Overcoming Short-term Behavior in Long-term Institutional Investors

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Abstract

This project investigates the source of short-term behaviors in long-term institutional investors and offers policy recommendations to help overcome the constraints. The project begins with a cross-disciplinary review of literature pertaining to the decision-making process at the individual and organizational level, as well as external factors that are relevant to institutional investors in their unique position within the financial market and the political arena. Based on a list of possible hypotheses, the project identifies four cases – each representing a type of long-term institutional investor – to investigate where and when varying sources of short-term behavior become relevant to each unique type of long-term institutional investor. The study draws lessons that are internally valid to each case, as well as more general findings that may be applicable to long-term institutional investors at large, and conclude with a set of policy recommendations for the OECD.

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1. Introduction

In February of 2012, the OECD launched its Long-Term Investment Project, spearheaded by the Financial Affairs Division within the Directorate of Financial and Enterprise Affairs. The project is aimed at facilitating long-term investment by institutional investors, addressing both potential regulatory obstacles and market failures. The growing interests around the need for long-term investment is not unrelated to the 2007 global financial crisis, which introduced extreme volatility into the financial market, uncovering existing vulnerabilities that manifested themselves in plummeting asset prices across the economy and resultant firesales of poorly performing assets. In theory, institutional investors should have been relatively shielded from the severity of the crisis, given their longer investment time horizon and longer-term liabilities. However, many institutional investors were hurt as hard by the crisis as were their non-institutional counterparts. Many long-term institutional investors ended up liquidating their assets at a steeply discounted rate, with the end result that a large volume of capital managed by institutional investors were allocated away from long-term investment assets to shorter term ones.

The financial crisis amplified the short-termism existent in the investment behavior of institutional investors, but the increasingly short-term nature of investments these days is not a recent phenomenon. The average holding period of assets has fallen by 1~3 years in select OECD stock exchanges over the last twenty years, showing a general tendency towards short-term investment by investors (Figure 1). In 1991, three stock exchange markets showed an average holding period of less than two years, and Borsa Italiana, Italy’s main stock exchange, recorded an average holding period of over six years. Since around 1999, however, all of the world’s main stock exchanges presented in the figure have had average holding periods of under two years. This decline is exemplified in the case of the New York Stock Exchange, whose average holding declined from over 5 years in the 1980s, to five months.

Figure 1. Average Holding Periods

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The increasingly shorter time horizon of investors has motivated multilateral efforts to promote long-term investment: the OECD has taken a leading role in the discussion surrounding long-term investment by institutional investors, ever since the global financial crisis in 2007 made short-term investment behaviors salient. The World Economic Forum (WEF) has also held discussions and published reports on the topic (World Economic Forum, 2011), and several high-level meetings, such as the G20 Meeting of Finance Ministers and Central Bank Governors in February 2014 (Sydney), the G20 Summit Meeting in 2013 (St. Petersburg), as well as the 2013 APEC Finance Ministers Meeting (Bali), have reiterated the importance of the issue.

The global financial crisis and behaviors motivated by the shock imposed large costs on the world economy. However, in its wake, it also leaves important lessons to be learned, by the current generation, as well as the next. In particular, the behaviors observed in the wake of the crisis help shed light on the underlying inefficiencies and misaligned incentive structures that drive short-termism in institutional investors. This study thus seeks to contribute to the multilateral efforts to promote long-term investment by identifying the causes of short-termism in institutional investors. It begins by first looking at possible sources of short-termism. It uses a cross-disciplinary literature review of what drives short-termism to form hypotheses, which will be examined through case studies. Before proceeding with the literature review and hypothesis, however, the following section provides the definition of our units of analysis, and explains why long-term institutional investors are focused on as the source of long-term capital.

2. Value of Long-Term Investment

2.1 Definition of Long-Term
The notion of “long-termism” lends itself to a variety of interpretations, but this study adopts OECD’s definition, which classifies long-term investments as assets with maturities of at least five years, in addition to sources of financing that have “no specific maturity but are generally relatively stable over time.” The notion of long-term horizon, however, cannot be restricted to a specific asset class, or the duration of holding; it relates more broadly to an overall attitude and ability to undertake long-term investment.

2.2 Definition of Long-Term Institutional Investors
Similarly, the range of institutional investors varies across the literature, but this paper follows the definition of long-term institutional investors given by the World Economic Forum, which defines it as “institutions with suitable long-term liability profiles, such as family offices,

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5 OECD, “The Role of Banks, Equity Markets and Institutional Investors in Long-term Financing for Growth and Development,” 4. 5 years is one of the benchmarks of a long-term investment but the study emphasizes others factors such as asset classes and capital characteristics.
endowments, foundations, sovereign wealth funds, pension funds and life insurers. “6 Elaboration on the nature of each type of long-term institutional investor is provided below:

- **Family offices that manage the wealth of one or more high net worth families**
- **Endowments/foundations used to fund some or all of the expenses of non-profit organizations**
- **Sovereign wealth funds owned by the state and responsible for investing budget surpluses for the long-term benefit of the nation**
- **Pension funds providing retirement provisions for pension scheme members**
- **Life insurers paying out to a designated beneficiary or policyholder at some defined point in the future**

2.3. Why Long-Term Investment and Why Institutional Investors?
The OECD highlights the importance of long-term investments as providing (1) *patient capital* that yields higher net investment rate of returns by taking advantage of illiquidity premia and lowering turnover; (2) *engaged capital* that promotes better corporate governance as shareholders are encouraged to adopt ongoing and more direct roles in investment strategies; and (3) *productive capital* that supports sustainable growth, such as infrastructure development and green energy, and fosters competitiveness and economic growth (Della Croce, R. et. al., 2011 and OECD, 2012a).

Despite the need for long-term capital, not every investor is positioned to hold a long-term position. Long-term investments, though not always, require a relatively large upfront cost, potentially being less attractive to smaller investors. Longer-term investments also require the ability to handle relative illiquidity, such that investors with short-term, and highly contingent liabilities may be inclined to invest over a shorter term. In this regard, long-term institutional investors which have characteristically long-term liabilities and a long-term mandate, are well positioned to be the providers of long-term capital; pension funds start collecting contributions from workers when they enter the workforce and promise to pay benefits in a distant future when those workers retire. The burden of future liabilities is increasing both as life expectancy increases and a demographic shift increases the ratio of senior citizens to the young. Insurance companies, particularly life insurers, also face long-term liabilities with some uncertainty for the end date. Sovereign wealth funds are expected to smooth out government revenues by undertaking countercyclical investment strategies. Endowment funds operate under long-term mandates (whether explicitly or implicitly) to finance the budget of non-profit organizations and/or educational organizations.

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In addition, institutional investors have the pool size to undertake investments in assets that require large upfront costs. Total assets of pension funds, insurers, and sovereign wealth funds are expected to be $26.8 trillion (in 2012), $24.5 trillion (in 2012), and $6 trillion (in 2013), respectively (OECD, 2013a; Sovereign Wealth Fund Institute). This allows long-term institutional investors to have a liability portfolio that allows them to make long-term investment without pressure from volatility observed in the market, and to benefit from return structures of long-term projects that promise higher returns at greater risks in the medium run. In this respect, institutional investors are well positioned to invest long-term, given their long-term liability and mandates and their sizeable capital pool.

As such, “[t]he growth of institutional investors can bring about the prospect of a larger and more diversified source of long-term financing for physical and intangible investment needs across all sectors in the economy and specifically in key drivers of growth, competitiveness and employment such as infrastructure, company equipment, education and skills, research & development, and new technology.”

In short, long-term investment benefits society on three different levels:

1. **Investors** stand to gain above average returns by accessing risk premia, taking advantage of macroeconomic trends, effecting in better corporate governance, avoiding buying high and selling low, and minimizing transaction costs;

2. **Corporations** can realize long-term value creation and improve their longer term prospects;

3. **Society** may benefit from long-term investments that help stabilize financial markets by providing liquidity during critical times and those that promote sustainable global economic growth.

It should be noted that the emphasis on long-term investing in this paper is not intended to downplay the importance of short-term investment. Short-term capital is necessary to provide short-term liquidity, as well as to ensure short-term accountability on the part of investment officers and corporate managers. Yet, despite the potential of institutional investors to unlock the key to much needed capital for long-term investment, liquid assets have come to occupy a greater portion in their investment portfolios since the crisis (World Economic Forum, 2011).

Even as the crisis uncovered much of the vulnerabilities that existed, it also offered a window of opportunity to acquire a variety of assets at a discounted rate, and the traditional advantages of having a long time horizon also meant that institutional investors could take advantage of the situation. This project thus looks at a heterogeneous group of institutional investors and examines their varying preparedness and responses to the unusual market conditions that the

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8 OECD, op. cit., p. 4.
crisis provided and identifies both the underlying institutional conditions and strategies that helped some institutions maintain their long-term position.

2.4 What Has Been Done to Promote Long-Term Investment?
The OECD launched the long-term investment project in 2012 in recognition of the dwindling supply of long-term capital since the 2007 global financial crisis and the corresponding need for long-term investments by institutional investors. As part of the project, the OECD has held a number of meetings with institutional investors to formulate guiding principles to help institutional investors better orient toward long-term investment. Prior to the OECD initiative, the WEF also launched a project to promote long-term investment, in which practices and knowledge about long-term investment were consolidated based on input by stakeholders such as investors, policymakers, and academics through a series of interviews and workshops.

The discussion on long-term investment gained further momentum in 2013, underscored by the G20 Finance Ministers and Central Bank Governors Meeting in February. The communiqué from the meeting recognized that “long-term financing for investment, including infrastructure, is a key contributor to economic growth and job creation in all countries” and urged the OECD to release its “Report on the ‘High Level Principles of Long-Term Investment Financing by Institutional Investors’” by September 2013. The report, released accordingly in September, outlined eight principles that span from governance and regulation matters to collaboration among institutional investors and financial education. These principles were endorsed by the leaders of the G20 countries at the G20 Summit Meeting, as well as the APEC (Asia-Pacific Economic Cooperation) Finance Ministers Meeting later in the same month.

In line with these high-level commitments, the OECD released several papers on investments by institutional investors in green projects (e.g., Kaminker, C. et al., 2013) and in infrastructures (e.g., Della Croce, R. and J. Yermo, 2013), as well as on institutional investors themselves (e.g., Celik, S. and M. Isaksson, 2013). However, there is a lacuna in the literature so far on the specific factors that cause long-term institutional investors, despite their long-term mandates and missions, to make investment decisions with short-term horizon. This paper seeks to contribute to the existing literature on promoting long-term investments by shedding light on the this core question.

3. Causes of Short-Term Investment Behavior and Constraints on Long-Term Investment

This section outlines a review of the relevant literature and presents the initial hypotheses derived from the three dimensions.

3.1 Behavioral and Cognitive Dimension
Short-termism is a recurrent topic in the study of an individual’s decision-making process. The
notion of discounting suggests that given the choice between two equally attractive options spread across the time horizon, the benefits in the future are worth less. Discounting is attributed to two factors - time delay and risk associated with future returns. Discounting, however, is not symmetric for gains and losses. Kahneman and Tversky (1991) find that for a given loss and gain scenario of equal size, individuals discount losses to a greater degree than gains. Furthermore, studies have found interactions between the gain and loss asymmetry and intertemporal discounting, such that short-term gains are disproportionately favored in comparison with long-term losses (Shelley, 1994).

In addition, payoffs are not the only factor overvalued in the short-term. Investors also tend to overvalue short-term information (World Economic Forum, 2011). The tendency of investors to hold overly optimistic views following increases in stock prices, and pessimism exhibited in short-term losses points to this cognitive bias. An additional source of cognitive bias, which drives short-termism, is the tendency to overvalue the information held by others. The herding behavior observed in the tech bubble (World Economic Forum, 2011), where investors based their action largely on information revealed by the actions of others, is one evidence of this hypothesis. The World Economic Forum’s report on long-term investment, which suggests that short-termism may be further encouraged by the increasingly faster rate of dissemination and availability of information, supports these hypotheses.

The relevant literature in behavioral dimension formulates the following hypotheses:

Hypothesis 1. Payoffs are not the only factor that is over-valued in the short-term. Individuals also tend to overvalue short-term information: the tendency of investors to hold overly optimistic views following the increase in stock prices, and pessimism exhibited in short-term losses point to this phenomenon.

Hypothesis 2. Individuals overvalue information held by others.

Hypothesis 3. Cognitive bias for short-termism may be further exacerbated by the increasingly faster rate of dissemination and availability of information.

3.2 Organizational and Institutional Dimension

While the behavioral and cognitive processes at the individual level do not independently determine the intertemporal investment horizon of an institutional investor, the sources of short-term behavior at the individual level shed light on how individual preferences, subject to incentive structures provided by the group dynamics and the organizational design, contribute to the investment decisions at the organizational level.

The literature in economics and psychology have widely recognized the existence of principal agent problem arising out of information asymmetry. Specifically, individuals may seek short-term gains at the cost of the long-term objective of the institutional investor. The misalignment
of interests may operate through various channels. In the presence of asymmetric information between the principal and agent, the decision chain could suffer from agenda control (Marginson & McAuley, 2008). Those who make the final decisions may not see the full range of options, but rather, only a range of alternatives that have made it up the chain of hierarchy. Similarly, organizational design could also have adverse effects for long-term investments if interests are misaligned across the horizontal chain. For instance, greater micro-divisions within the organization can cause short-term competition for performance that creates preference for tasks that yield short-term results (Loescher, 1984). Similarly, if there is managerial mobility highly dependent on market performance of the portfolio on a frequent basis, this would drive managers to seek short-term investments with observable returns.

Group dynamics that affect investment horizon within the investing organization applies to its external relationships as well. When investment is outsourced and the contractual relationship is in the short-term, there would be greater incentives for the external manager to seek “evidence” for his performance. This would mean that greater the extent of outsourcing, shorter the time horizon becomes for each investment.

In sum, in an organizational setting, the discrepancy between individual and group interests stemming from incentive structures misalignment and moral hazard problems endemic to information asymmetry can lead to optimal individual decisions that are suboptimal for the organization.

Based on the literature the following hypotheses were formulated:

Hypothesis 4. In the absence of incentive structures that are aligned with the overall performance of the fund, greater division across the horizontal chain of decision-making creates competition that motivates short-term behavior.

Hypothesis 5. Greater degree of outsourcing to external managers creates additional nodes for competition that creates bias for a shorter investment time horizon.

3.3 Market Dimension
Institutional investors operate within the conditions provided by the financial market. As a market participant, institutional investors, like all other actors in the market, are guided by expenditures and revenues as well as price and cost signals in the market to make investment decisions that earn them the greatest reward for the risks they undertake. The literature suggests four relevant channels through which investors may be encouraged to behave in a short-term manner.

The first factor pertains to liquidity needs that arise from liabilities faced by the investors. Investors are required to maintain a sufficient buffer to meet both the regular liquidity needs that
arise through basic operation costs, liabilities to banks, as well as unanticipated needs for margin calls \(^{10}\) that may arise in the future (Berk and Demarzo, 2011). By definition, long-term assets (e.g., real estate and infrastructure) are less liquid and as a result are less attractive sources of investments in their ability to respond quickly to liquidity needs. As a result, if investors face high uncertainty in liquidity needs due to their unique liability structure, or when market conditions provide uncertainty in future liquidity needs, investors may be tempted to overvalue the benefits of short-term investment.

The second source of short-termism stems from the process of raising capital to undertake investments. Capital is allocated to the best-performing investors in the market that offer the highest expected returns. The relationship between the performance of firms and the pool of capital it attracts, however, is characterized as a convex shape, suggesting that the best performing firms tend to receive a disproportionate share of capital from the market (Baker and Nofsinger, 2010). The main determinant of this performance is often done on a yearly basis, which skews incentive structures of fund managers to undertake investment strategies that can yield high returns in the short-term. Consequently, short-term investment becomes more attractive to investors under pressure to attract capital, even if the benefits of long-term investment are acknowledged theoretically.

The third source of short-termism arises from market inefficiency. The efficient market theory posits that all market information is instantly reflected in market prices (Farma, 1997). However, actual activities in the financial market have shown that investors engage in sales of securities that experience a rapid rise in price, following the investment principle of “sell high, buy low” (Baker and Nofsinger, 2010). This indicates that the market is not functioning under the theory, and the short-term behaviors displayed by investors attest to the abundance of opportunistic investments that exist in the market. This explanation suggests that short-termism, while undesirable for the economy as a whole, is a rational decision on the part of investors, who take advantage of market dislocations as price deviates from its “true price,” which should be achieved in the perfect market.

The fourth element is transaction cost. Every financial transaction requires investors to pay commission fees to intermediary financial institutions and taxes to governments. The more frequent transactions are made, the higher the total transaction costs will be, undermining some of the returns made on the investments. Barberis and Thaler (2003) argue that if transaction costs are incorporated into investment returns from the past, those returns would have actually been smaller than the returns of the average market portfolio. Although the literature points to the fact that holding investments over a longer time horizon reduces costs (Croce, et.al., 2011), in reality, investors do not take advantage of the benefits from holding assets for a longer period, and

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\(^{10}\) Investors are required to deposit additional money in their margin account when the amount of their deposit becomes under the minimum requirement.
engage in more frequent transactions than is desirable.

Similarly, transaction cost introduces an additional wrinkle – the information cost: Barber and Odean (2000) attributes short-termism to overconfidence of investors, arguing that overconfident investors will overestimate the value of the information they obtain, which leads them to trade too actively and to earn below-average returns as a consequence. Large sums paid on external fees are one proxy for institutional investors to think that they have enough access to expertise in investment.\textsuperscript{11} Taken together, the study hypothesizes that when investors pay large fees – which they consider as cost of unique, and “certain” information, they are likely to invest unnecessarily frequently.

Based on the review above, hypotheses from the market dimension are below:

Hypothesis 6. Long-term investors are likely to engage in short-term behavior when they are faced with liquidity needs on the whole.

Hypothesis 7. Stable capital sources make it easier for institutional investors to make long-term investments, as there is lower pressure to show short-term performance in order to attract capital in the market.

Hypothesis 8. Rapid changes in asset prices resulting from market inefficiency drives long-term investors to act in a short-term manner by creating market dislocations to make immediate profits.

Hypothesis 9. Higher fees paid to external managers, advisors or consultants prompt long-term investors to feel overly optimistic about their information, which in turn drives more frequent investment transactions.

3.4 Political Dimension

Short-termism is ubiquitous in modern politics and policy-making, and has characterized government processes and decisions at all levels. Institutional investors, to varying degrees, are inadvertently affected by myopic behaviors as such in government decisions and outcomes. A study of political short-termism further informs our study about similar organizational politics in investment institutions.

The literature on political short-termism points to democracy as a source of short-term policy-making (Majone, 1996). The propensity for shortsighted considerations has often been cited as a natural byproduct of the standard four to five-year electoral cycles for government institutions, and of the even shorter economic performance cycles for companies. Reelection concerns induce politicians to invest in short-term public goods that yield immediate and visible payoffs, instead of long-term ones that only give a payoff in the second term (Garri, 2010). Democratic politicians have few incentives to develop policies whose success, often uncertain, will come

\textsuperscript{11} For example, see Ashby Monk, “Internal vs. External Managers.”
after the next election. However, Alesina and Tabellini (2004) differentiate between politicians, or elected representatives, who are motivated by the goal of winning elections, and non-elected bureaucrats, who are in turn motivated by “career concerns” and strive to fulfill the goals of their organization because this improves their professional prospects.

Analogous to political rent-seeking, investor behavior is hypothesized to be related to the remuneration scheme of the organization. For instance, institutional investors suggest that performance metrics of CEOs based on short-term stock prices, instead of long-term value creation, puts firms under increasing pressure to pursue quick short-term returns at the expense of longer term overall gains. In addition, long-term investment is further hampered in organizations where short-term investors focused on making quick returns and not necessarily committed to the company’s long-term well being have the same voting power as longer term investors.

The Oxford Martin Commission further identifies enhanced technology and the accompanying pressure for greater and more immediate accountability as drivers of political shortsightedness. Investors are likewise confronted with obligations of accountability and such concerns have come in the way of long-term but potentially riskier investments.

The above literature review led to the following hypotheses:

Hypothesis 10. Performance metrics based on short-term asset prices rather than long-term value creation induce employees to focus on short-term performance and to adopt short-term strategies in their decision-making.

Hypothesis 11. Accountability obligations that require short-term evaluation indicators burden investors from making potentially risky investments with long-term horizon, even if the incentive structure itself is not directly linked to short-term indicators.

4. Case Studies

4.1 Case Selection
The case study methodology was chosen for its strength in highlighting behavioral aspects of causes of short-termism in long-term institutional investors (Hartley, 1994). The case selection was guided by Eisenhardt’s framework (1989) and the four cases were selected based on the following criteria:

First, case selection must allow for findings to have internal as well as external validity (Meyer, 2001). Given the varying degrees to which virtually all long-term institutional investors are

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exposed to each source of constraint, the selected cases seek to illustrate which hypotheses are particularly relevant, and which are less compelling in the type of institutional investors being discussed. The case study methodology is particularly valuable as it provides illustrative examples from which key lessons can be drawn, as opposed to generalizations or a direct comparison across the sample group, which is made difficult by the divergent structural and institutional interests of each institutional category examined. With this in mind, a broad categorization of long-term institutional investors (pension funds, SWFs, endowments and hybrid institutions) was constructed based on the potential source of constraints identified from the literature review - broadly categorized under liquidity shortage, market inefficiency, compensation structure and decision chain, as well as accountability obligation. The categories of long-term institutional investors examined in this study broadly correspond to types of institutional investors identified by the World Economic Forum.13

Second, the strength of the case methodology lies in the fact that it can be used to “replicate previous cases” or to “extend emergent theory,” without requiring random sampling; in fact, the case methodology encourages the use of “extreme,” or “polar” cases to project contrast in hypothesis (Eisenhardt, 1989; Crabtree and Miller, 1992).14 Following this guideline, two cases demonstrating short-term behaviors and two examples of long-term performance were chosen accordingly. As for the specific investment, focus was placed on cases that involved long-term investments in infrastructure, real estate, or private equity, asset classes typically associated with long-term horizon.

Third, in addition to using short-term and long-term behavioral distinctions to elicit underlying constraints that influence an investor’s investment behavior, this study chose cases that had taken place at different time points of the financial crisis in order to explore the effects of an external event engendering a sharp change in surrounding conditions (Meyer, 2001). The instrumental role of the financial crisis is twofold: First, for the purpose of the case studies, it provides an exogenous shock that altered the conditions in which the long-term institutional investors operate – a point of comparison to evaluate the consistency of the institutional investors being examined over time; Second, it is relevant to all four broad categories of cases under study, in that not only does it trigger divergent responses to the economic shock and volatility in asset prices from each institutional investor, but also help “uncover the true risk tolerances of many long-term investors and encouraged a starker appreciation of the full extent of contingent liabilities”15 in the process.

Fourth, the four cases were selected purposefully to ensure the information richness of the qualitative study (Meyer, 2001). All four institutions release frequent and regular comprehensive

13 WEF groups institutional investors into 4 broad categories according to the extent of exposure to key constraints to long-term investment.
14 The selection of the specific investor and case followed the advice that information richness and purposeful selection are more desired than randomness.
reports on their performance, allowing interview questions formulated beforehand to target specific hypotheses and drivers of short-term behavior. Furthermore, the added value of this case study lies in the closed dialogue interview technique (Clark, 1998) employed, which is a relative rarity in the field due to the sensitivity nature of the information. The in-depth interviews and close dialogues conducted relied heavily upon the intimacy to and trust with the industry respondents, which were valuable assets in this case study.

Based on the selection process outlined above, the following four cases were selected: California Public Employees’ Retirement System (CalPERS); Stanford Management Company (SMC); New Zealand Superannuation Fund (NZSF); and Alberta Investment Management Company (AIMCo). These cases shed light on the particularities of constraints that limit long-term investment potential of each type of institutional investor to varying degrees, while allowing deeper investigation into the the problems that pose broader organizational challenges through a study of their liquidity portfolio, governance, risk appetite and belief in the long-term profitability. Applying the hypotheses formulated in sections 3.1 through 3.4 to the four case studies, four are found to be particularly pertinent to short-term behaviors in institutional investors, namely,

(i) **Liquidity Shortage Hypothesis**: Long-term investors are likely to engage in short-term behavior when they are faced with liquidity needs, or when their liability structure is faced with large liquidity needs;

(ii) **Market Inefficiency Hypothesis**: Rapid changes in asset prices resulting from market inefficiency create market dislocations and drive long-term investors to act in a short-term manner by creating opportunities to make immediate profits;

(iii) **Compensation Structure and Decision Chain Hypothesis**: Short-term behavior is engendered by

- Performance metrics based on short-term asset prices rather than long-term value creation and,
- Incentive structures that are not aligned with the overall performance of the institution, as greater division across the horizontal chain of decision-making creates competition that motivate short-term thinking;

(iv) **Accountability Obligation Hypothesis**: Accountability obligations that require short-term evaluation indicators burden investors from making potentially risky investments with long-term horizon, even if the incentive structure itself is not directly linked to short-term indicators.

In each of the following sections 4.2 through 4.5, the four institutional investors are introduced, followed by a description of the respective investment episode in which the institution exhibited
long or short-term behavior. Finally each section is concluded with a brief analysis of the hypothesized reason behind each institution’s long or short-term behavior based on the aforementioned hypotheses. In-depth analysis of each case is elaborated in detail in section 5.

4.2 California Public Employees’ Retirement System (CalPERS)
Established by state law in 1932 to provide retirement benefits for state employees, CalPERS stands today as the second largest pension fund in the U.S., with more than $260 billion in total asset (as of June 2013). The fund manages retirement, as well as health benefits for more than 1.6 million California public employees, retirees, and their families. CalPERS is overseen by a Board of Administration, constituting six members elected from CalPERS members, two appointed by the Governor of California, and one appointed jointly by the Speaker of the Assembly and the Senate Rules Committee of California. The rest of the Board consist former state government officials. The fund publishes actuarial reports, compliance reports, investment reports, and comprehensive financial reports annually.

CalPERS experienced lucrative returns through real estate investments prior to the financial crisis. During this period, the Board of Administration entrusted its senior investment executives with enormous authority. Board approval was not needed for single real estate deals of up to $1.8 billion for senior investment officers, and up to $2.7 billion for deals with approval by the chief investment officer. During the second half of 2008, however, the real estate portfolio of CalPERS lost almost half of its value during the one-year period till September 2009. As a result of these losses, CalPERS sold its income-producing and other low-risk real estate worth $16 billion and dismissed many of its investment managers.

Based on the literature review, CalPERS’s massive losses during the financial crisis suggests that the lack of liquidity may have been behind the fund’s short-term investment decision to sell off many of its real estate assets during the financial crisis. In addition, the fund’s decision to discharge some of its employees points to the inability of the fund to provide long-term job security and forward-looking incentive motivations that are thought to be necessary for long-term strategies. Similarly, the pension fund’s accountability obligation to the state government is hypothesized to have exerted pressure on the organization to demonstrate short-term performances based on which it would be assessed.

4.3 New Zealand Superannuation Fund (NZSF)
New Zealand Superannuation Fund (NZSF) was established in 2001 under the New Zealand Superannuation and Retirement Income Act to assist future governments to meet the cost of providing retirement income to New Zealanders. The sovereign wealth fund has a total fund

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17 Arleen Jacobious, “How CalPERS strategy backfired.”
18 Marc Lifsher, “CalPERS axing investment managers over real estate losses.”
19 International Working Group of Sovereign Wealth Funds, “Sovereign Wealth Funds Generally Accepted...
size of NZ$22.97 billion (US$18.85 billion)\textsuperscript{20} (as of 30 June 2013, before tax), of which NZ$14.88 billion (US$12.21 billion) comes from the New Zealand national government. However, government contribution has been suspended since 2009. The Fund is governed by a separate Crown entity known as the Guardians of New Zealand Superannuation. While accountable to the Crown, the Guardians operate at arm’s length from the Crown.\textsuperscript{21} NZSF releases regular monthly performance reports, as well as annual reports.

In 2010, NZSF acquired Royal Dutch Shell’s downstream assets in New Zealand, in collaboration with Infratil Limited, a New Zealand-based infrastructure investment company. They each took on a stake of NZ$210 million (US$ 172.31 million) equity in the project. The acquisition included a wide range of Shell’s business chains, such as supply and inventory, refining and national distribution, storage, terminal, and regional distribution, and retail and commercial sales.\textsuperscript{22} Subsequently, Shell New Zealand was rebranded as Z Energy in 2011 and issued its IPO in July 2013, raising NZ$840 million (US$ 689.22 billion) (NZ$420 million (US$ 344.61 million) each for NZSF and Infratil). NZSF and Infratil both maintain their 20% stake in Z Energy.\textsuperscript{23}

As a SWF bolstered by government contributions, NZSF is believed to have little concerns about liquidity shortage. Withdrawal from NZSF is expected to begin only in 2029/2030, and all investment income is going to be reinvested in the fund until then.\textsuperscript{24} The Fund’s adequate liquidity is in turn hypothesized to have been instrumental in its ability to take on long-term investment decisions. Furthermore, the public nature of NZSF is hypothesized to be conducive to cultivating a “bureaucratic” mindset among its employees, aligning them with the long-term future of the Fund. However, NZSF’s close affiliation to the government raises doubts about its ability to make independent investment decisions without any tint of political agenda. Therefore, NZSF’s accountability obligations to the government are predicted to be a potential stumbling block in the Fund’s ability to make independent long-term investments.

4.4 Stanford Management Company (SMC)
Established in 1991 to manage the University’s financial assets, Stanford Management Company (SMC) is worth approximately $21.9 billion (as of June 2013) and is financed mainly by endowment-related funds. SMC is a division of the University with oversight by a Board of Directors appointed by the University Board of Trustees. The SMC Board consists investment professionals, the University president, the University chief financial officer, the chairman of the Board of Trustees, as well as the CEO of SMC. While SMC hires third-party managers to manage its assets, the ultimate responsibility of approving asset allocation targets, and evaluating

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20 The rate is US$0.8205 per NZS on average in 2013.
22 Infratil, “Acquisition of Shell NZ Downstream Oil assets.”
23 Alice Young, “New Zealand’s Z Energy Raises NZ$840 Million in IPO.”
24 New Zealand Superannuation Fund, opt. cit., p. 83.
\end{flushright}
investment performance lies with the management company. SMC releases annual reports, in addition to testifying irregularly before the University’s academic council, whose minutes can be reviewed online.

At the height of the financial crisis in 2009, the annualized investment performance of SMC was negative 25.9%. Subsequently, SMC attempted to sell its real estate and private equity assets in order to gain more liquidity. This was a phenomenon common for many endowment funds, as Harvard Management Company (HMC), similarly recording an annual return of negative 27.3% in 2009, unloaded two-thirds of a $2.9 billion stock portfolio into the falling market in exchange for liquidity.

The need for liquidity to fund the University’s operating costs is hypothesized to be one of the main drivers behind SMC’s short-term decision to liquidate some of its assets in 2009. In addition, market dislocations caused by fluctuating asset prices during the financial crisis could have created profitable opportunities that SMC wished to capitalize on. On the other hand, the short decision-chain of the endowment fund was hypothesized to minimize the number of sources of accountability obligations and principal-agent issues that may drive short-termism in investors with a longer decision-chain.

4.5 Alberta Investment Management Corporation (AIMCo)
Alberta Investment Management Corporation (AIMCo) stands as one of Canada’s largest investment management firms, with $68.6 billion worth in total assets under management. AIMCo was established in 2008 with a clear mandate to provide superior long-term investment results for its clients primarily in the public sector. The investment company operates independently from the Government of Alberta and is responsible for managing investments on behalf of 27 clients consisting Alberta public sector pension plans, endowments and government funds, which include the Alberta Heritage Savings Trust Fund. AIMCo is headed by the Board of Directors, which is responsible for overseeing the management of the business and affairs of the institution. All directors are fully independent from the management. AIMCo releases comprehensive annual reports of its performances.

In December 2010, AIMCo acquired stake of $850 million and joined Abertis Infraestructuras S.A. and Santander Private Equity S.A., in the acquisition of Skanska AB, a Swedish construction company, and Sociedad Concesionaria Autopista Central, a Santiago-based toll road operator. The highway had started operations in 2004 and the consortium of investors holds the

concession until 2031.\textsuperscript{30} Despite criticisms of AIMCo for overpaying, the CEO asserted that attention must not be focused myopically on the costs, and defended AIMCo’s investment decision by highlighting the toll road’s income potential which may be calculated based on traffic flows.\textsuperscript{31} Considering its increasing car ownership rates, traffic flows in Chile were expected to continue rising. Moreover, tolls may also be raised owing to inflation or roadway congestion charges, which would add long-term benefit to the equation.

AIMCo is supported by the Alberta state government and can receive advance credit of up to $70 million from the government\textsuperscript{32}. This maximum quota has never been reached to date. Hence, AIMCo’s adequate liquidity is believed to have been a key contributing factor in its ability to maintain a long-term investment profile. Unlike SWFs, pension funds or endowment funds, AIMCo is not faced with direct liabilities to provide pension benefits or to cover University operation costs. This is in turn hypothesized to have alleviated AIMCo’s accountability pressures, allowing the institution to think more on the long-term horizon.

5. Case Analysis

The overview of the literature and case studies formulated the eleven initial hypotheses considered relevant to understanding the source of short-termism in behaviors of institutional investors. This section highlights the four consolidated hypotheses that, based on the interviews, have been found to be most informative in understanding short-termism in institutional investors.

5.1 Market dimension

(i) Liquidity Shortage Hypothesis:
The liquidity hypothesis was supported across all four cases. NZSF and AIMCo, two institutional investors that have limited liabilities maturing in the short-term,\textsuperscript{33} acknowledged that their long-term liability structure allowed them to limit their exposure to the deteriorating market conditions that adversely affected many other investors in the economy. In fact, they alluded to the fact that the lack of immediate liabilities and relative liquidity buffer they had maintained allowed them to take advantage of good investment opportunities that became available in the market.

SMC noted that liquidity needs were what initially compelled it to consider selling some of its valuable illiquid assets. Even though SMC does not generally face large liabilities, the decline in endowment inflow to Stanford led the university to reach out to SMC to help finance its

\textsuperscript{30} Alberta Investment Management Corporation, “AIMCo signs agreement to acquire 50% interest in Chilean Toll Road.”
\textsuperscript{31} Martin Mittelstaedt, “AIMCo joins rush to infrastructure.”
\textsuperscript{33} On limited liability needs: NZSF is expected to face withdrawals for pension benefits beginning only in 2029. AIMCo is an investment manager, not a pension/endowment fund, so it does not face direct liability in the form of it pension benefits or university operation costs.
operation costs; with increased need for liquidity, SMC came under pressure to adopt short-term behaviors. The opportune recovery of the secondary market for private equity significantly alleviated liquidity concerns, and ultimately allowed SMC to avoid liquidating its assets. However, SMC’s initial response to changing market conditions shows that liquidity shortage is indeed a powerful source of short-term behavior.

(ii) Market Inefficiency Hypothesis:
The second hypothesis within the market dimension was the role of market inefficiency in driving short-termism. It was initially hypothesized that the existence of distortions and dislocations resulting from an inefficient market would encourage short-term behavior, as investors would focus on capitalizing on immediate market dislocations, diverting their attention away from long-term objectives. In contrast to these initial expectations, the findings across all four case studies did not show market inefficiencies to be a compelling source of short-termism. Contrary to the initial formulation of the hypothesis, the investors responded that even though they would have liked to take advantage of the lucrative short-term opportunities that arose – particularly in unusual economic conditions such as the global financial crisis – they were unable to do so due to the lack of the governance structure, quick decision-chain, and good in-house talent necessary to respond quickly to rising opportunities. Besides indicating that market inefficiencies did not drive short-termism in their institution, industry respondents suggested that if good governance structure, quick decision chain, and good in-house talent are in place, institutional investors would also be able to take advantage of opportunities that arise in long-term asset areas such as unlisted equity, or real assets. In fact, NZSF attributed its successful acquisition of Royal Dutch Shell’s downstream assets in the midst of the financial crisis to its good governance, a short decision chain that allowed the Fund to make investment decisions without Board approval, and a strong caliber of in-house talent. The examination of the market inefficiency hypothesis thus suggests that even though an investor that meets all of the three conditions of good governance, quick decision chain, good in-house talent are not precluded from engaging largely in short-term dislocations, the same set of desirable qualities of an investor could also be utilized to invest in the longer-term, as the case of NZSF illustrates.

5.2 Organizational and Political dimension
(iii) Compensation Structure and Decision Chain Hypothesis:
The hypothesis on performance metrics and payoff structures had two dimensions. First, time horizon of the performance metrics was conjectured to be relevant; frequent, short-term evaluation would drive short-termism in employees who would come under pressure to prove short-term performance. Second, a payoff structure that minimizes unnecessary competition across the horizontal decision chain, would deter short-termism.

34 Opportunities in areas such as public equity.
All of the respondents confirmed the relevance of the performance metrics hypothesis and claimed that if misaligned, evaluative metrics could be a main obstacle to long-term behavior. The institutions that were initially identified as successfully long-term, actively sought ways to align their performance metrics to promote long-term investment behavior.

AIMCo, for instance, implemented the Long-Term Incentive Program (LTIP) and Special Long-Term Incentive Plan (SLTIP) in 2009, to reinforce the long-term nature of its investment strategies; the former was intended to reward outstanding value-added performance measured over rolling four-year cycles, and the latter for sustained investment performance over an eight year period.

The measurement of an employee’s performance at NZSF is based not only on the asset class directly managed, but also on the overall performance of the fund. The fund-wide performance is further split into two benchmarks – absolute and relative performance, accounting for market-wide performance fluctuations in a business cycle. Furthermore, the discretionary bonus section which is dependent on individual performance is tied not to the performance of the assets, but rather to how the employees were contributing to the broad goals of the Fund. In addition, NZSF first considered candidates for promotion from within the institution before hiring from the market. On one hand, such policy cultivates a corporate culture that allows employees to dedicate themselves to a long-term career with the Fund, and thereby, to develop a long-term horizon with regards to their investment decisions.

In the case of SMC, at the managerial level (and for employees with increasing decision-making power), performance was rewarded not solely based on one’s own asset class, but also on the performance of the other asset classes in the horizontal decision chain within the organization. SMC emphasized the importance of this performance metrics in ensuring that unnecessary competition amongst asset classes and divisions did not distract employees away from the mission of the endowment. AIMCo pointed out that the significant collaboration through shared incentives allows the fund to respond more swiftly to rising opportunities that may be of unexpected, or mixed asset classes, in which case a coordinated horizontal decision chain would be better positioned to act in a timely manner to the investment opportunity.

These cases illustrate that performance metrics that balance across short-term and long-term contributions and tie rewards across the horizontal chain of decision-making allow employees to work towards the stated mission of the institution, by limiting the pressure to demonstrate performance in the short-term.

35 Alberta Investment Management Corporation, op. cit.
36 We recognize that there are potential downsides in the form of moral hazard in putting in place long-term job security and address this in our policy recommendations.
(iv) Accountability Obligation Hypothesis:
The second hypothesis within the organizational dimension posited that accountability obligations would put investors under pressure to engage in short-term behavior. Contrary to the initial hypothesis, institutions generally did not view accountability obligations as a burden or hindrance to long-term decision making. Rather, investors tended to view accountability obligations as part of their duties as an institutional investor, and as a necessary trade-off for greater autonomy in their decision-making (AIMCo interview). NZSF indicated that it is precisely the transparency and accountability record that allowed them to maintain the autonomy and flexibility to work at arms-length from the government, which in turn limited their exposure to political concerns which could potentially conflict with their long-term objectives.

However, the hypothesis that accountability could conflict with long-term objectives was not entirely refuted: the case of CalPERS illustrates the fact that accountability could encourage short-term behavior, if there is a salient information asymmetry between the investor and the stakeholder—this qualification is elaborated in the next section.

According to the respondent at CalPERS, the organization came under considerable pressure from the public which demanded accountability for the loss of US $4.3 billion during the global financial crisis. Given the liquidity needs, uncertainty surrounding future prospects of their asset prices, and a political climate which made it acceptable to have negative returns on asset prices, the public demand for accountability incentivized CalPERS to dismiss some of its employees and liquidate its assets. Even though the global financial crisis affected the investors across the industry, the obligations on a public who demanded accountability for the fluctuations created by an exogenous shock, were potent concern that led to CalPERS to behave in a short-term manner.

The case of CalPERS suggests that in the presence of information asymmetry, demands for accountability may drive short-termism. In contrast with AIMCo, SMC and NZSF which communicate with stakeholders who are better informed, CalPERS’s accountability to the public, that on average has far more limited understanding of investment science, put the organization under considerable pressure, which ultimately resulted in its short-termist decisions that resulted in the dismissal of its employees, as well as the liquidation of its assets.

5.3 Limitations and Directions for Future Research
Initial findings derived from the literature on individual and organizational behavior formulated our hypotheses on overvaluation of short-term information as well as information held by others. Though there were recognition of the relevance of these hypotheses particularly in relation to the increasingly important role of social media in the dissemination of information (World Economic

37 The interview suggested this was in response to public demands and concerned only external managers, and no one internally was fired as a consequence of the crisis. In addition, the grounds for dismissal of external managers were attributed to “convenience” rather than on “cause.”
Report, 2011), the strength of these channels were not conclusively established based on the interviewees’ responses. All four institutions recognized the relevance of the increasingly fast dissemination of information and means of communication, but acknowledged the difficulty in determining a clear direction of their effects. As such, this study leaves many areas for future research to investigate: the interaction between information asymmetry and susceptibility to short-term information, or information held by others, is just one of many such areas.

On a related note, even though investors viewed accountability as a duty rather than a hassle, all four noted that short-term performance evaluations, such as monthly reports, can distract from the long-term value of some investments. According to NZSF, this is not necessarily due to the relationship between the investor and the stakeholder, but rather, due to commentators and the press that engage in selective interpretation and reporting of a given metric of performance. These observations reinforce the suggestion that there may exist a relationship between lack of information, and responsiveness to short-term information. Further research should be done to test these hypotheses.

6. Policy Recommendations to the OECD

The policy recommendations offered in this section are derived directly from the findings from the case studies. Recognizing the creation of guidelines on long-term investment in September 2013 under the title “G20/OECD High-Level Principles of Long-Term Investment Financing by Institutional Investors” (hereinafter referred to as the OECD Principles) which is also the first attempt to provide a comprehensive set of guiding principles applicable for all institutional investors, the following policy recommendations serve to substantiate the existing principles, where relevant.

Liquidity Buffer:
The strong correlation between liquidity needs and short-termism found in the analysis suggests the desirability for a system of liquidity support for institutional investors as a safety net in the wake of liquidity shortage that may arise from exogenous changes in the financial market. This recommendation can supplement sub-principles 5.2 within the OECD principles, which relate to guidelines on support for long-term investment in terms of risk mitigation. It should be noted that, however, this type of support does run the risk of moral hazard as institutional investors may be encouraged to engage in risky investment behaviors if they are not held accountable to internalize the consequence of their risk-taking. The nature of long-term investment is further likely to increase the share of illiquid assets given the typical asset characteristics of long-term investment assets. In this regard, the liquidity support system must outline a benchmark for a

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38 Notwithstanding the Santiago Principles which is applicable only to SWFs.
39 The OECD Principles outlines a comprehensive list of eight main principles each comprising a set of sub-principles to promote long-term investment strategies. The list covers a broad range of issues in long-term investment from governance to financial education.
balance between liquid and illiquid assets in the portfolio of institutional investors, and provide credible commitment to enforce these criteria.

Remuneration Schemes and Governance:
The analysis of remuneration schema has shown that the short-term nature of employee performance indicators which are tied to the business cycle, such as short-term stock prices, comes into inevitable conflict with promoting long-term decision-making by investors. It is therefore, important for institutional investors to devise a compensation scheme that is able to overcome myopic indicators and evaluate performance on a longer horizon. As such, remuneration and bonus should not be based on the individual performance of a portfolio managed by employees but instead encompass indicators that reflect their contribution to long-term, as well as institution-wide performance. While it is difficult to peg base wages that are remunerated regularly on a short-term basis to long-term indicators, employees may be rewarded in the form of discretionary bonus based on value creation for the institution over a longer (five to ten years) period of time. To instill “bureaucratic” mentality as was mentioned in above in section 3.4 of this report and in line with Principle 3.7, (within Principle 3 on governance, remuneration and asset management delegation), institutional investors are advised to reward well-performing employees with long-term job security and career progression opportunities— one such measure would be to consider in-house employees for promotion vacancies before considering external candidates.

The role of the last point is twofold: the development of in-house talent has the benefit of reducing the principal-agent problem arising out of extended decision chain. Furthermore, the presence of a well-coordinated in-house expertise allows the organization to respond promptly and flexibly to good investment opportunities that arise in long term assets. It is recognized that long-term job security may be a source of moral hazard; and as such, implementation of these considerations would have to ensure that the potential concerns for moral hazard issues are addressed by adequate structuring of discretionary rewards on performance.

Education for Financial Literacy:
The analysis also showed that accountability could create short-termism in the presence of significant information asymmetry between the investor and the stakeholders. The finding suggests that it is important to ensure that the communication channels between the investor and the stakeholders facilitate information transfer but that the audience has the basic financial literacy to evaluate the information they obtain. This would require education of the general public of basic science of investment, such that the information asymmetry does not lead to demand on accountability when it is not warranted. The OECD should advise governments to take advantage of the timing, when the current generation has just experienced both the downturn, as well as the recovery, of the economy first-hand; these lessons would be harder to communicate to a population that does not have direct experience. Emphasis should be placed on
communicating the benefits of long-term investment, as well as the nature of short-term fluctuations of asset prices which are not automatically cause for alarm.

Education of the general public and facilitation of acquisition of financial literacy would alleviate the detrimental effects on long-term investments that may be caused by media scrutiny of short-term performance that often overlook greater long-term value creation. Such phenomena are increasingly magnified by the proliferation of social media and use of the Internet. This highlights the point that while frequent reports that live up to expectations of accountability have its benefits; they should be done in a way to ensure that long-term objectives are not compromised.
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