columns (5) to (8) repeat the analysis substituting multiple of invested capital as the performance measure. We continue to observe that investments made by state-appointed and state-exofficio board members have lower returns. Using multiples as the metric, pension funds governed by 10 percentage points more state-appointed trustees select investments that underperform by 0.27 to 0.45 (27 to 45 percent of capital). An increase of 10 percentage points in the proportion of the board that consists of state-exofficio members is associated with a decrease of between 0.17 and 0.28 in the multiple of invested capital, depending on the model. We also observe that participant-elected trustees invest in PE funds that deliver lower multiples, while the investments made by public-appointed board members usually do not deliver significantly different returns.

Board composition is more likely to be endogenous to pension fund performance in private equity among pension funds that change their board composition during the sample period. In Table 5, we analyze only the sub-sample of pension funds that do not change their board composition during the sample period. There are two potential reasons why these funds did not change their board composition. Either their performance was good, so we should find no differences in performance when we analyze this subsample, or they cannot change their board composition, because the legislation defining the board structure is sticky and beyond their control. In the second case, we should find differences in performance, but pension funds cannot respond to them.

We run two tests in Table 5. In Columns (1) and (3), we analyze the performance of 173 pension funds that have not changed their board composition during their presence in the data. In Columns (2) and (4), we run a stricter test and analyze only those pension funds that have not changed their board composition at least since 1985. We track the legislative amendments to the statutes defining the board composition and identify 47 pension funds that maintained same board structure since 1985.[23] Overall, Table 5 confirms that state-appointed, state-exofficio and participant-elected exhibit lower performance.

What drives the underperformance of boards characterized by high representation by state *ex officio* or state appointed trustees? Following the three theoretical channels posited by Shleifer (1996), we hypothesize that that variation in risk-adjusted investment performance associated with state trustees might be driven by multiple factors. First, politicians may behave opportunistically and drive investment decisions into investments that serve to garner political support or that may be viewed as beneficial to the state (the *Control* channel). Second, state trustees, particularly elected officials, may choose to direct investments in return for quid pro quo, bribes or kickbacks, including in the form of political donations to their campaigns

---

[23] In Online Appendix Table A.6, we present a list of the 37 pension funds that change their board composition during the sample period and the year when their board composition was changed. Regarding the second test, the number of funds that maintain the same board composition since 1985 can be larger as we are not able to check all legislative amendments and identify the last change for many funds.

(the *Corruption* channel). Finally, poor investment choices may simply reflect a lack of knowledge, expertise or experience on the part of state trustees (the *Confusion* channel).

Poor performance could be due to poor allocation decisions across PE sub-categories or to poor selection of managers. We hypothesize that under the *Control* channel, boards with larger fractions of state officials may be more likely to allocate disproportionately into asset categories that can be argued to be related to economic development, such as real estate or venture capital. In Table 6, we explore allocations to the various PE sub-categories. We present estimates from regressions in which the dependent variable is the percentage allocated to different fund types during the 1990-2011 period. Observations are at the LP-vintage year level. In Panel A, the dependent variables are defined based on the number of investments, and in Panel B, the percentage allocations are weighted by the commitments. We focus again on the percentage board representation by the four categories used in Table 4, and the omitted category is participant-appointed. The number of observations is lower in Columns (3), (4) and (5) because we condition on investing in private equity. Some LP-vintage observations only have investments in real estate or natural resources.

Table 6 shows that state trustee representation on pension fund boards is significantly related to the percentage allocated across investment categories. State-appointed, state-exofficio and participant-elected trustees overweight real estate at the expense of private equity. Based on Column (1) in Panel A, an increase of 10 percentage points in the proportion of the board that consists of state-appointed members is associated with a 2.48 percentage point higher allocation to real estate funds and 2.42 percentage points lower allocation to private equity funds.[24] We also observe that, within private equity, state-appointed, state-exofficio and participant-elected trustees overweight fund-of-funds primarily at the expense of buyout funds. For instance, based on Panel A Column (5), a pension fund governed by 10 percentage points more state-exofficio board members allocates 1.27 percentage points more to fund-of-funds. We also document

---

[24] The coefficients reported in Table 6 Columns (1) and (2) are not exactly the opposite and do not sum up to zero, because we classify the investments in natural resources as a separate sub-category, but do not analyze it separately as the number of observations is relatively low.

that larger pension funds overweight private equity instead of real estate funds, and within private equity they increase the allocation to buyout funds and avoid fund-of-funds. These findings partially support the *Control* hypotheses, as the more state government officials and elected plan participants a board has, the more the fund invests in real estate. We observe no overweighting of the venture capital asset class, however.

Having looked at the allocations across categories, we now turn to selection of managers within categories. Table 7 presents regressions in which the dependent variable is investment performance, measured by net IRR. (In Online Appendix Table B.7, we present the same estimations using the multiple of invested capital as a performance measure). In this analysis, observations are at the LP-investment level. We start by analyzing the performance in all investments together (*All*) while controlling for allocation to different categories using indicator variables. The omitted category in Table 7 Columns (1) and (2) is buyout funds and we include indicators for real estate, natural resources, venture capital, fund-of-funds and other private equity fund types. Even after controlling for difference in allocations, state-appointed, state-exofficio and participant-elected trustees invest in PE fund managers who deliver lower returns. If we compare the coefficients reported in Table 7 Columns (1) and (2) with the coefficients reported in Table 4 Columns (1) and (2), we can conclude that poor asset allocation decisions explain 20 to 30 percent of the performance differential. The remainder can be potentially attributed to poor selection of PE funds.

Next, we analyze the performance separately in real estate (RE) and private equity (PE). In columns (5) and (6), we also distinguish between performance in buyout funds (BO) and venture capital funds (VC). We find that state-appointed, state-exofficio and participant-elected trustees underperform within both real estate and private equity. The underperformance in private equity cannot be explained solely by higher allocation to fund-of-funds, and it is strongly concentrated in VC funds. We do not observe significant differences in buyout funds.

Moreover, as we document above, state-appointed, state-exofficio and participant-elected trustees overweight investments in real estate and fund-of-funds. In Table 7 Columns (1) and (2), we find that real

estate and fund-of-funds are the worst performing types within private equity. However, even within the real estate category, pension funds governed by boards heavily populated by state-appointed, state-exofficio and participant-elected trustees select worse funds. Based on Panel A Column (7), an increase of 10 percentage points in the proportion of state-appointed board members is associated with a decrease of 0.83 percentage points in annual net IRR on real estate investments.

Overall, Table 7 documents that state-appointed, state-exofficio and participant-elected exhibit both worse asset allocation and selection of managers. A natural question is whether the lower returns we observe for these groups are perhaps the result of their investing in less risky funds, which on average would be expected to have lower returns. Due to the nature of private equity, it is impossible to obtain an exact, ex ante measure of risk for PE fund investments.[25] That said, there are several reasons why the results are unlikely to be driven by differences in risk.

First, a number of indicators suggest that real estate funds covered by Preqin are among the riskiest categories of private equity. Preqin data contains mainly value-added and opportunistic real estate funds and almost no core real estate funds. The fact that boards heavily populated by state-appointed, state-exofficio, and participant-elected members overweight real estate, is not consistent with the idea that they are investing in less-risky private investments and expecting lower returns for that reason. Second, Andonov, Bauer, and Cremers (2016) and Bradley, Pantzalis, and Yuan (2016) examine the extent to which boards with different types of trustees invest in equity and other risky asset classes. They find that pension funds governed by boards populated with more state-appointed and state-exofficio board members invest more in risky asset classes.[26]

---

[25] In the context of private equity investments, there is little that can be done by the econometrician to measure risk in a similar fashion to that which is done in the context of continuously traded assets whose values are repeatedly observed. In practice, we observe one return number for the entire twelve-year life of any private equity fund: the ultimate return to LPs net of fees. Computing a beta for a given fund in the traditional manner as is done for public securities is thus impossible. Given this, the best the PE literature has been able to accomplish in the area of computing the risk of PE is to arrive at widely variable estimates of a beta for the asset class as a whole.

[26] Specifically, Andonov, Bauer, and Cremers (2016) find that an increase of one standard deviation in the proportion of board that consists of these two categories is associated with approximately 3 percent higher allocation to risky asset classes, while Bradley, Pantzalis, and Yuan (2016) document a positive relation between the fraction of state trustees and the annual time series change in the allocation to risky assets.

Third, Table 8 and Figure 2 resemble a value-at-risk analysis and present evidence suggesting that risk cannot be the explanation for the poor performance we observe in Table 7. The observation is an LP-investment and we present the distribution of returns for the five main categories of board members. We measure performance using the net internal rate of return (IRR) minus [vintage x fund type] group mean. In Online Appendix Table B.8, we present the distribution of returns based on the multiple of invested capital minus [vintage x fund type] group mean. When calculating the group means, we include investments made during the 1990-2011 period and we split the investments in the following fund types: real estate, natural resources, buyout, venture capital, fund-of-funds and other private equity funds.

If participant-appointed and public-appointed trustees obtain higher returns by taking on riskier investments, we should expect that they have a higher likelihood of having funds in the lowest performance percentiles. Actually, the better performance of participant-appointed and public-appointed trustees comes mainly from the limited down-side. When examining the 5th and 10th percentiles, we see that these better performing trustee categories avoid selecting the really bad funds, and the worse performing categories have worse performance in these percentiles. For example, the 5th percentile for plans with no state-exofficio members is -15.7 net IRR points, and for plans with an above-median percentage of state-exofficio members it is -21.5 net IRR points. On the right side of the distribution, their performance is closer to the average performance. This suggests that it is not simply the case that state trustees are picking less-risky funds.[27]

5. Political Representation and Investment Selection

Next, we aim to understand the characteristics of the poor performing funds that state-appointed, state-exofficio and participant-elected trustees select. What explains the underperformance of these funds

---

[27] Online Appendix Table B.9 presents logit regressions and tests the probability that pension funds select investments that deliver return in the tails of performance distribution. The results confirm that state-appointed, state-exofficio and participant-elected board members select more investments that deliver returns in the lowest five percentile of the distribution, while there are no differences in the probability to select investments with returns in the top five percentile. The marginal effects are relatively larger for the state political trustees.

in particular? Under the *Control* hypotheses, boards with larger fractions of state officials may be more likely to direct investments into funds that can be perceived as beneficial to the state or local economy, such as in-state funds (Hochberg and Rauh, 2013). Table 9 presents regressions in which the dependent variable is the LP's excess share of in-state investments, relative to the benchmark representing the share of investments in the state by out-of-state LPs, over the preceding five-year period. The analysis is on an LP-vintage year level and we examine the overweighting in all investments as well as separately in real estate (RE) and private equity (PE). In Columns (5) and (6), we also distinguish between overweighting in buyout funds (BO) and venture capital funds (VC), whereas Column (7) is estimated conditional on investing in private equity.[28]

Looking at the estimates in the table, it appears that state-appointed, state-exofficio and participant-elected board members overweight in-state investments even after controlling for differences in percentage allocation to PE sub-categories. In Column (2), the coefficients on the percentage of state-exofficio board members is positive and significant, indicating that a 10 percentage point increase in the proportion of state-exofficio members is associated with a 1.35 percentage point higher allocation to local in-state investments. Based on the economic magnitudes, the overweighting of local investments is even larger among state-appointed trustees. The coefficients on the size of the LP's assets under management are significant, reflecting the fact that larger LPs do less in-state overweighting, other things equal. A one-unit increase in the log of assets under management is correlated with a reduction in overweighting by 1.60 percentage points, when analyzing all assets together.

The next columns of Table 9 present the results separately for investments in real estate, private equity, VC and buyout funds, respectively. We document that the in-state overweighting by state-appointed,

---

[28] Online Appendix Table C.1 presents summary statistics for the overweighting by LPs of local in-state investments on a state level, using rolling five-year benchmarks. We perform two robustness checks and present the results also in Online Appendix C. First, in Table C.2, the dependent variable is the LP's excess share of in-state investments, relative to the benchmark representing the share of investments in the state by all LPs (not only the out-of-state LPs), over the preceding five-year period. Second, in Table C.3, the analysis is on an LP-investment level (instead of LP-vintage level). In this analysis we use logit regressions in which the dependent variable is equal to one if the general partner of the investment is located in the same state as the pension fund (LP).

state-exofficio and participant-elected board members is particularly strong for real estate and VC, but is not significant for buyout funds. For VC, the coefficient on state-appointed trustees is not significant, but the magnitude points in the overweighting direction. Overall, the estimates in Table 9 suggest that the overweighting of local investments may potentially explain part of the underperformance by state-appointed, state-exofficio and participant-elected trustees, given the Hochberg and Rauh (2013) finding that public pension funds' in-state investments achieve performance that is lower than the performance on their own similar out-of-state investments. These findings lend further support to the *Control* channel as a source of underperformance.

How else do the investment choices of differently composed boards differ? Table 10 presents regressions in which the dependent variables capture three different investment characteristics. First, in columns (1) and (2), the dependent variable measures the total number of LP investors in the fund. Second, in columns (3) and (4), the dependent variable is the natural logarithm of the fund size in which the LP invested. Third, in columns (5) and (6), the dependent variable is the sequence number of the fund in which the LP invested. We choose these three characteristics because they are generally associated with poorer performance in PE. Generally speaking, larger PE funds tend to exhibit higher performance, perhaps unsurprisingly, given that the ability to raise large sums of money is likely to be positively correlated with the perceived quality of the PE fund manager. Managers of funds of low sequence number are relatively new, and have not yet proven their ability to perform, as would be the case with managers in higher sequence funds-which will only be raised if the manager returns good performance on his earlier sequenced funds. Finally, having a limited number of LPs suggests that the manager may not have been able to secure broad support for his/her fundraising efforts.

Based on the results in Table 9, we additionally introduce two new control variables. *In-state RE* and *In-state VC* are indicators equal to one if the general partner of a real estate or venture capital fund is located in the same state as the pension fund (LP). The number of observations is lower in columns (2), (4) and (6) because we control for the commitment as a percentage of the assets under management.

In Table 10, we find that state-appointed, state-exofficio and participant-elected trustees invest in smaller funds, funds with fewer investors and funds with a lower sequence number. The number of investors counts not only the number of public pension funds acting as LP, but also the number of other LPs, like private pension funds, endowment funds and foundations. Similarly, fund size reflects the total PE fund size, which is a sum of the commitments from all investors. Thus, we document that public pension funds governed by state-appointed, state-exofficio and participant-elected board members invest more in PE funds that were shunned by other public pension funds and institutional investors.

In columns (5) and (6), we focus on the PE fund sequence number, which proxies for the experience of the GP. Our results indicate that state-appointed, state-exofficio and participant-elected board members exhibit substantial bias towards inexperienced GPs. This effect is particularly pronounced for state-appointed trustees, where a 10 percentage point increase in their proportion is related to investing in PE funds with 0.28 to 0.37 lower sequence number. Importantly, in Table 10, we control for local in-state investments as well as indicators for different fund types. We thus document a third channel through which the investments made by state-appointed, state-exofficio and participant-elected trustees differ from other pension funds – these trustees select poorly-performing managers even when investing outside of their own state and the differences are not due to overweighting some PE fund sub-categories.[29]

How much of the poor performance of state-appointed, state-exofficio and participant-elected trustees within asset classes that we explored in Table 7 can be explained by controlling for the overweighting of in-state investments in real estate and VC and selection of small funds with fewer investors and a lower sequence number? In other words, how much does overweighting of in-state investments and selection of small funds with few investors and low sequence numbers contribute to

---

[29] Our results are also robust to controlling for percentage allocated to private equity and alternative assets from total pension fund assets. If some pension funds allocate a larger share of their assets to private equity, and if the universe of investments available to them is limited, those with higher allocations may take on more marginal investments. In Online Appendix D, we use the Pensions & Investments (P&I) asset allocation data for the largest pension funds to explore this alternative explanation. We find no evidence that the percentage allocated to private equity is related to choices of asset category, performance within category, or characteristics of funds. Addition of these controls does not affect the magnitude on the board composition variables.

underperformance above and beyond the 20-30% of the performance differentials that is explained by allocation to worse-performing categories such as real estate and fund-of-funds that we calculated in Table 7?

Table 11 presents regressions in which the dependent variable is again the performance of public pension funds and estimates can be compared to Table 4 as well as Table 7 columns (1) and (2). We note that we cannot include *Fund size* and *#Investors* in the same regression as these two variables are highly correlated. The number of observations is lower in columns (3), (4), (7) and (8) because fund size is missing for some investments.

The three characteristics that we identified are significantly negatively related to performance and explain larger part of the underperformance by state-appointed, state-exofficio and participant-elected board members. Similar to Table 7, in Table 11 we observe that investing in real estate and fund-of-funds is negatively related to performance. However, the underperformance is especially large among local in-state real estate investments. Based on column (5), local real estate investments deliver 0.371 (=-0.288-0.083) lower multiple of invested capital (37 percent of capital). Local investments in VC funds also deliver lower returns. Variables *#Investors* and *Fund size*, as expected, proxy for better performing investments that were selected by multiple LPs. For instance, based on column (3) a one-unit increase in the log of PE fund size (doubling the fund size) is associated with 1.024 percentage points higher net IRR. The sequence number, that proxies for GP's experience is positive, but not always significantly related to returns.

Even after controlling for all these variables, still we observe significant underperformance by pension fund boards heavily populated by state-appointed, state-exofficio and participant-elected trustees. In Figure 3, we compare the coefficients reported in Table 11 Column (1) with the coefficients reported in Table 4 Column (1) and Table 7 Column (1). We conclude that our proxies for poor investment decisions explain approximately 50 to 60 percent of the performance differential. Namely, the coefficient on state-appointed board members is reduced from -9.148 in Table 4 to -6.248 in Table 7 (controls for allocation differences) and further to -3.679 in Table 11 (additional controls for in-state investments and funds

shunned by other LPs). Therefore, while we find evidence that supports the *Control* channel, we conclude that there appear to be multiple failures in the asset management decisions of pension funds governed by state-appointed, state-exofficio and participant-elected trustees.

A causal relationship between political representation and poor performance would imply the policy conclusion that a given board could improve performance by choosing to replace government officials and appointees with more independent board members from the public or from participants. For the results to be driven by omitted variables that are correlated with both board structure and performance, it would have to be the case that in funds with many political board members, the members of the public or participants would replace them would also underperform in private equity investment, which could be the case due if the pools of possible appointees differ in quality by state. In the absence of natural experiments in board construction, we conduct a falsification exercise in which we examine whether the performance of corporate pension funds, foundations and endowments in states with lots of political trustees on the public boards underperform relative to those in states whose public funds have very few political public fund trustees (see Online Appendix Table E.1). Our finding that other institutions perform no worse in the states with heavy political representation on the public boards shows that there is a pool of potential public appointees that is just as good as in the states without political trustees.

6. Experience, Skills and Performance

The *Control* channel-related factors we have explored up to this point explain about half of the poor performance by boards with heavy representation of state trustees. We now turn to examine the remaining two channels: *Confusion* and *Corruption*. We begin by exploring the extent to which the results are driven by varying financial expertise and experience across the types of board members (the *Confusion* channel).

In Table 3 we saw that different categories of trustees have various backgrounds. In Table 12, we use the biographical data on the individual board members to explore whether different skill sets explain the underperformance. For this analysis, we obtained background data for the 41 largest LPs in our sample.

These LPs account for 7,913 out of 11,506 observations with net IRR data; and for 8,002 out of 11,778 observations with data on multiples. Thus, we match more than two-thirds of the investments.

Table 12 presents regressions in which the dependent variable is the performance of U.S. public pension funds during the 1990-2011 period. When analyzing board member characteristics, we focus on the prior professional experience of the trustees. In particular, we measure the percentage of trustees with prior *Asset Management*, *Financial* and *Related* professional experience. *Executive Experience* measures the percentage of board members with prior executive experience in the private sector, while *Union Members* is the percentage of pension fund trustees who are union members.

Table 12 suggests that prior professional experience is related to performance. Pension funds governed by a higher percentage of trustees with asset management experience, financial experience or related experience obtain higher returns on their PE investments. In columns (3) and (7), we estimate the relationship between performance and prior experience using LP fixed effects.[30] The coefficients on the three variables measuring prior experience remain highly significant, indicating that even within a particular pension fund, adding more board members with prior experience is positively related to performance. Comparing column (1) to (4), we see that the negative performance of participant elected trustees is fully explained by a financial experience effect.

To illustrate the magnitude of these coefficients, consider two similar pension funds governed by a five-member board with the same composition of trustees. Fund A has two board members with prior asset management experience, whereas Fund B has only one board member with such experience. Based on columns (4) and (8), Fund A will select PE investments that deliver 1.65 (=1/5*8.265) percentage points higher net IRR and 5.68 (=1/5*0.284) percent higher multiple of capital than the investments selected by Fund B.

---

[30] In the other tables and columns, we do not use LP fixed effects, because the time series variation of board composition is limited as only 37 public pension funds experience a change in overall board composition during our sample period, while 173 funds maintain the same board structure and size over time.

In Table 12, we focus on the variables measuring valuable prior professional experience, because our model estimates indicate that this is the most important characteristic of the board members. In the Online Appendix Table F.1, we compare the importance of prior experience with education variables and document that the education variables are not significantly related to performance after controlling for past professional career experience.

We conclude that lower financial skills can almost entirely explain the underperformance of participant-elected trustees, but do not explain the lower returns of state-appointed and state-exofficio trustees. Indeed, the coefficients on these state trustee groups are, if anything, *larger* in column (4) of Table 12 than in column (1). The main reason for this, based on the summary statistics, is likely due to state-appointed and state-exofficio trustees having relatively high prior financial skills and experience. Thus, we find no support for the *Confusion* channel.

7. Political Contributions and Performance

Our last set of tests examine the relationship between fund performance and political contributions to the campaigns of elected officials, especially from the finance industry. We focus on the political contributions received by pension fund board members when they participated in political elections on a local, state or federal level. In Table 13, *Political Elections* measures the percentage of pension fund trustees who have participated in political elections before or during their tenure as pension fund board members. The political contribution variables capture contributions to board members who serve as elected officials or participate in political elections during their tenure as a pension fund board member. We thus match a given individual's tenure as a board member to simultaneous involvement in politics in order to more precisely capture potential political incentives and agency conflicts.

We use political contributions from the finance industry as a proxy for opportunistic incentives and focus on two variables. First, *FinanceContrib / LP size* measures contributions from the finance industry relative to the assets under management by the LP. When estimating this ratio, the contributions from the

finance industry are expressed in $ million and the LP assets under management are expressed in $ billion. Second, *%Finance Contributions* measures political contributions received from institutions in the finance industry as a percentage of total contributions. We control for the natural logarithm of the total contributions, board composition and prior professional experience of the trustees. In the analysis, we use only the sub-sample of observations during 1999-2011 time period, when the political contributions data provides broad coverage.[31]

Table 13 shows the results of the regression analysis including the trustee categories and the contributions variables. Overall, our proxies for political incentives appear to be negatively related to performance. Pension funds managed by trustees who have received relatively more contributions from the financial industry have lower returns. The ratio of finance contributions to LP size enters significantly and robustly in all specifications. Its magnitude in the second column suggests that for an additional $100,000 of financial contributions, a $10 billion pension fund would have worse performance by 0.27 net IRR percentage points. Adding prior professional experience controls does not materially attenuate the result. The second proxy measuring contributions received from the finance industry as a percentage of total contributions is significantly negatively related to the multiple of invested capital. The vast majority of trustees who receive political contributions are state board members and controlling for political contributions explains part of their underperformance. While the significance and magnitude of the effect of state trustees is slightly reduced, our measure of political connections based on campaign contributions from the finance industry does not explain all of the basic difference in performance. These results indicate that at least some of the underperformance of the elected officials relates to political incentives, and to the extent that politicians derive personal gain from political contributions, support the *Corruption* channel.

---

[31] Before 1998, the website Follow the Money provides political contributions for elections on a state and local level only in several states. As of 1998, the data covers elections in every U.S. state. We exclude year 1998 from the analysis because if the incumbent politician, who serves as a trustee, did not run for re-election in that election cycle than we will not have political contributions for this board member. For instance, we have no contributions data for the governor of Florida (who sits on the Florida State Board of Administration) before 1999, even though we are certain that the governor received political contributions during the election campaign.

Importantly, our political contributions proxy captures only one of the channels through which poor incentives can affect performance. There are also other channels. For example, many state-appointed and state-exofficio trustees are appointed to their position by another government official who serves in a higher position in the hierarchy. We do not control for the incentives of that person. Another potential channel is that a financial institution provides contributions to the political party and the political party donates to the candidate.

8. Conclusion

In this paper, we examine the effect of political representatives on governance and decision-making in organizations. We exploit variation in board composition across public pension funds at a given point in time and examine their performance in private equity investments. We find that pension funds governed by boards heavily populated by state-appointed, state-exofficio and participant-elected trustees invest in PE funds that deliver lower net IRR and multiple of invested capital.

We find support for two potential channels that explain the underperformance by boards of trustees that are heavily populated by politicians or political appointees. First, we document three failures that explain approximately half of the underperformance of pension funds with boards heavy in state-appointed and state-exofficio members. First, such pension funds invest more in real estate and funds of funds, which are categories that have delivered lower returns. Second, these board members overweight local in-state investments in real estate and VC, which negatively affects performance. Third, poorly governed pension funds are more likely to invest in small funds with few other investors and managed by inexperienced GP. These results lend support to a *Control* channel, whereby political representatives direct investment into PE funds that may be perceived as supportive of state economic development but that are not part of a financial strategy of maximizing expected return subject to a given level of risk, or minimizing risk subject to a given level of expected return.

Second, part of the underperformance by state officials can be explained by controlling for the political contributions received from the finance industry relative to the pension fund assets under management. We document that pension funds governed by board members who have received relatively more contributions from the finance industry obtain lower returns. To the extent to that politicians derive personal gain from political contributions, these findings support a *Corruption* channel.

In contrast, when we exploit variation in professional experience of the board members across pension funds at a given point in time, we find no support for a *Confusion* channel whereby differences in performance are driven by a lack of knowledge, skills or experience. Prior asset management, financial or related experience is valuable and is associated with selection of PE funds that deliver higher performance. Low prior financial experience explains the poor performance by boards with high proportion of participant elected board members, but does not explain the underperformance of state-appointed and state-exofficio trustees.

In some ways, our results about the impact of politicians on public asset management boards contrast with the literature that studies the effects of politicians on corporate boards. The corporate literature finds that when politicians serve on boards, they bring benefits to the shareholders of the firms, either through enhanced access to procurement contracts or a lower cost of capital, thereby aiding the board in its primary objective of creating shareholder value. In the public pension investing context, the presence of politicians on boards appears to work against pension funds' primary objective of delivering the benefits promised to the participants as efficiently as possible for taxpayers. In other ways, however, the results can be viewed as consistent. Indeed, both the benefits to firms with political board representation and the costs to public pension systems with political board representation may be paid for to a large extent by taxpayers.

References:

Acemoglu, D., S. Johnson, A. Kermani, J. Kwak, and T. Mitton (2016). The value of connections in turbulent times: Evidence from the United States. *Journal of Financial Economics 121* (2), 368–391.

Adams, R. B., B. E. Hermalin, and M. S. Weisbach (2010). The role of boards of directors in corporate governance: A conceptual framework and survey. *Journal of Economic Literature 48* (1), 58-107.

Agrawal, A. K. (2012). Corporate governance objectives of labor union shareholders: Evidence from proxy voting. *Review of Financial Studies 25* (1), 187-226.

Akey, P. (2015). Valuing changes in political networks: Evidence from campaign contributions to close congressional elections. *Review of Financial Studies 28* (11), 3188-3223.

Amore, M. D., and M. Bennedsen (2013). The value of local political connections in a low-corruption environment. *Journal of Financial Economics 110* (2), 387-402.

Andonov, A., R. Bauer, and M. Cremers (2016). Pension fund asset allocation and liability discount rates. Working Paper: *Erasmus University Rotterdam*.

Bernstein, S., J. Lerner, and A. Schoar (2013). The investment strategies of sovereign wealth funds. *The Journal of Economic Perspectives 27* (2), 219-238.

Bortolotti, B., V. Fotak, and W. L. Megginson (2015). The sovereign wealth fund discount: Evidence from public equity investments. *Review of Financial Studies 28* (11), 2993-3035.

Bradley, D., C. Pantzalis, and X. Yuan (2016). The influence of political bias in state pension funds. *Journal of Financial Economics 119* (1), 69-91.

Brogaard, J., M. Denes, and R. Duchin (2015). Political connections, incentives and innovation: Evidence from contract-level data. Working Paper: *University of Washington*.

Chaney, P. K., M. Faccio, and D. Parsley (2011). The quality of accounting information in politically connected firms. *Journal of Accounting and Economics 51* (1), 58-76.

Chevalier, J. and G. Ellison (1999). Are some mutual fund managers better than others? Cross-sectional patterns in behavior and performance. *The Journal of Finance 54* (3), 875-899.

Claessens, S., E. Feijen, and L. Laeven (2008). Political connections and preferential access to finance: The role of campaign contributions. *Journal of Financial Economics 88* (3), 554-580.

Cocco, J. F. and P. F. Volpin (2007). Corporate governance of pension plans: the UK evidence. *Financial Analysts Journal 63* (1), 70-83.

Cooper, M. J., H. Gulen, and A. V. Ovtchinnikov (2010). Corporate political contributions and stock returns. *The Journal of Finance 65* (2), 687-724.

Coronado, J. L., E. M. Engen, and B. Knight (2003). Public funds and private capital markets: The investment practices and performance of state and local pension funds. *National Tax Journal*, 579-594.

Del Guercio, D. and J. Hawkins (1999). The motivation and impact of pension fund activism. *Journal of Financial Economics 52* (3), 293-340.

Dewenter, K. L., X. Han, and P. H. Malatesta (2010). Firm values and sovereign wealth fund investments. *Journal of Financial Economics 98* (2), 256-278.

Dinç, I. S. (2005). Politicians and banks: Political influences on government-owned banks in emerging markets. *Journal of Financial Economics 77* (2), 453-479.

Duchin, R. and D. Sosyura (2012). The politics of government investment. *Journal of Financial Economics 106* (1), 24-48.

Faccio, M. (2006). Politically connected firms. *The American Economic Review 96* (1), 369-386.

Faccio, M., R. W. Masulis, and J. McConnell (2006). Political connections and corporate bailouts. *The Journal of Finance 61* (6), 2597-2635.

Fang, L., V. Ivashina, and J. Lerner (2015). The disintermediation of financial markets: Direct investing in private equity. *Journal of Financial Economics 116* (1), 160-178.

Federal Reserve (2015). Financial accounts of the United States. *Release Z.1*.

Fisman, R. (2001). Estimating the value of political connections. *The American Economic Review 91* (4), 1095-1102.

Fisman, R., F. Schulz, and V. Vig (2014). The private returns to public office. *Journal of Political Economy 122* (4), 806-862.

Fisman, R., and Y. Wang (2015). The Mortality Cost of Political Connections. *The Review of Economic Studies 82* (4), 1346-1382.

Goldman, E., J. Rocholl, and J. So (2009). Do politically connected boards affect firm value? *Review of Financial Studies 22* (6), 2331-2360.

Goldman, E., J. Rocholl, and J. So (2013). Politically connected boards of directors and the allocation of procurement contracts. *Review of Finance 17* (5), 1617-1648.

Hochberg, Y. and J. Rauh (2013). Local overweighting and underperformance: Evidence from limited partner private equity investments. *Review of Financial Studies 26* (2), 403-451.

Johnson, S. and T. Mitton (2003). Cronyism and capital controls: Evidence from Malaysia. *Journal of Financial Economics 67* (2), 351-382.

Kaplan, S. and A. Schoar (2005). Private equity performance: Returns, persistence, and capital flows. *The Journal of Finance 60* (4), 1791-1823.

Kempf, E., A. Manconi, and O. G. Spalt (2014). Learning by doing: The value of experience and the origins of skill for mutual fund managers. Working Paper: *Tilburg University*.

Khwaja, A. I., and A. Mian (2005). Do lenders favor politically connected firms? Rent provision in an emerging financial market. *The Quarterly Journal of Economics 120* (4), 1371-1411.

Korniotis, G. M. and A. Kumar (2011). Do older investors make better investment decisions? *The Review of Economics and Statistics 93* (1), 244-265.

Kotter, J., and U. Lel (2011). Friends or foes? Target selection decisions of sovereign wealth funds and their consequences. *Journal of Financial Economics 101* (2), 360-381.

Lerner, J., A. Schoar, and W. Wongsunwai (2007). Smart institutions, foolish choices: The limited partner performance puzzle. *The Journal of Finance 62* (2), 731-764.

Mitchell, O. S. and P.-L. Hsin (1999). Public pension governance and performance. *In Salvador Valdes Prieto, ed. The Economics of Pensions: Principles, Policies, and International Experience*, 92-126.

Mitchell, O. S. and T. Yang (2008). Public pension governance, funding, and performance: a longitudinal appraisal. *In J. Piggott (eds.) Pension Fund Governance: A Global Perspective on Financial Regulation*, 179-200.

Novy-Marx, R. and J. Rauh (2014). The revenue demands of public employee pension promises. *American Economic Journal: Economic Policy 6* (1), 193-229.

Novy-Marx, R. and J. D. Rauh (2009). The liabilities and risks of state-sponsored pension plans. *The Journal of Economic Perspectives 23* (4), 191-210.

Novy-Marx, R. and J. D. Rauh (2011). Public pension promises: How big are they and what are they worth? *The Journal of Finance 66* (4), 1211-1249.

Petersen, M. A. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. *Review of Financial Studies 22* (1), 435-480.

Phalippou, L. and O. Gottschalg (2009). The performance of private equity funds. *Review of Financial Studies 22* (4), 1747-1776.

Sensoy, B. A., Y. Wang, and M. S. Weisbach (2014). Limited partner performance and the maturing of the private equity industry. *Journal of Financial Economics 112* (3), 320-343.

Shleifer, A. (1996) Origins of Bad policies: Control, corruption and confusion. *Rivista di Politica Economica 86* (6), 103-124.

Shleifer, A., and R. Vishny (1994). Politicians and Firms. *The Quarterly Journal of Economics 109* (4), 995-1025.

Stigler, G. J. (1971). The Theory of Economic Regulation. *Bell Journal of Economics and Management Science* 2(1), 3-21.

Useem, M. and O. S. Mitchell (2000). Holders of the purse strings: Governance and performance of public retirement systems. *Social Science Quarterly 81* (2), 489-506.

Figure 1: **Histograms of board composition**

Percentage of state-appointed

Percentage of state-exofficio

Percentage of participant-appointed

Percentage of participant-elected

Percentage of public-appointed

43
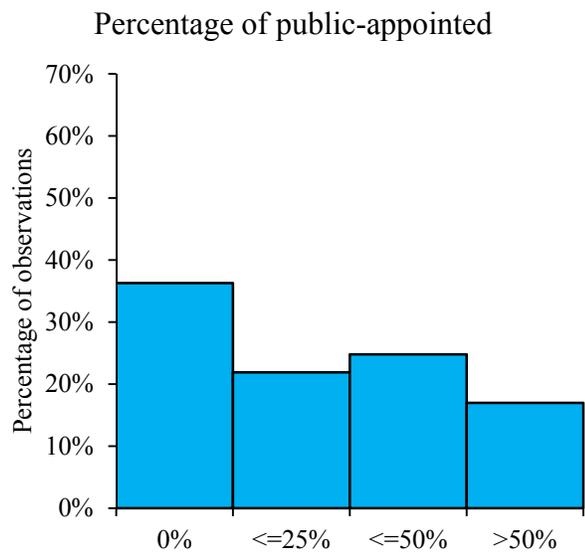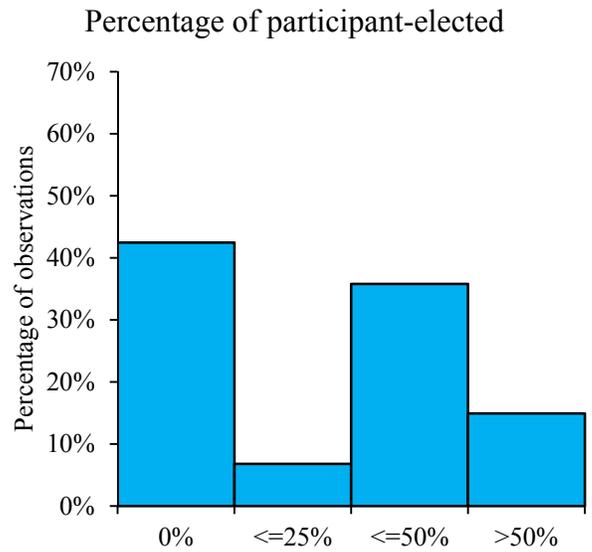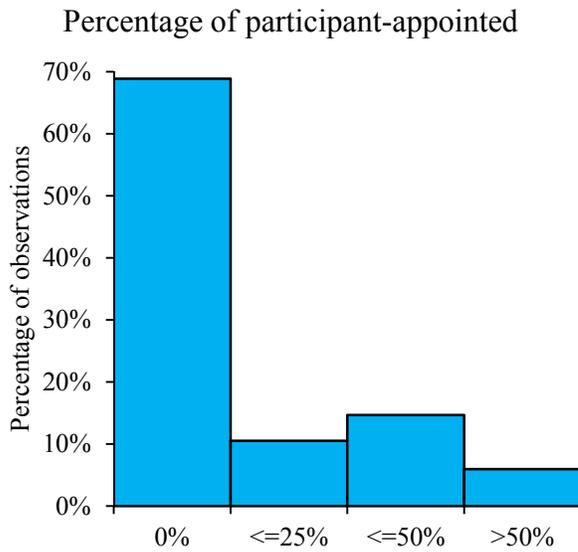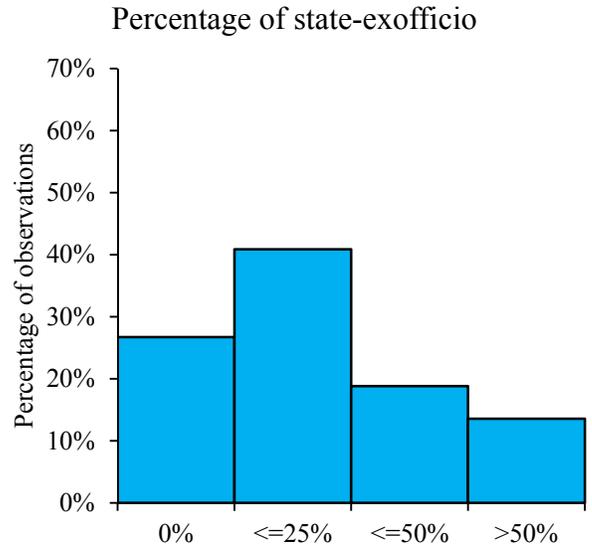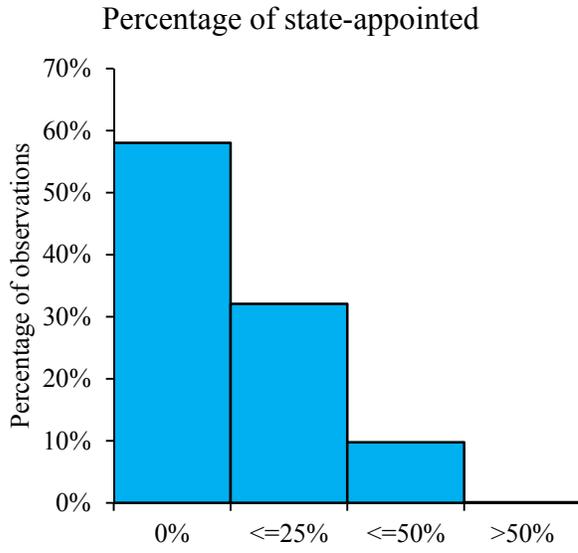
Figure 2: **Board composition and performance distribution (Value-at-Risk analysis)**

This figure presents the distribution of returns for the five main categories of board members and resembles a value-at-risk analysis. The observation is an LP-investment. The performance is measured using either the net internal rate of returns (IRR) minus [vintage x fund type] group mean or the multiple of invested capital minus [vintage x fund type] group mean. When calculating the group means, we include investments made during the 1990-2011 period and we split the investments in the following fund types: real estate, natural resources, buyout, venture capital, fund-of-funds and other private equity funds. State-appointed and State-exofficio measure the percentage of appointed or ex-officio board members who are government officials, i.e. of the state, city or other public entity. Participant-appointed captures the percentage of board members appointed from the plan participants. Participant-elected captures the percentage of board members elected by plan participants. Public-appointed measures the percentage of board members appointed from the general public. For every category, we split the observations in three groups. The first group includes investments made by a board that has no members belonging to that category. The second group includes investments made by a board that has a below median percentage of members belonging to that category. Finally, the third group includes investments made by a board that has an above median percentage of board members belonging to that category.

44
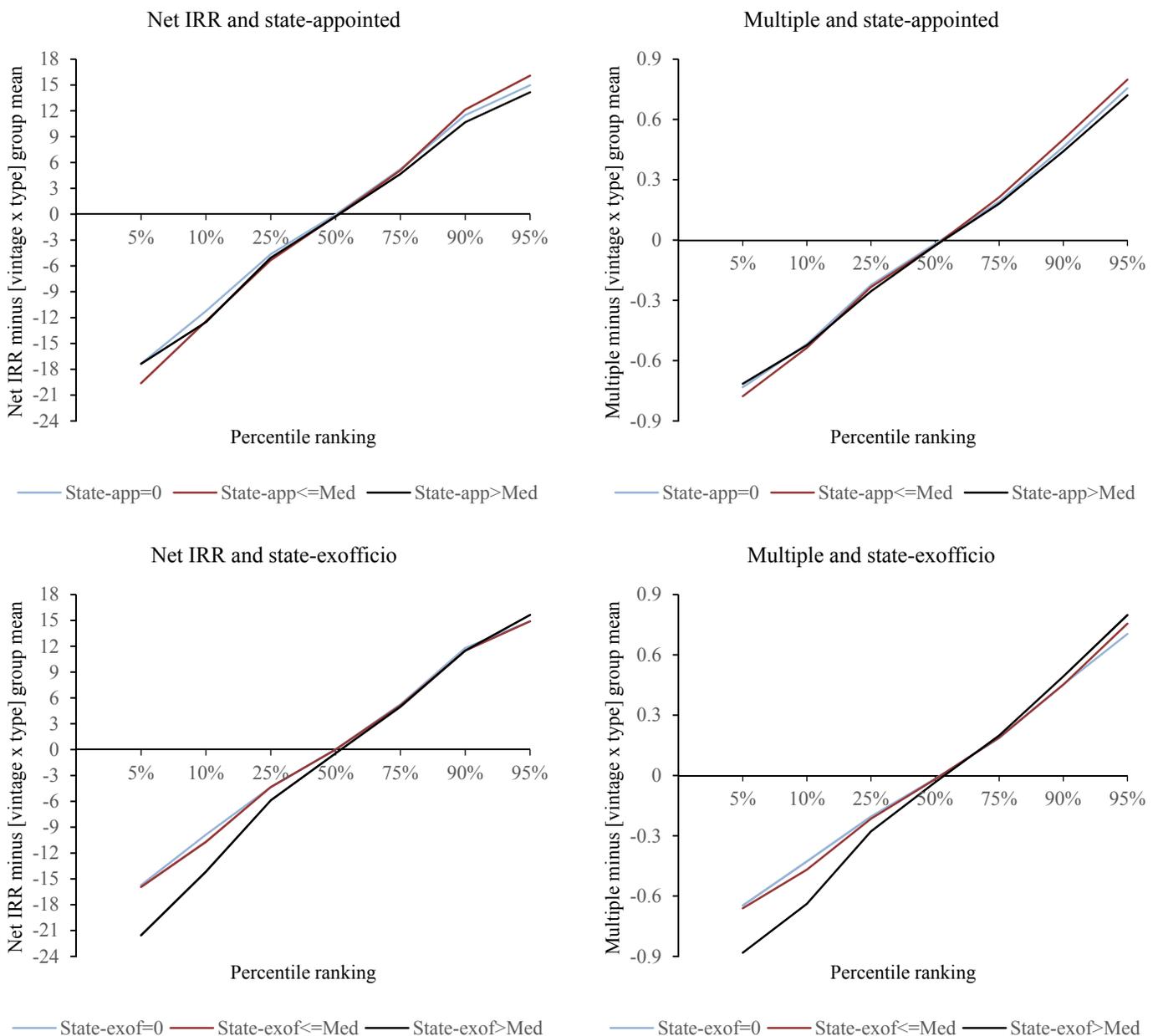
Net IRR and participant-appointed
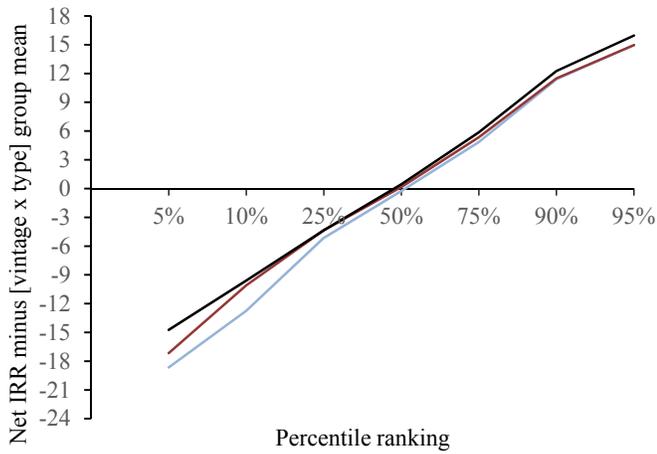
Multiple and participant-appointed
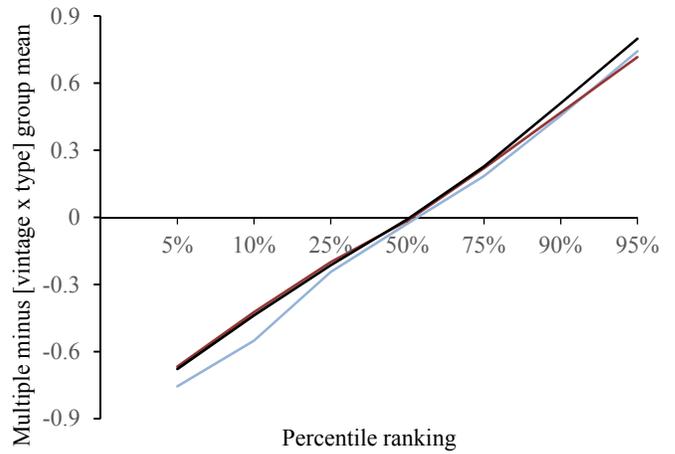
Net IRR and participant-elected
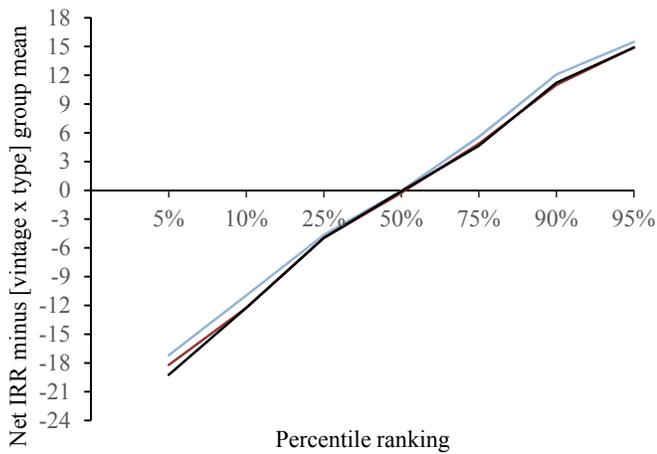
Multiple and participant-elected
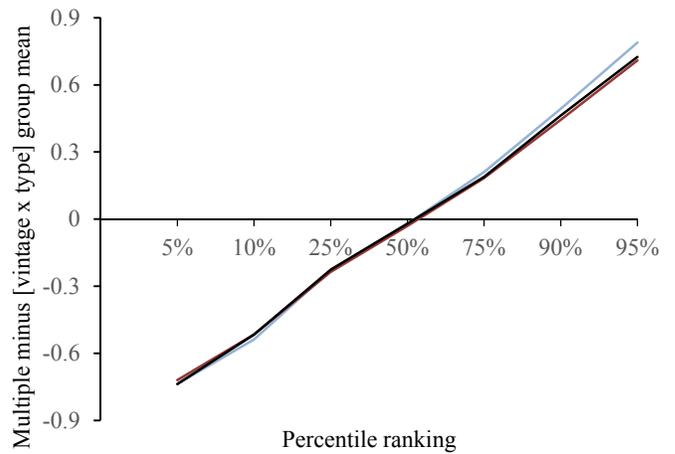
Net IRR and public-appointed
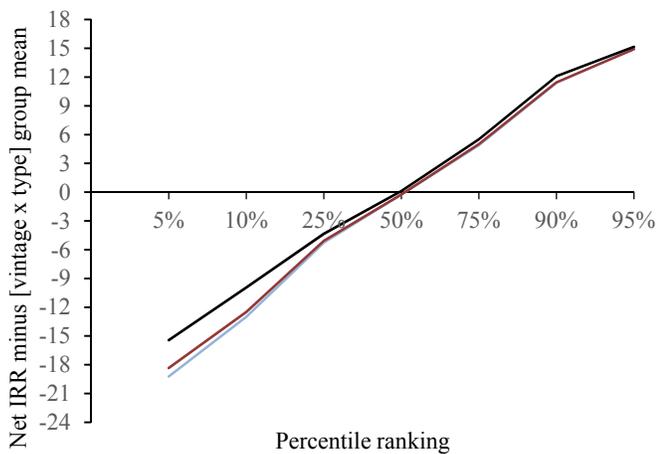
Multiple and public-appointed
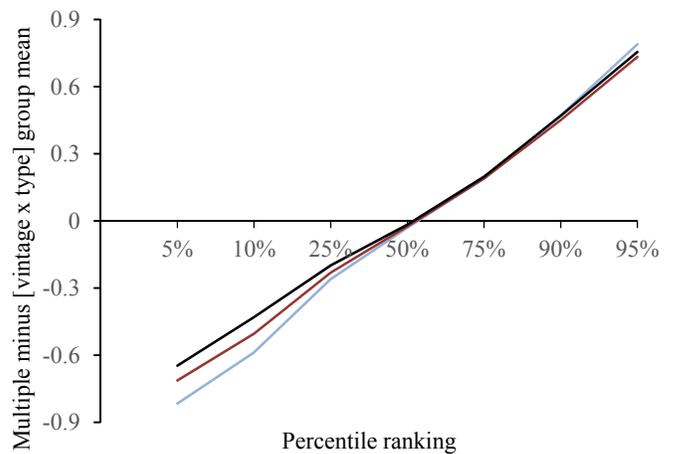
Figure 3: **Explaining pension fund performance: Comparison of coefficient estimates**

Panel A: Board composition and net IRR

Panel B: Board composition and multiple of invested capital
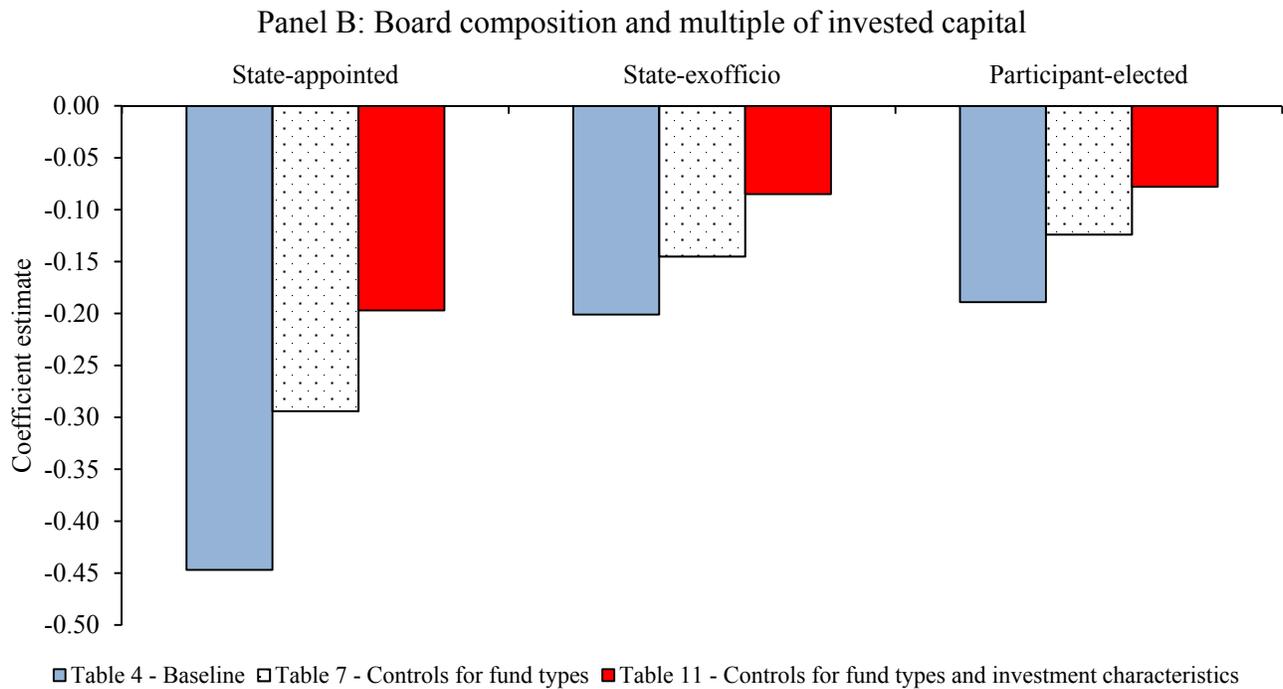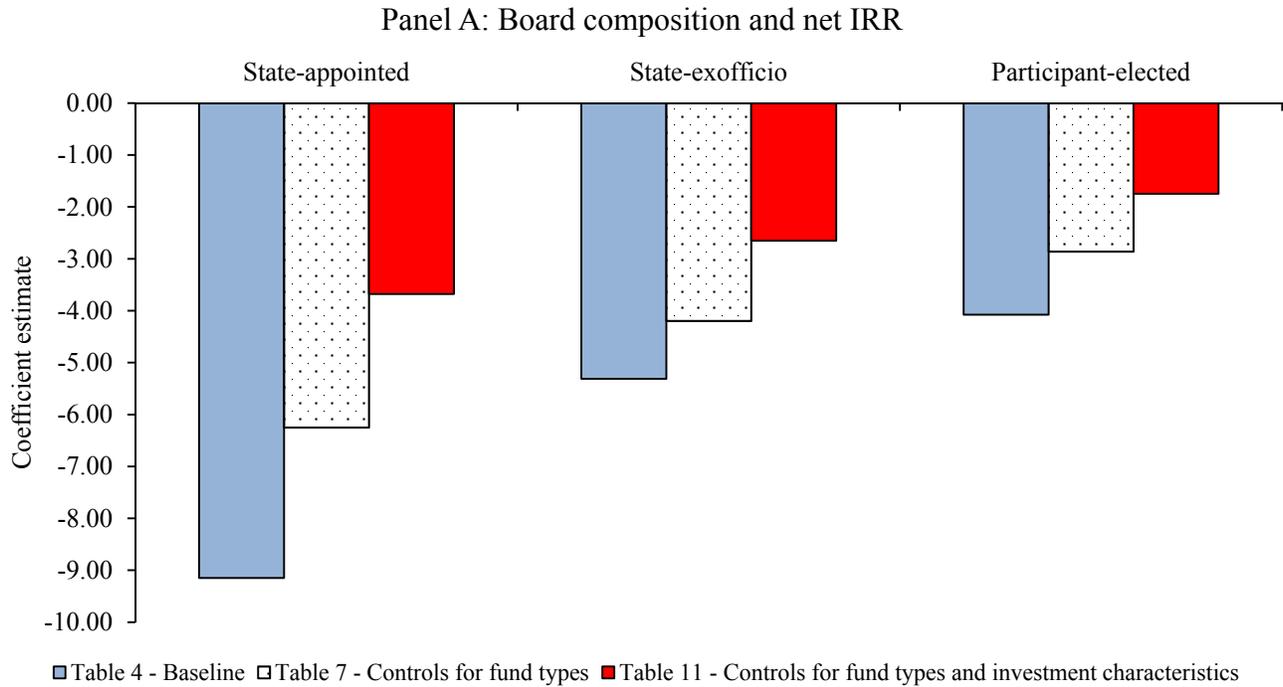
Table 1: **Summary statistics: Pension fund board composition and their investments**

Panel A presents summary statistics for the pension fund board composition. We match the board composition data of 210 pension funds with 13,405 investments during the 1990-2011 period. Board size and LP AUM ($ mil.) present summary statistics for the number of board members and the pension fund (LP) assets under management in million dollars. In Panel A, columns *LPs* and *Investments* present the number of pension funds and corresponding investments that have at least one board member belonging to that category. We split the board members into three categories. *State* measures the percentage of board members who are government officials, i.e. of the state, county, city or other public entity. State trustees can be appointed by a government executive (*State-appointed*), serve as an ex-officio member by the virtue of holding another government position (*State-exofficio*) or elected to the board by plan participants (*State-elected*). *Participant* measures the percentage of board trustees who are currently employed and retired plan participants. Board members representing plan participants can be appointed to the board (*Participant-appointed*), serve as an ex-officio member (*Participant-exofficio*), or elected by plan members (*Participant-elected*). *Public* measures the percentage of board members who are members of the general public and do not work for the state or participate in the pension plan. General public board members can be appointed to the board (*Public-appointed*), serve as an an ex-officio member (*Public-exofficio*), or elected to the board by plan members (*Public-elected*). *Mean* and *Median* present the average and median percentage representation of every board category. *SD* column shows the standard deviation of every board group. Panel B presents summary statistics for the key performance measures, net IRR, and multiple of invested capital, for the subsamples of the 13,405 total investments for which these performance related date items are available. We also show the size of the commitments in million dollars, size of the funds in which the LPs invest in million dollars, the total number of investors in the private equity fund and the sequence number of the private equity fund. *In-state* is an indicator equal to one if the general partner is located in the same state as the pension fund (LP).

	LPs	Investments	Mean	Median	SD
Panel A: Pension fund board composition					
Board size	210	13,405	9.277	9.000	4.736
LP AUM ($ mil.)	210	13,405	43,834	24,800	51,962
State	194	11,496	0.343	0.286	0.290
State-appointed	117	5,625	0.076	0.000	0.115
State-exofficio	165	9,823	0.254	0.167	0.302
State-elected	4	325	0.013	0.000	0.084
Participant	197	11,236	0.403	0.444	0.229
Participant-appointed	49	4,173	0.116	0.000	0.208
Participant-exofficio	9	637	0.017	0.000	0.079
Participant-elected	164	7,712	0.270	0.286	0.261
Public	162	8,847	0.255	0.222	0.245
Public-appointed	159	8,539	0.245	0.200	0.243
Public-exofficio	1	268	0.002	0.000	0.011
Public-elected	4	310	0.008	0.000	0.056
Panel B: Pension fund investments					
Net IRR		11,506	10.410	9.900	17.612
Multiple		11,778	1.434	1.350	0.875
Commitment ($ mil.)		11,387	60	30	104
Fund size ($ mil.)		12,111	2,240	875	3,375
#Investors		13,405	26.335	17.000	25.706
#Sequence		12,343	4.098	4.000	2.666
In-state		13,405	0.172	0.000	0.378

Table 2: **Summary statistics: Percentage allocated to fund types**

This table shows summary statistics for the percentage allocated to different fund types during the 1990-2011 period. The analysis is at the LP-vintage level. We estimate the statistics either based on the number of investments or weighted by the commitments. Using the number of investments results in 1,570 LP-vintage observations, whereas using the commitments data results in 1,334 LP-vintage observations. We split the funds in three types: *%PE*, private equity funds; *%RE*, real estate funds; and *%NR*, natural resources funds. Within private equity we distinguish between buyout (*%BO*), venture capital (*%VC*), fund-of-funds (*%FOF*) and other (*%Other*) funds. Other funds capture investments in distressed debt, secondaries, coinvestments, hybrid and balanced funds. Within private equity, using the number of investments results in 1,397 LP-vintage observations, whereas using the commitments data results in 1,210 LP-vintage observations. In real estate, we distinguish between direct investments in real estate funds (*%Direct*) or investing through fund-of-funds (*%FOF*). Within real estate, using the number of investments results in 958 LP-vintage observations, whereas using the commitments data results in 739 LP-vintage observations.

Based on:	Number of investments			USD commitments		
	Mean	Median	SD	Mean	Median	SD
Panel A: Fund types						
%PE (Private equity)	0.712	0.800	0.319	0.713	0.821	0.328
%RE (Real estate)	0.257	0.143	0.314	0.254	0.111	0.323
%NR (Natural resources)	0.031	0.000	0.097	0.033	0.000	0.108
Panel B: Private equity subcategories						
%BO (Buyout)	0.418	0.467	0.325	0.464	0.501	0.349
%VC (Venture capital)	0.227	0.167	0.275	0.169	0.056	0.258
%FOF (Fund-of-funds)	0.185	0.000	0.321	0.190	0.000	0.331
%Other	0.170	0.083	0.240	0.178	0.067	0.254
Panel C: Real estate subcategories						
%Direct	0.981	1.000	0.122	0.982	1.000	0.113
%FOF (Fund-of-funds)	0.019	0.000	0.122	0.018	0.000	0.113

Table 3: **Summary statistics: Experience and political engagement of board members**

Panel A shows summary statistics for the skills and professional experience of pension fund board members that served during the 1990-2011 period. We collect background data for the trustees of 41 pension funds (LPs) and match it to the 9,064 investments made by these LPs (8,393 investments with return data). When presenting the summary statistics by person, we assign an equal weight to every trustee. *#Trustees* refers to the number of trustees matched with background data, while *Vacant* refers to the number of positions that remained vacant. Variables *Asset Management*, *Financial* and *Related* are indicators that capture prior asset management, financial or related professional experience. *Executive* and *Private Sector Experience* are indicators for prior executive experience or other experience in the private sector. In the public sector, we distinguish between experience in political elections (*Political Elections*) or just working in the public sector (*Public Sector Experience*). *Union Members* is an indicator for union membership. Education related variables *CFA*, *Relevant Degree*, and *MBA* are indicators for Chartered Financial Analyst professional credential, relevant educational degree and master degree in business administration. *Educational Attainment* is an ordinal variable equal to 0 for not obtaining a bachelor degree, 1 for bachelor, 2 for master and 3 for obtaining PhD degree. When presenting the summary statistics by pension fund (on an LP-investment level), we calculate the averages of all trustees sitting on the board in the year of the observation. Panel B presents summary statistics of the political contributions received by the board members during the 1999-2011 period. *#Receive* shows the number of trustees who have received political contributions. *Total Contributions* is the sum of political contributions received by the trustees in that election cycle in $ million, while *Finance Contributions* is the sum of contributions from the finance industry. *FinanceContrib / LP size* presents the contributions from the finance industry relative to the assets under management by the LP. When estimating this ratio the contributions from the finance industry are expressed in $ million and the LP assets under management are expressed in $ billion. Variable *%Finance Contributions* measures the political contributions received from institutions in the finance industry as a percentage of the total political contributions in that election cycle.

| | Statistics by person | | | | | | Statistics by fund | | |
	All trustees	State appointed	State exofficio	Participant appointed	Participant elected	Public appointed	Mean	Median	SD
Panel A: Experience and skills of board members (1990-2011)									
#Trustees	1,057	93	228	147	264	305			
Vacant	17	2	0	1	1	13			
Asset Management Experience	0.210	0.215	0.176	0.088	0.068	0.423	0.203	0.143	0.204
Financial Experience	0.147	0.097	0.106	0.102	0.042	0.295	0.146	0.091	0.205
Related Experience	0.370	0.495	0.568	0.490	0.243	0.230	0.395	0.333	0.243
Executive Experience	0.323	0.333	0.211	0.136	0.023	0.751	0.284	0.273	0.207
Private Sector Experience	0.198	0.280	0.339	0.156	0.095	0.177	0.225	0.167	0.230
Political Elections	0.224	0.570	0.617	0.102	0.015	0.062	0.262	0.200	0.304
Public Sector Experience	0.410	0.344	0.379	0.571	0.481	0.311	0.414	0.417	0.252
Union Members	0.211	0.022	0.018	0.320	0.564	0.052	0.232	0.222	0.204
CFA	0.023	0.032	0.013	0.000	0.015	0.046	0.022	0.000	0.068
Relevant Degree	0.375	0.387	0.326	0.320	0.167	0.600	0.390	0.333	0.259
MBA	0.128	0.108	0.141	0.048	0.057	0.223	0.128	0.091	0.170
Educational Attainment	1.548	1.613	1.727	1.476	1.314	1.659	1.600	1.571	0.385
Panel B: Political contributions received by board members (1999-2011)									
#Receive	133	31	97	3	0	1			
Total Contributions	2.949	0.616	3.864	0.154		0.078	5.395	0.100	13.246
Finance Contributions	0.355	0.088	0.460	0.009		0.019	0.727	0.015	1.762
FinanceContrib / LP size	0.006	0.002	0.007	0.000		0.002	0.008	0.000	0.016
%Finance Contributions	0.126	0.132	0.124	0.051		0.238	0.079	0.056	0.093

Table 4: **Regressions: Board composition and performance**

This table presents regressions in which the dependent variable is the performance of U.S. public pension funds during the 1990-2011 period. The observation is an LP-investment. In columns (1) to (4) the performance is measured using the net internal rate of returns (IRR), whereas in columns (5) to (8) the performance is measured using the multiple of invested capital. *State-appointed* and *State-exofficio* measure the percentage of appointed or ex-officio board members who are government officials, i.e. of the state, city or other public entity. *Participant-elected* captures the percentage of board members elected by plan participants. *Public-appointed* measures the percentage of board members appointed from the general public. We also control for the percentage representation by the other types of trustees: State-elected, Participant-exofficio, Public-exofficio and Public-elected. The omitted category is Participant-appointed. We control for the natural logarithm of LP assets under management and board size. *Log%Commitment* is the natural logarithm of the commitment as a percentage of the assets under management. We include vintage year fixed effects and independently double cluster the standard errors by pension fund and by vintage. In columns (2), (3), (4), (6), (7), and (8) we include LP state fixed effects. In columns (4) and (8), we exclude all in-state (local) investments and analyze only investments outside of the LP's own state. We report standard errors in brackets. *, **, and *** indicate significance levels of 0.10, 0.05, and 0.01, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Net IRR			Multiple of invested capital			
State-appointed	-9.148***	-8.768***	-8.543***	-6.959***	-0.447***	-0.399***	-0.277**	-0.270**
	[2.687]	[2.426]	[2.287]	[1.875]	[0.128]	[0.149]	[0.126]	[0.107]
State-exofficio	-5.312***	-6.816***	-5.754***	-5.869***	-0.201***	-0.276***	-0.165***	-0.237***
	[1.581]	[1.529]	[1.035]	[1.221]	[0.077]	[0.090]	[0.048]	[0.067]
Participant-elected	-4.076***	-2.994***	-1.927***	-3.374***	-0.189***	-0.139***	-0.079***	-0.139***
	[1.045]	[0.787]	[0.292]	[0.546]	[0.054]	[0.054]	[0.017]	[0.045]
Public-appointed	-2.600**	-1.371**	-0.048	-1.060	-0.110*	-0.052	0.058	-0.040
	[1.206]	[0.654]	[1.190]	[0.839]	[0.061]	[0.059]	[0.064]	[0.052]
LP size	0.224	0.338*	0.407	0.425***	0.014**	0.024***	0.014	0.026***
	[0.178]	[0.173]	[0.425]	[0.161]	[0.007]	[0.008]	[0.016]	[0.008]
Board size	-0.055	-0.068	-0.055	-0.088	-0.001	-0.001	-0.001	-0.004*
	[0.047]	[0.050]	[0.052]	[0.061]	[0.002]	[0.002]	[0.002]	[0.002]
Log%Commitment			0.177				-0.017	
			[0.736]				[0.033]	
Other trustees	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vintage FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LP state FE	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Observations	11,506	11,506	9,966	9,530	11,778	11,778	10,206	9,762
R-squared	0.088	0.093	0.094	0.098	0.117	0.124	0.131	0.133

Table 5: **Regressions: Board composition and performance**

This table analyzes two sub-sample of pension funds. The board composition of the first group (*No Change*) does not change during the presence of these pension funds in the Preqin data. The second group (*Old Board*) consists of fewer pension funds whose board composition has not changed since 1985 based on legislative records. In the regressions, the dependent variable is the performance of public pension funds during the 1990-2011 period. The observation is an LP-investment. In models (1) and (2) the performance is measured using the net internal rate of returns (IRR), whereas in models (3) and (4) the performance is measured using the multiple of invested capital. *State-appointed* and *State-exofficio* measure the percentage of appointed or ex-officio board members who are government officials, i.e. of the state, city or other public entity. *Participant-elected* captures the percentage of board members elected by plan participants. *Public-appointed* measures the percentage of board members appointed from the general public. We also control for the percentage representation by the other types of trustees: State-elected, Participant-exofficio, Public-exofficio and Public-elected. The omitted category is Participant-appointed. We control for the natural logarithm of LP assets under management and board size. We include vintage year fixed effects and independently double cluster the standard errors by pension fund and by vintage. We report standard errors in brackets. *, **, and *** indicate significance levels of 0.10, 0.05, and 0.01, respectively.

	(1)	(2)	(3)	(4)
	Net IRR		**Multiple**	
	No Change	Old Board	No Change	Old Board
State-appointed	-10.335***	-6.363**	-0.510***	-0.341**
	[3.930]	[3.051]	[0.173]	[0.163]
State-exofficio	-5.838***	-3.948***	-0.236**	-0.137*
	[2.145]	[1.082]	[0.092]	[0.070]
Participant-elected	-2.913**	-2.683***	-0.145**	-0.126**
	[1.152]	[0.951]	[0.058]	[0.049]
Public-appointed	-2.719*	-0.922	-0.139*	-0.060
	[1.496]	[0.985]	[0.074]	[0.057]
LP size	0.317	-0.127	0.016*	-0.006
	[0.223]	[0.173]	[0.009]	[0.010]
Board size	-0.038	-0.104**	0.001	-0.001
	[0.058]	[0.051]	[0.002]	[0.003]
Other trustees	Yes	Yes	Yes	Yes
Vintage FE	Yes	Yes	Yes	Yes
LP state FE	No	No	No	No
Observations	7,697	5,397	7,924	5,524
R-squared	0.085	0.090	0.132	0.129

Table 6: **Regressions: Board composition and allocation to fund types**

This table presents regressions in which the dependent variable is the percentage allocated to different fund types during the 1990-2011 period. The observation is an LP-vintage. In Panel A, the dependent variables are defined based on the number of investments. In Panel B, the percentage allocations are weighted by the commitments. *%RE* is the percentage allocated to real estate investments, while *%PE* is the percentage allocated to private equity investments. In columns (3), (4) and (5) we focus on the subsample of private equity investments. *%BO*, *%VC* and *%FOF* measure the percentage allocated to buyout, venture capital and fund-of-fund investments within private equity. *State-appointed* and *State-exofficio* measure the percentage of appointed or ex-officio board members who are government officials, i.e. of the state, city or other public entity. *Participant-elected* captures the percentage of board members elected by plan participants. *Public-appointed* measures the percentage of board members appointed from the general public. We also control for the percentage representation by the other types of trustees: State-elected, Participant-exofficio, Public-exofficio and Public-elected. The omitted category is Participant-appointed. We control for the natural logarithm of LP assets under management and board size. We include vintage year fixed effects and independently double cluster the standard errors by pension fund and by vintage. We report standard errors in brackets. *, **, and *** indicate significance levels of 0.10, 0.05, and 0.01, respectively.

	(1) %RE	(2) %PE	(3) %BO	(4) %VC	(5) %FOF
Panel A: Percentage allocated based on the number of investments					
State-appointed	0.248*	-0.242*	-0.268*	0.012	0.249
	[0.135]	[0.130]	[0.152]	[0.118]	[0.160]
State-exofficio	0.144**	-0.130*	-0.047	-0.068	0.127**
	[0.071]	[0.072]	[0.084]	[0.074]	[0.064]
Participant-elected	0.203***	-0.187***	-0.094	-0.054	0.156**
	[0.061]	[0.056]	[0.073]	[0.049]	[0.069]
Public-appointed	0.097	-0.078	-0.012	-0.089	0.132*
	[0.076]	[0.076]	[0.094]	[0.085]	[0.073]
LP size	-0.022*	0.024**	0.064***	-0.002	-0.061***
	[0.013]	[0.012]	[0.008]	[0.010]	[0.012]
Board size	-0.001	0.001	0.002	-0.003	-0.002
	[0.003]	[0.003]	[0.005]	[0.004]	[0.003]
Other trustees	Yes	Yes	Yes	Yes	Yes
Vintage FE	Yes	Yes	Yes	Yes	Yes
Observations	1,570	1,570	1,397	1,397	1,397
R-squared	0.127	0.130	0.207	0.155	0.181
Panel B: Percentage allocated based on the commitments					
State-appointed	0.216	-0.247**	-0.166	-0.114	0.325*
	[0.152]	[0.121]	[0.160]	[0.088]	[0.172]
State-exofficio	0.058	-0.047	-0.029	-0.066	0.125*
	[0.084]	[0.078]	[0.089]	[0.069]	[0.068]
Participant-elected	0.204***	-0.205***	-0.125	-0.035	0.196**
	[0.066]	[0.057]	[0.083]	[0.050]	[0.080]
Public-appointed	0.079	-0.067	0.008	-0.093	0.134*
	[0.085]	[0.079]	[0.099]	[0.082]	[0.077]
LP size	-0.004	0.005	0.077***	-0.019*	-0.057***
	[0.011]	[0.010]	[0.009]	[0.011]	[0.014]
Board size	-0.005	0.004	0.003	-0.002	-0.003
	[0.003]	[0.003]	[0.005]	[0.005]	[0.003]
Other trustees	Yes	Yes	Yes	Yes	Yes
Vintage FE	Yes	Yes	Yes	Yes	Yes
Observations	1,334	1,334	1,210	1,210	1,210
R-squared	0.108	0.113	0.203	0.142	0.145

Table 7: **Regressions: Board composition and performance within fund types**

This table presents regressions in which the dependent variable is the performance of U.S. public pension funds during the 1990-2011 period. The observation is an LP-investment. The performance is measured using the net internal rate of returns (IRR). In Online Appendix B, we estimate a robustness test and use the multiple of invested capital as a performance measure. We analyze the performance in all investments as well as separately in real estate (RE) and private equity (PE). In columns (5) and (6), we also distinguish between performance in buyout funds (BO) and venture capital funds (VC) within private equity. RE, NR, VC, FOF and $Other$ are indicator variables for investments in real estate, natural resources, venture capital, fund-of-funds and other private equity funds (the omitted category is buyout funds). We include vintage year fixed effects and independently double cluster the standard errors by pension fund and by vintage. In models (2), (4), and (8) we include LP state fixed effects. We report standard errors in brackets. *, **, and *** indicate significance levels of 0.10, 0.05, and 0.01, respectively.

	(1) All	(2) All	(3) PE	(4) PE	(5) BO	(6) VC	(7) RE	(8) RE
State-appointed	-6.248**	-5.909***	-5.622*	-4.358*	2.008	-21.872*	-8.319***	-5.114***
	[2.500]	[1.841]	[3.263]	[2.557]	[1.442]	[11.732]	[3.186]	[1.321]
State-exofficio	-4.196***	-5.652***	-3.667**	-4.584***	-0.695	-9.870**	-7.038***	-6.788***
	[1.398]	[1.336]	[1.682]	[1.690]	[1.086]	[4.801]	[2.464]	[1.309]
Participant-elected	-2.861***	-2.119***	-2.494**	-1.975**	-0.770	-6.744**	-4.330**	-3.228*
	[0.822]	[0.585]	[1.030]	[0.969]	[0.979]	[2.858]	[1.700]	[1.734]
Public-appointed	-1.542*	-1.076	-0.650	0.903	0.933	-1.003	-5.935**	-6.073***
	[0.921]	[0.938]	[0.995]	[1.273]	[0.989]	[3.901]	[2.316]	[2.295]
LP size	0.094	0.150	0.004	0.063	-0.050	0.143	0.299	0.065
	[0.172]	[0.158]	[0.149]	[0.164]	[0.082]	[0.383]	[0.387]	[0.318]
Board size	-0.048	-0.049	-0.030	-0.060	-0.056**	-0.037	-0.138	-0.096
	[0.043]	[0.046]	[0.030]	[0.043]	[0.028]	[0.108]	[0.126]	[0.131]
VC	-3.176	-3.151	-3.016	-3.034				
	[3.169]	[3.170]	[3.093]	[3.105]				
FOF	-3.170***	-3.072***	-3.109***	-3.051***				
	[1.068]	[1.027]	[1.110]	[1.064]				
Other	-0.202	-0.228	-0.086	-0.054				
	[0.846]	[0.836]	[0.916]	[0.907]				
RE	-6.003**	-5.938**						
	[2.546]	[2.512]						
NR	1.467	1.503						
	[2.243]	[2.250]						
Other trustees	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vintage FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LP state FE	No	Yes	No	Yes	No	No	No	Yes
Observations	11,506	11,506	9,081	9,081	4,530	2,341	2,040	2,040
R-squared	0.106	0.110	0.091	0.096	0.180	0.226	0.298	0.315

54

Table 8: **Board composition and performance distribution (Value-at-Risk analysis)**

This table presents the distribution of returns for the five main categories of board members and resembles a value-at-risk analysis. The observation is an LP-investment. The performance is measured using the net internal rate of returns (IRR) minus [vintage x fund type] group mean. In Online Appendix B, we estimate a robustness test and use the multiple of invested capital minus [vintage x fund type] group mean as a performance measure. When calculating the group means, we include investments made during the 1990-2011 period and we split the investments in the following fund types: real estate, natural resources, buyout, venture capital, fund-of-funds and other private equity funds. *State-appointed* and *State-exofficio* measure the percentage of appointed or ex-officio board members who are government officials, i.e. of the state, city or other public entity. *Participant-appointed* captures the percentage of board members appointed from the plan participants. *Participant-elected* captures the percentage of board members elected by plan participants. *Public-appointed* measures the percentage of board members appointed from the general public. Column N presents the number of investments and the other columns show the performance percentiles.

	N	1%	5%	10%	25%	50%	75%	90%	95%	99%
All	11,506	-35.411	-17.925	-11.848	-4.893	-0.221	5.051	11.498	14.992	36.637
State-appointed= 0	6,697	-34.059	-17.349	-11.249	-4.647	-0.039	5.207	11.498	14.969	38.354
State-appointed<=Med	2,652	-39.959	-19.625	-12.435	-5.339	-0.242	5.082	12.141	16.081	38.354
State-appointed>Med	2,157	-35.411	-17.366	-12.525	-5.059	-0.270	4.671	10.675	14.154	32.269
State-exofficio= 0	3,054	-30.638	-15.725	-9.882	-4.351	0.020	5.242	11.801	14.901	33.620
State-exofficio<=Med	4,246	-31.014	-15.946	-10.709	-4.348	0.002	5.111	11.479	14.897	34.115
State-exofficio>Med	4,206	-47.529	-21.549	-14.163	-5.893	-0.437	4.963	11.491	15.641	38.354
Participant-appointed= 0	7,880	-37.199	-18.643	-12.737	-5.137	-0.242	4.867	11.401	14.969	36.675
Participant-appointed<=Med	1,932	-34.059	-17.158	-10.093	-4.346	0.169	5.363	11.491	14.969	33.550
Participant-appointed>Med	1,694	-30.808	-14.733	-9.593	-4.342	0.452	5.872	12.252	15.967	38.354
Participant-elected= 0	4,876	-33.941	-17.202	-10.956	-4.645	-0.039	5.582	12.082	15.486	38.354
Participant-elected<=Med	3,825	-34.059	-18.209	-12.256	-4.962	-0.259	4.867	10.997	14.901	35.142
Participant-elected>Med	2,805	-46.438	-19.231	-12.256	-4.947	-0.082	4.658	11.230	14.897	32.972
Public-appointed= 0	4,125	-39.970	-19.231	-12.999	-5.256	-0.242	4.898	11.401	14.969	36.675
Public-appointed<=Med	3,931	-37.362	-18.338	-12.508	-5.080	-0.242	5.007	11.451	14.897	35.061
Public-appointed>Med	3,450	-30.638	-15.450	-9.946	-4.343	0.116	5.520	12.082	15.152	35.142

Table 9: **Regressions: Board composition and overweighting of in-state investments**

This table presents regressions in which the dependent variable is the LP's excess share of in-state investments, relative to the benchmark representing the share of investments in the state by out-of-state LPs, over the preceding five-year period. The observation is an LP-vintage. We analyze the overweighting in all investments as well as separately in real estate (*RE*) and private equity (*PE*). In columns (5) and (6), we also distinguish between overweighting in buyout funds (*BO*) and venture capital funds (*VC*). Column (7) is estimated conditional on investing in private equity. *State-appointed* and *State-exofficio* measure the percentage of appointed or ex-officio board members who are government officials, i.e. of the state, city or other public entity. *Participant-elected* captures the percentage of board members elected by plan participants. *Public-appointed* measures the percentage of board members appointed from the general public. We also control for the percentage representation by the other types of trustees: State-elected, Participant-exofficio, Public-exofficio and Public-elected. The omitted category is Participant-appointed. We control for the natural logarithm of LP assets under management and board size. *%RE* is the percentage allocated to real estate investments, while *%NR* is the percentage allocated to investments in natural resources. Variables *%VC*, *%FOF*, *%Other* measure the percentage allocated to venture capital, fund-of-funds and other private equity fund types (the omitted category is buyout funds). The percentage allocation variables are defined based on the number of investments. We include vintage year fixed effects and independently double cluster the standard errors by pension fund and by vintage. We report standard errors in brackets. *, **, and *** indicate significance levels of 0.10, 0.05, and 0.01, respectively.

	(1) All	(2) All	(3) RE	(4) PE	(5) BO	(6) VC	(7) PE
State-appointed	0.275**	0.255**	0.384***	0.249*	-0.030	0.238	0.196
	[0.124]	[0.126]	[0.111]	[0.140]	[0.091]	[0.150]	[0.138]
State-exofficio	0.136**	0.135**	0.148***	0.124**	0.059	0.173*	0.141**
	[0.055]	[0.055]	[0.048]	[0.061]	[0.042]	[0.092]	[0.060]
Participant-elected	0.140***	0.132***	0.139***	0.160***	0.078	0.189**	0.165***
	[0.049]	[0.049]	[0.046]	[0.060]	[0.050]	[0.080]	[0.058]
Public-appointed	-0.006	-0.003	0.147***	-0.066	-0.028	-0.097	-0.036
	[0.057]	[0.056]	[0.057]	[0.065]	[0.040]	[0.081]	[0.060]
LP size	-0.017**	-0.016**	-0.018**	0.003	0.008	0.017	-0.005
	[0.008]	[0.008]	[0.008]	[0.009]	[0.009]	[0.013]	[0.011]
Board size	0.002	0.002	0.001	0.003	0.003	-0.000	0.003
	[0.003]	[0.003]	[0.003]	[0.003]	[0.002]	[0.005]	[0.003]
%VC		0.132**					0.163***
		[0.062]					[0.050]
%FOF		-0.003					0.023
		[0.049]					[0.052]
%Other		0.043					0.056
		[0.050]					[0.045]
%RE		0.094***					
		[0.031]					
%NR		0.044					
		[0.064]					
Other trustees	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vintage FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,570	1,570	1,570	1,570	1,397	1,397	1,397
R-squared	0.128	0.151	0.097	0.094	0.064	0.094	0.146

Table 10: **Regressions: Board composition and selection of investments**

This table presents regressions in which the dependent variables capture different investment characteristics. The observation is an LP-investment. In columns (1) and (2), the dependent variable measures the total number of LP investors in the fund. In columns (3) and (4), the dependent variable is the natural logarithm of the fund size in which the LP invested. In columns (5) and (6), the dependent variable is the sequence number of the fund in which the LP invested. *State-appointed* and *State-exofficio* measure the percentage of appointed or ex-officio board members who are government officials, i.e. of the state, city or other public entity. *Participant-elected* captures the percentage of board members elected by plan participants. *Public-appointed* measures the percentage of board members appointed from the general public. We also control for the percentage representation by the other types of trustees: State-elected, Participant-exofficio, Public-exofficio and Public-elected. The omitted category is Participant-appointed. We control for the natural logarithm of LP assets under management and board size. *RE*, *NR*, *VC*, *FOF* and *Other* are indicator variables for investments in real estate, natural resources, venture capital, fund-of-funds and other private equity funds (the omitted category is buyout funds). Variables *In-state RE* and *In-state VC* are indicators equal to one if the general partner of a real estate or venture capital fund is located in the same state as the pension fund (LP). *Log%Commitment* is the natural logarithm of the commitment as a percentage of the assets under management. We include vintage year fixed effects and independently double cluster the standard errors by pension fund and by vintage. We report standard errors in brackets. *, **, and *** indicate significance levels of 0.10, 0.05, and 0.01, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	#Investors		Fund size		#Sequence	
State-appointed	-36.074***	-31.472***	-1.520***	-1.738***	-3.694***	-2.807***
	[5.975]	[5.954]	[0.268]	[0.282]	[0.685]	[0.567]
State-exofficio	-22.086***	-19.243***	-0.954***	-0.952***	-2.391***	-1.948***
	[3.742]	[3.492]	[0.161]	[0.153]	[0.365]	[0.297]
Participant-elected	-16.017***	-9.432***	-0.764***	-0.374***	-1.647***	-1.162***
	[3.559]	[2.806]	[0.185]	[0.128]	[0.319]	[0.294]
Public-appointed	-16.035***	-13.746***	-0.648***	-0.623***	-1.828***	-1.409***
	[3.529]	[3.790]	[0.127]	[0.158]	[0.406]	[0.367]
LP size	-0.018	1.326**	0.082**	0.242***	-0.079*	-0.051
	[0.522]	[0.620]	[0.041]	[0.032]	[0.047]	[0.052]
Board size	-0.300**	-0.336***	-0.015**	-0.016**	-0.038**	-0.044***
	[0.119]	[0.130]	[0.007]	[0.007]	[0.018]	[0.017]
RE		-21.542***		-0.889***		-0.846***
		[2.417]		[0.089]		[0.142]
NR		-3.313		-0.139		1.854**
		[4.325]		[0.178]		[0.738]
VC		-15.898***		-1.024***		1.023***
		[2.207]		[0.101]		[0.212]
FOF		-21.005***		-1.351***		-0.323
		[2.651]		[0.144]		[0.248]
Other		-5.228*		-0.233**		0.108
		[2.944]		[0.109]		[0.269]
In-state RE		-0.427		-0.240**		0.001
		[1.655]		[0.115]		[0.184]
In-state PE-VC		-1.300		-0.274***		-0.524**
		[1.137]		[0.066]		[0.247]
Log%Commitment		4.316***		0.409***		0.158**
		[0.952]		[0.044]		[0.071]
Other trustees	Yes	Yes	Yes	Yes	Yes	Yes
Vintage FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	13,405	11,382	12,111	10,499	12,343	10,673
R-squared	0.069	0.221	0.143	0.407	0.062	0.111

Table 11: **Regressions: Board composition and performance within investment types**

This table presents regressions in which the dependent variable is the performance of U.S. public pension funds during the 1990-2011 period. The observation is an LP-investment. In models (1) to (4) the performance is measured using the net internal rate of returns (IRR), whereas in models (5) to (8) the performance is measured using the multiple of invested capital. *State-appointed* and *State-exofficio* measure the percentage of appointed or ex-officio board members who are government officials. *Participant-elected* captures the percentage of board members elected by plan participants. *Public-appointed* measures the percentage of board members appointed from the general public. We also control for the percentage representation by the other types of trustees: State-elected, Participant-exofficio, Public-exofficio and Public-elected. The omitted category is Participant-appointed. We control for the natural logarithm of LP assets under management and board size. *RE, NR, VC, FOF* and *Other* are indicator variables for investments in real estate, natural resources, venture capital, fund-of-funds and other private equity funds (the omitted category is buyout funds). Variables *In-state RE* and *In-state VC* are indicators equal to one if the general partner of a real estate or venture capital fund is located in the same state as the pension fund (LP). *#Investors* measures the total number of LP investors in the PE fund. *Fund size* is the natural logarithm of the assets managed by the PE fund in which the LP invested. *#Sequence* is the sequence number of the fund in which the LP invested. We include vintage year fixed effects and independently double cluster the standard errors by pension fund and by vintage. In models (2), (4), (6) and (8), we include LP state fixed effects. We report standard errors in brackets. *, **, and *** indicate significance levels of 0.10, 0.05, and 0.01, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Net	IRR			Multiple of	invested capital	
State-appointed	-3.679*	-4.110**	-3.554*	-3.968**	-0.197**	-0.198*	-0.208**	-0.209*
	[2.063]	[1.804]	[2.105]	[1.833]	[0.092]	[0.114]	[0.092]	[0.112]
State-exofficio	-2.651**	-4.263***	-2.575**	-4.156***	-0.085	-0.180***	-0.101*	-0.193***
	[1.199]	[1.114]	[1.150]	[1.106]	[0.061]	[0.063]	[0.058]	[0.065]
Participant-elected	-1.746***	-1.234**	-1.565**	-1.092*	-0.078**	-0.054	-0.076**	-0.059
	[0.633]	[0.609]	[0.652]	[0.615]	[0.033]	[0.035]	[0.033]	[0.037]
Public-appointed	-0.348	-0.800	-0.261	-0.933	-0.011	-0.020	-0.012	-0.023
	[0.892]	[0.838]	[0.836]	[0.852]	[0.046]	[0.054]	[0.044]	[0.055]
LP size	0.109	0.132	0.023	0.030	0.008	0.014**	0.006	0.010*
	[0.146]	[0.143]	[0.138]	[0.141]	[0.005]	[0.006]	[0.005]	[0.006]
Board size	-0.015	-0.013	-0.015	-0.014	0.000	0.001	-0.000	0.000
	[0.045]	[0.044]	[0.044]	[0.045]	[0.002]	[0.002]	[0.001]	[0.002]
RE	-4.461	-4.455	-4.394	-4.378	-0.288***	-0.281***	-0.302***	-0.296***
	[2.760]	[2.710]	[2.743]	[2.701]	[0.080]	[0.080]	[0.078]	[0.078]
NR	1.223	1.251	1.772	1.769	0.033	0.037	-0.003	0.002
	[2.369]	[2.371]	[2.561]	[2.549]	[0.103]	[0.103]	[0.083]	[0.085]
VC	-1.686	-1.776	-1.007	-1.104	-0.030	-0.036	-0.029	-0.035
	[3.469]	[3.431]	[3.370]	[3.336]	[0.163]	[0.160]	[0.163]	[0.161]
FOF	-2.504**	-2.432**	-2.073*	-2.022*	-0.108**	-0.102**	-0.115**	-0.111**
	[1.145]	[1.101]	[1.220]	[1.197]	[0.042]	[0.042]	[0.047]	[0.047]
Other	0.016	-0.022	0.159	0.126	-0.026	-0.026	-0.027	-0.027
	[0.928]	[0.912]	[0.961]	[0.948]	[0.036]	[0.036]	[0.038]	[0.039]
In-state RE	-3.397***	-3.308**	-3.205**	-3.192**	-0.083**	-0.085**	-0.075**	-0.078**
	[1.316]	[1.307]	[1.244]	[1.240]	[0.033]	[0.036]	[0.032]	[0.034]
In-state PE-VC	-3.434**	-3.051**	-3.155*	-2.823*	-0.225**	-0.211**	-0.225**	-0.212**
	[1.688]	[1.526]	[1.685]	[1.516]	[0.107]	[0.099]	[0.108]	[0.100]
#Sequence	0.193*	0.188*	0.153	0.149	0.001	0.000	0.003	0.002
	[0.112]	[0.110]	[0.134]	[0.132]	[0.006]	[0.006]	[0.006]	[0.006]
#Investors	0.035**	0.035**			0.002**	0.002**		
	[0.015]	[0.015]			[0.001]	[0.001]		
Fund size			1.024***	1.019***			0.027**	0.027**
			[0.290]	[0.286]			[0.011]	[0.011]
Other trustees	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vintage FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LP state FE	No	Yes	No	Yes	No	Yes	No	Yes
Observations	11,506	11,506	11,307	11,307	11,778	11,778	11,559	11,559
R-squared	0.112	0.116	0.116	0.119	0.141	0.147	0.142	0.147

Table 12: **Regressions: Experience of the board members and performance**

This table presents regressions in which the dependent variable is the performance of U.S. public pension funds during the 1990-2011 period. The analysis focuses on a smaller sample of investments for which the background data is available. We collect background data for the trustees of 41 pension funds (LPs) and match it to the 9,064 investments made by these LPs (8,393 investments with return data). The observation is an LP-investment. In models (1) to (4) the performance is measured using the net internal rate of returns (IRR), whereas in models (5) to (8) the performance is measured using the multiple of invested capital. Variables *Asset Management*, *Financial* and *Related* capture prior asset management, financial or related professional experience. *Executive Experience* measures the percentage of board members with prior executive experience in the private sector, while *Union Members* is the percentage of pension fund trustees who are union members. We also control for the natural logarithm of LP assets under management and board size. We include vintage year fixed effects and independently double cluster the standard errors by pension fund and by vintage. In columns (3) and (7), we include pension fund (LP) fixed effects. We report standard errors in brackets. *, **, and *** indicate significance levels of 0.10, 0.05, and 0.01, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Net IRR				**Multiple of invested capital**		
State-appointed	-6.650*			-7.877**	-0.475***			-0.494***
	[3.713]			[3.964]	[0.174]			[0.154]
State-exofficio	-4.964***			-5.473***	-0.233***			-0.223***
	[1.775]			[1.553]	[0.089]			[0.068]
Participant-elected	-3.925**			-0.461	-0.228***			-0.054
	[1.495]			[0.698]	[0.069]			[0.042]
Public-appointed	-2.314			-4.400***	-0.110			-0.196***
	[1.541]			[1.661]	[0.080]			[0.071]
Asset Management Experience		7.014***	15.678***	8.265***		0.213**	0.463***	0.284**
		[2.573]	[3.828]	[3.047]		[0.089]	[0.152]	[0.117]
Financial Experience		6.742***	14.133***	7.728***		0.238***	0.444***	0.285***
		[1.501]	[3.080]	[1.920]		[0.054]	[0.132]	[0.076]
Related Experience		6.523***	12.513***	7.560***		0.246***	0.406***	0.303***
		[2.195]	[3.019]	[2.709]		[0.076]	[0.117]	[0.099]
Executive Experience		0.809	-1.107	0.772		0.140**	0.007	0.134*
		[1.411]	[1.727]	[1.529]		[0.069]	[0.106]	[0.073]
Union Members		0.153	-2.148	-1.300		-0.008	-0.056	-0.050
		[0.779]	[5.627]	[1.049]		[0.063]	[0.186]	[0.059]
LP size	-0.381	-0.887**	0.877	-0.295	-0.006	-0.024*	-0.009	-0.001
	[0.329]	[0.378]	[4.248]	[0.322]	[0.016]	[0.014]	[0.203]	[0.013]
Board size	-0.074	0.187		0.082	0.002	0.009*		0.008
	[0.082]	[0.147]		[0.140]	[0.004]	[0.005]		[0.005]
Other trustees	Yes	No	No	Yes	Yes	No	No	Yes
Vintage FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LP FE	No	No	Yes	No	No	No	Yes	No
Observations	7,913	7,913	7,913	7,913	8,002	8,002	8,002	8,002
R-squared	0.081	0.082	0.088	0.084	0.111	0.112	0.119	0.114

Table 13: **Regressions: Political contributions to the board member and performance**

This table presents regressions in which the dependent variable is the performance of public pension funds during the 1999-2011 period. The analysis focuses on a smaller sample of investments for which the background data is available. We collect political contributions data for the trustees of 41 pension funds (LPs) and match it to the 8,074 investments made by the LPs during this period (7,486 investments with return data). The observation is an LP-investment. In models (1) to (3) performance is measured using net internal rate of returns (IRR), whereas in models (4) to (6) performance is measured using multiple of invested capital. The board composition variables are the same as in the previous tables. *Political Elections* is the percentage of pension fund trustees who have participated in political elections. *FinanceContrib / LP size* presents the contributions from the financial industry as a percentage of the assets under management by the LP. Variable *%Finance Contributions* measures the political contributions received from organizations in the financial industry as a percentage of the total contributions received in that election cycle. *Log Contributions* is the natural logarithm of the total contributions received by the trustees. When analyzing board member characteristics, we measure the percentage of trustees with prior *Asset Management*, *Financial* and *Related* professional experience. We include vintage year fixed effects and independently double cluster the standard errors by pension fund and by vintage. We report standard errors in brackets. *, **, and *** indicate significance levels of 0.10, 0.05, and 0.01, respectively.

| | (1) | (2) | (3) | (4) | (5) | (6) |
		Net IRR			Multiple of invested capital	
State-appointed	-2.764	-0.914	-1.791	-0.266***	-0.182**	-0.228**
	[1.847]	[1.880]	[2.210]	[0.080]	[0.080]	[0.095]
State-exofficio	-3.422***	-2.622**	-3.120**	-0.164***	-0.157***	-0.193***
	[1.064]	[1.027]	[1.258]	[0.049]	[0.041]	[0.052]
Participant-elected	-2.698***	-2.686***	-1.596	-0.156***	-0.149***	-0.101*
	[0.753]	[0.741]	[0.979]	[0.043]	[0.039]	[0.054]
Public-appointed	-1.724	-1.664	-2.456*	-0.083*	-0.067	-0.114**
	[1.038]	[1.044]	[1.299]	[0.045]	[0.044]	[0.046]
Political Elections		-1.436	-0.830		-0.047	-0.004
		[1.059]	[1.063]		[0.047]	[0.049]
FinanceContrib / LP size		-26.771**	-23.446**		-1.057**	-1.004*
		[10.407]	[10.279]		[0.485]	[0.497]
%Finanace Contributions		-3.154	-2.820		-0.315***	-0.281**
		[3.397]	[3.048]		[0.115]	[0.114]
Log Contributions		0.094	0.081		0.007**	0.006**
		[0.068]	[0.067]		[0.003]	[0.003]
Asset Management Experience			3.369*			0.153*
			[1.794]			[0.079]
Financial Experience			3.810**			0.201**
			[1.543]			[0.088]
Related Experience			2.443			0.091
			[1.498]			[0.073]
LP size	-0.104	-0.242	-0.238	0.000	-0.007	-0.007
	[0.227]	[0.253]	[0.284]	[0.008]	[0.010]	[0.011]
Board size	-0.211***	-0.250***	-0.181*	-0.003	-0.007**	-0.004
	[0.063]	[0.075]	[0.091]	[0.002]	[0.003]	[0.004]
Other trustees	Yes	Yes	Yes	Yes	Yes	Yes
Vintage FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7,040	7,040	7,040	7,124	7,124	7,124
R-squared	0.091	0.093	0.093	0.079	0.080	0.082