The AMBACHTSHEER Letter
Sustainable Pension Design • Effective Pension Management

May 2017

FOSTERING 'LONG-TERMISM' IN INVESTING

When one talks about market efficiency, it is important to distinguish between ideas whose implications are obvious and consequently travel quickly, and ideas that require reflection, judgment, and special expertise for their evaluation, and consequently travel slowly. The second kind of idea is the only meaningful basis for long-term investing.

Jack Treynor, 1976

Fostering 'Long-Termism' in Investing

There was a time when 'active management' in investing meant beating the market through active trading. Economist John Maynard Keynes called it "beauty contest investing" in his 1936 book "The General Theory of Employment, Interest, and Money". He lamented that most professional investors seemed to show little interest in real investing: the long-term transformation of financial savings into wealth-producing capital. Entering the institutional investment world in 1969, I concluded quickly that not much had changed since Keynes' days. However, recently, a new form of active management is unfolding. While the form is new, the ideas behind it are not. A still-small group of institutional investors has taken up Keynes' assertion that real investing is the long-term transformation of savings into wealth-producing capital. A growing body of evidence supports the logic that this 'active ownership' form of investing is not only good for society, but for its implementers and their clients as well. The challenge for us today is to foster the wide-scale adoption of a long-termism mindset in investing. This *Letter* offers eight concrete measures to that end.

Keynes on Active Management

The year 1969 saw my transition from an unfocused PhD (Econ) candidate to a focused implementer of (at that time) Modern Portfolio Theory (MPT) for a large institutional investor. Within six months of entry, I had read the relevant MPT literature and met its key authors. Bill Sharpe and Jack Treynor were especially helpful. At the same time, I began to absorb the culture of the institutional investment world. There was an inside hierarchy of portfolio managers, research analysts, and traders…..and an outside broker hierarchy of sales people, research analysts, and traders. This self-contained world had its own 'soft dollar' transaction currency….as well as great lunches, dinners, and other benefits that would be considered outrageous today.

There were also clear rules about how this institutional investing world operated during working hours. Outside clients hired investing institutions such as mine to manage their pension assets for a fee. At the other end of the chain, brokers fed an ongoing stream of trading ideas into our investment department. Perceived good ideas were accepted and acted upon, leading to trades with the broker the idea came from. What was the objective of these trades? To generate higher portfolio returns than other managers trying to do the same thing.

All this triggered a vague recollection. Keynes had described this behavior in his 1936 book. I dusted off my copy, and there it was in Chapter 12! It offered a good description of what I observed: "beauty contest" investing in action, with the goal of buying stocks now the market would deem most beautiful six months hence, and selling those the market would deem ugly. Keynes observed that while this game might be entertaining for its participants, it was far removed from the economic purpose of investing: transforming savings into wealth-producing capital. As to actual investment performance, logic suggests "beauty contest" investing should be a zero-sum game less costs, and actual outcomes seemed consistent with that logic.

MPT to the Rescue?

Would imposing a dose of quantitative discipline on these mainly qualitative portfolio management processes improve performance? That was my job to find out. It was fine to have access to quantitative optimization tools that maximized net expected returns at different risk levels, but how good were the return forecasts? Measuring the predictive accuracy of these forecasts became my main professional occupation over the course of the 1970s, first inside my employer organization and later externally on a much broader scale.

What conclusions did this work lead to? It was summarized in a 1979 Financial Analysts Journal (FAJ) article[i]:

- Many predictive processes (analyst or model-driven) of relative stock returns did indeed produce modest positive correlations with actual relative return outcomes over short-term time horizons (i.e., 'information coefficients' tended fall in the 0.0 to 0.25 range and peak in six month time frames).

- If these low-quality predictions were scaled properly, and if realistic transaction costs were assumed, portfolios optimally 'managed' under these conditions generated 'paper' net excess returns in the 2%-6%/yr. range with turnover rates of 50-100%/yr.

So at least on paper, MPT-aided active management could indeed add value. However, I found very few portfolio managers willing to operate within the confines of this rigid optimization regimen. The vast majority chose to continue playing the beauty contest game. Why? This is how Nobel Laureate Daniel Kahneman put it in his 2011 book "Thinking – Fast and Slow": *"Given the professional culture of the financial community, it is not surprising large numbers of individuals in that world believe themselves to be among the chosen few who can do what they believe others cannot."*

Rethinking Active Management

So as the 1980s came into view, my time had come for another career change. It would be sparked by reading Peter Drucker's 1976 book on pension economics and management: "The Unseen Revolution". He envisioned that it would be through boomer demographics and the related accumulation of retirement savings that workers would end up owning the means of production, rather than through Karl Marx's 19th Century vision of violent revolution. Drucker raised three questions about the implications of the peaceful pension revolution he foresaw:

- What kind of organizations would evolve to manage these looming pools of retirement savings?

- In whose interest would these pools be managed? Workers and retirees? Politicians? Corporate management? Organized labor leaders? Or in the interest of the financial services industry?

- What will be the implications of the answers to these questions for how growing retirement savings pools would be invested and managed?

Fifteen years later, Drucker would observe that out of his 39 books, "The Unseen Revolution" was his most prescient and least-read. Luckily, I did read it, and the book continues to be my professional compass to this day.[ii]

Even in the early 1980s, the right normative answers to Drucker's three questions were clear to me:

- Special-purpose organizations would have to be created, capable of designing and managing transparent, sustainable pension arrangements. They should have a clear mission, good governance, and be able to access the requisite resources to achieve their mission.

- Pension organizations should be managed in the sole best interests of their clients/beneficiaries.

- Retirement savings pools should be managed to achieve the dual goals of payment safety and affordability. This is best accomplished through managing separate payment-safety and payment affordability sub-pools. The former pool matches asset maturities to payment obligations. The latter pool transforms the power of long-term return compounding into affordable pension contribution rates.[iii]

What does all this have to do with rethinking active management and promoting long-termism? It is the need for pension organizations to generate high-enough long-term investment returns to make adequate pensions affordable. This takes us back to Keynes' observation that real investing is transforming savings into wealth-producing capital. The quality of this transformation, rather than zero-sum beauty-contest investing, should be the focus of active investment management today. To make the distinction clear, let's call this form of investing 'active ownership' investing.

Four 'Active Ownership' Foundations

Luckily, the implications of 'active ownership' investing do not have to be developed from first principles. Four key building blocks have been in place for many decades:

- 1932: In their treatise "The Modern Corporation and Private Property", Adolf Berle and Gardiner Means examine the role and internal organization of the modern corporation. They warn that wide diffusion of corporate ownership places much power in the hands of corporate boards and managements. This raises the question of how to ensure that this power would not be misused.

- 1934: Benjamin Graham and David Dodd's "Security Analysis" is published. It is still considered by many the definitive text on understanding the cash-flows and balance sheets of businesses and their valuation. In their view, professional investors have an obligation to thoroughly understand a business before making any valuation judgment or buy/sell decision. In a preface to the 6th Edition of the book released in 2008, active owner Warren Buffett described the book as *"a roadmap to investing that I have now been following for 57 years".*

- 1970: Nobel Laureate George Akerlof's article "The Market for Lemons: Quality Uncertainty and the Market Mechanism" is published.[iv] He reminds us that much of micro economic theory assumes that buyers know as much about what they were buying as sellers know about what they were selling. What if that is not the case? Then buyers are at an informational disadvantage, and will pay too much for too little. So if retirement savers don't know 'beauty contest' investing is a zero-sum game less fees, they will collectively pay too much for too little. A large body of empirical evidence confirms this to actually be the case.[v] Their best defense is to have their retirement savings managed by Drucker pension organizations steeped in the messages of Berle/Gardiner, Graham/Dodd, and Treynor.

- 1976: In response to the Efficient Market Hypothesis and its implications for active management, FAJ Editor Jack Treynor publishes his classic article "Long-Term Investing".[vi] He distinguishes between the 'fast' ideas of Keynes' beauty contest investors and the 'slow' ideas of Graham/Dodd's deep investment thinkers. He argues that these 'slow' ideas are the only legitimate basis for successful long-term investing.

So much for logic. Is there evidence that the long-term 'active ownership' style of investing indeed creates net positive value? I address this question by reviewing two types of studies: 1. Broad studies using large databases, and 2. Specific case studies.

Four Large Database Studies

Consider the findings of four studies:

- Cremers and Pareek (CP)[vii]: found that investment managers with low portfolio turnover and concentrated positions outperformed managers without these two combined characteristics by a statistically-significant 2.3%/yr. over 20+year observation periods. The authors noted that portfolios lacking these two combined features produced, on average, index-like performance or worse.

- Harford, Kecskes, and Mansi (HKM)[viii]: found that investment managers with low portfolio turnover and concentrated positions were disproportionately invested in a subset of companies that had relatively higher-quality boards, higher proportions of shareowner proposals, more innovation, higher returns on capital, and higher dividend payouts. These companies also had relatively lower take-over defenses, lower incidence of managerial misbehavior, lower financial leverage, and lower volatility of sales, costs, and earnings. The subset of low turnover/high concentration managers outperformed the rest of the manager universe by a statistically significant 3.5%/yr. over 20+year observation periods.

- Khan, Serafeim, and Yoon (KSY)[ix]: found that portfolios made up of companies with high KLD[x] sustainability scores weighted by SASB[xi] materiality scores outperformed portfolios of companies with low KLD sustainability scores weighted by SASB materiality scores by average annual return gaps ranging from 3.1%/yr. to 8.9%/yr. over 20+year observation periods, depending on the degree of portfolio concentration.[xii] They observed their results were notably different from the mixed results of previous ESG studies that did not include the materiality dimension.

- Barton, Manyika, Koller, Palter, Godsall, and Zoffer[xiii]: used consulting firm McKinsey&Co's 5-factor Corporate Horizon Index (CHI) to rank a list of 615 corporations by the degree to which their behaviors favored long-termism over short-termism. Using McKinsey's own databases, the five ranked factors were Investment, Earnings Quality, Margin Growth, Quarterly Management, and Earnings Growth. Corporations with high CHI rankings materially outperformed low-ranking corporations based on revenue growth, earnings growth, R&D growth, and total return to share-holders (TRS) over the course of the last 15 years.

What should we make of the findings in these studies?

Inductively, CP discovered portfolios that combined high concentration and low turnover had materially higher average investment returns than portfolios without these two characteristics. HKM went further by finding that low turnover, high concentration investors favored companies with high scores on governance quality, shareowner proposals, innovation, return on capital, and dividend payouts, and low scores on take-over defenses, incidence of managerial misbehavior, financial leverage, and volatility of sales, costs, and earnings. These findings are consistent with the premise that low-turnover, high-concentration investors are 'active ownership' investors.

Deductively, the KSY and McKinsey studies start with the logic that some corporate behaviors are consistent with 'active ownership' and shareholder value-creation, while others are not. As 'active ownership' proxies, KSY use the KLD corporate sustainability ranking protocol that started in 1988. Their innovation was to weight the KLD scores with SASB's corporate materiality scores. The McKinsey team used their own databases to create rankings of the quality of corporate investment decisions and public disclosure protocols. In the end, both 'active ownership' proxy models were able to distinguish between high- and low-value creating investments over 15-20 year time periods.

The inductively and deductively-derived research findings are mutually supportive. The former discover exceptional investment results and identify 'active ownership' drivers supporting it. The latter posit the 'active ownership' drivers of corporate value-creation and discover that portfolios that embody them indeed experience exceptional investment results.[xiv]

The Cases of Three Active Owners

My re-reading of Keynes' Chapter 12 back in the 1970s raised a puzzling question: how did he know so much about the strange world of institutional investing that I was just discovering? I learned only recently that as a sideline, he managed the King's College/Cambridge University Endowment Fund from 1921 to his death in 1946. Keynes was an early institutional investor himself!

Cambridge's David Chambers and Elroy Dimson computerized the Fund's 1921-1946 trading and valuation records. Keynes flailed about at first (i.e., behaved like a beauty contest investor). However, he learned from his early mistakes and by the 1930s he had become a low-turnover, high-conviction 'value' investor. In a 1938 speech, he said the best strategy *"….is to carefully select a few investments having regard to their intrinsic value for a period of years ahead…."*. Chamber and Dimson estimate the portion of the Fund he had discretion over generated a 25-year net excess return of 8%/year over a passively-managed fund with the same risk characteristics.[xv]

And we have already met Graham and Dodd's most famous 'active owner' Warren Buffett. The article "Buffett's Apha", reported his 1976-2011 (35-year) net excess return was 13%/year.[xvi] In his 2000 book "Pioneering Portfolio Management: An Unconventional Approach to Institutional Investing", Yale University's David Swensen integrates the Keynes and Buffett stories, and summarizes the five common success drivers as: 1. Long-term focus, 2. Equity-bias, 3. Contrarian 'value'/'bottom up' approach, 4. High-conviction, 5. Simple decision-making structure. Swensen himself had already been applying these rules to managing the Yale Endowment for 14 years, as he continues to do to this day. The Yale Endowment Fund has generated a net excess return of 4.3%/yr. for the last 30 years.[xvii]

While the Keynes, Buffett, and Swensen case studies stand out in terms of exceptional long-term investment results and wide name recognition, similar additional 'active ownership' cases come to mind.[xviii] Taken together, these cases raise an important question: can the 'active ownership' style of investing be implemented without the vision and leadership of unconventional, strong-willed individuals such as Keynes, Buffett, or Swensen?

A Fourth Active Owner

This question leads to a fourth case study, triggered in 1986 by Robert Nixon, Treasurer of the Canadian province Ontario. He commissioned an investigation "to determine whether the current methods and approaches of Ontario's public sector pension funds most appropriately meet the needs of present and future pension beneficiaries". As a taskforce advisor, I made the case for creating pension organizations based on the three principles Peter Drucker had set out in 1976: clear mission, strong, knowledgeable governance, and the ability to access the requisite resources for mission achievement. This became a key recommendation in the taskforce 1987 report titled "In Whose Interest?"

An obvious candidate for the Drucker treatment was Ontario's teachers pension plan. It had been a government bureaucracy for decades, with all of its assets 'invested' in non-marketable Ontario bonds. Treasurer Nixon and Margaret Wilson, President of the Ontario Teachers' Federation (OTF), jointly agreed to transform the teachers' pension plan bureaucracy into a new kind of pension organization. Legislation was drafted to create the Ontario Teachers' Pension Plan (OTPP) as an arms-length entity jointly-owned by the Ontario Government and the OTF. A board selection protocol was agreed on to ensure the organization would benefit from strong, knowledgeable governance. The board was given a clear mandate to hire a top-notch executive team at market-competitive compensation rates to manage the organization.

January 1, 1990 marked the beginning of the new organization. OTPP almost immediately swapped a large part of the returns on its 100% non-marketable bond portfolio for equity market returns. It began to build internal investment capabilities, especially in private markets. It initiated incentive compensation for its internal investment team. It privatized Canada's largest publicly-traded real estate company Cadillac Fairview, which continues to be OTPP's wholly-owned real estate subsidiary to this day. It initiated a formal balance sheet risk-budgeting protocol. It set unusually-high disclosure and reporting standards for itself. Through all this, it became an increasingly visible 'active owner' on a global scale, even to the point of acquiring Glass Lewis, the globe's second-largest corporate governance/proxy advisory firm. Over the 1990-2016 period, OTTP has generated a net excess return of 2.2%/yr. versus an equal-risk reference portfolio, amounting to a cumulative $37 billion in incremental assets.[xix]

OTPP's unconventional structure and 'active owner' investment successes have not gone unnoticed. They were copied in the creation and management of the Canada Pension Plan Investment Board, as well as by other major Canadian pension funds. *The Economist* publication took note of these developments in a 2012 article titled "Maple Revolutionaries". The underlying Drucker 'success' principles are now taking hold in the redesign of other major pension organizations around the world. These organizations are now banding together in the execution of their 'active ownership' investment programs through collaborations such as the Aspen Institute[xx], the UN-sponsored Principles for Responsible Investing (PRI), Focusing Capital on the Long-Term (FCLT Global), the World Economic Forum (WEF)[xxi], and the Rotman International Centre for Pension Management (ICPM). Silicon Valley is making its own contribution by fostering the creation of the Long-Term Stock Exchange (LTSE).[xxii]

Three Barriers to Long-Termism

All this is not to say that the 'active owner' style of investing is now decisively winning the day. A recent portfolio turnover study involving 3500 long-only active equity fund managers in the Mercer database reported an average annual turnover rate of 60%.[xxiii] This suggests there is still a lot of 'beauty contest' trading going on.

Given its social and financial value-creating potential, its strong conceptual foundations, and its growing empirical validation, why is long-term 'active ownership' investing still not the dominant investment paradigm today? I see three mutually-reinforcing barriers:

1. Convention: for lay people and even most professional investment people 'investing' continues to fit Keynes' 1936 'beauty contest' and Treynor's 1976 'fast ideas' descriptions of it. It continues to be re-enforced on a daily basis in the electronic and print media, and on a quarterly/ annual basis through the agendas of the vast majority of retail and institutional investment conferences. Measured in terms of entertainment value, 'short-termism' beats 'long-termism' hands down. On top of all this, most compensation schemes continue to reinforce 'short-termism' conventions.[xxiv]

2. Exploitation: George Akerlof's 'asymmetric information' thesis applies directly to the market for financial/investment services. Buyers pay too much….and the sellers earn too much for exchanges of too little value. Short-termism has played an important role in this systemic exploitation process, as sellers work hard to convince buyers that they can beat their competitors in a variety of investment beauty contest games.

3. Information Dysfunction: Peter Drucker observed "what gets measured gets managed". In a short-termism world, corporate and investment performance measurement systems have short-term orientations. Longer-term information is seldom demanded or provided.

The question is: how do we get to a barrier-breaking tipping point?[xxv]

Breaking Down the Three Barriers

Malcolm Gladwell's 2000 book "The Tipping Point" offers examples of how individuals, groups, or events can trigger changes in what people think and do in such diverse fields as health, education, crime, and transportation. Can we get to the critical mass of people and events needed to act as catalysts to change the short-term 'beauty contest' convention in institutional investing?

It will require ongoing sponsorship of academic research and case studies that address a list of relevant governance and investment questions, as well as a material expansion of sharply-focused, strategic governance and investment education efforts.[xxvi] At the same time, a continuous, integrated 'outreach' strategy involving the institutional collaborations listed above is critical. As to 'outreach' targets? The print and electronic media should be high on the list, as should other 'impact' bodies such as international and national government, NGO, regulatory, and industry agencies.

Meanwhile, on the exploitation front, the asymmetric information problem continues to siphon billions of dollars out of retirement savings into the pockets of a global network of intermediary agents. Performance studies of actively-managed retail mutual funds show average net return shortfalls of -3%/ year versus market indexes, compared to average positive net return outcomes for pension funds with fiduciary mandates.[xxvii]

Legislators and regulators have started to sever the link between providing financial 'advice' and receiving sales commissions from mutual fund manufacturers. Mandatory participation in workplace pension plans (e.g., in northern European countries, Australia, Singapore, and recently, the UK) is also helpful. As these plans operate with fiduciary mandates, they must act in the best interest of their members, rather than exploit them.

A remaining exploitation barrier-breaking opportunity is to reorganize the management of workplace pension plan sectors around the world by fewer, larger-scale organizations with strong governance functions. As empirical evidence of the value-creating powers of scale and good governance continues to mount, the stronger the case becomes that the sponsors and trustees of pension organizations which lack these two attributes are failing the legal 'reasonable expectations' test, and are therefore in breach of their fiduciary duties.[xxviii]

On the information dysfunction front, Drucker defines information as "data endowed with relevance and purpose". Much of the information being disclosed in the corporate and investment sectors does not pass this test. A number of collaborative efforts underway to change this situation. Examples are the International Integrated Reporting Council (IIRC), the Sustainable Accounting Standards Board (SASB), Accounting for Sustainability (A4S), and the Financial Stability Board's Taskforce on Climate-related Financial Disclosures (TCFD). Where do these promising 'information dysfunction' barrier-breaking efforts go from here? The efforts to date have led to voluntary disclosure protocol recommendations. Is not the logical next step to mandate them?

Getting to 'Tipping Points'

In conclusion, how can we best accelerate these promising 'change' developments? Addressing the question from macro and micro perspectives, here is my 'to do' list:

1. Macro: 1. Accelerate systems-level work towards building a global financial system that is stable, credible, and transparent.[xxix] 2. Integrate 'active ownership' investing into governance and investment education and accreditation programs (e.g., for the Chartered Financial Analyst designation).[xxx] 3. Initiate 'active ownership' investment messaging to the media, and to key governmental, regulatory, and business agencies. 4. Expand workplace pension plan coverage with effective pension delivery organizations with fiduciary mandates. 5. Repurpose stock exchanges to promote and facilitate long-term investing. 6. Transform the voluntary disclosure protocols developed by IIRC, SASB, A4S, and TCFD into a coherent set of mandatory principles-based reporting requirements for the corporate and investment sectors.

2. Micro: 1. Continue to develop the ideas and protocols first proposed by Graham and Dodd in 1934. Promising exchanges are underway in both the academic and professional communities on defining and measuring such concepts as corporate sustainability, organizational effectiveness, 'value for money' measurement and benchmarking, and incentive compensation.[xxxi] 2. Actually implement these ideas in 'active ownership' institutional investment programs rather than just talk about them.

In the end, saying is one thing, doing another. Are you ready to join the move to long-term 'active ownership' investing? [xxxii]

Keith Ambachtsheer

Endnotes:

i. *See Keith Ambachtsheer and James Farrell. 1979. "Can Active Management Add Value?", Financial Analysts Journal.*

ii. *Drucker's book was republished in 1991.*

iii. *For more on this idea, see Part 2 of my 2016 book "The Future of Pension Management", Wiley. An important point here is that long-term and short-term perspectives both matter in setting investment policy. Their respective weightings will vary, depending on the investment context.*

iv. *See The Quarterly Journal of Economics, Aug 1970.*

v. *See, for example, John C. Bogle. 2014. "The Arithmetic of 'All-In' Investment Expenses", Financial Analyst Journal, Jan-Feb., and Juhani Linnainmaa, Brian Melzer, and Allessandro Previtara. 2015. "Costly Financial Advice: Conflicts of Interest or Misguided Investment Beliefs?", Working Paper.*

vi. *It was republished by the FAJ 'In Memoriam' in 2016.*

vii. *See Martijn Cremers and Ankur Pareek. 2016. "Patient Capital Outperformance: The Investment Skills of High Active-Share Managers who Trade Infrequently", Journal of Financial Economics.*

viii. *See Jarrod Harford, Ambrus Kecskes, and Sattar Mansi. 2015. "Do Long-Term Investors Improve Corporate Decision-Making?" Working Paper.*

ix. *See Mozaffar Khan, George Serafeim, and Aaron Yoon. 2016. "Corporate Sustainability: First Evidence of Materiality". The Accounting Review.*

x. *Originally founded as Kinder, Lydenberg & Domini Research Analytics in 1989, KLD is now a division of MSCI.*

xi. *The Sustainable Accounting Standards Board (SASB) was founded in 2011 to foster more complete disclosures regarding the impact of environmental, social, and governance factors on corporate affairs.*

xii. *KLD creates its sustainability scores based on four considerations: Environment, Community/Society, Employees/Supply Chains, and Governance/Ethics. SASB corporate ESG materiality scores are based on the relative frequency of keyword mention of 43 generic sustainability factors.*

xiii. *See Dominic Barton, James Manyika, Tim Koller, Robert Palter, Jonathan Godsall, and Josh Zoffer. 2017. "Measuring the Economic Impact of Short-termism", McKinsey Global Institute, Discussion Paper. The results were discussed in an article in the February 2017 issue of the Harvard Business Review "Finally, Evidence that Managing for the Long-Term Pays Off", by Dominic Barton, James Manyika, and Sarah Williamson.*

xiv. *All this raises the state of academic research on these issues. It is telling that in a 2008 Journal of Banking and Finance article titled "Socially Responsible Investments: Institutional Aspects, Performance, and Investor Behavior" authors Renneboog, Ter Horst, and Chang wrote: "Existing studies on Socially Responsible Investing hint, but do not unequivocally demonstrate that SRI investors are willing to accept suboptimal performance to pursue social or ethical objectives. However, the emergence of SRI raises interesting questions for research on corporate finance, asset pricing, and financial intermediation." The four cited large database studies published in the 2015-2017 period show how far answering these questions has come.*

xv. See Chambers and Dimson. 2013. "Retrospectives: John Maynard Keynes, Investment Innovator", Journal of Economic Perspectives. They speculate that some of Keynes' exceptional results might have been due to his insider knowledge of the firms he invested in.

xvi. By Andrea Frazzini, David Kabiller, and Lasse Heje Pederson in a 2013 NBER Working Paper.

xvii. From the Yale Endowment Fund website. These exceptional results were likely in part due to the exceptional support (e.g., through financial backing, advice, and fund access) provided by Yale alumni.

xviii. For example, three similar cases can be found by accessing the websites of MFS Investment Management, Generation Investment Management, and Ownership Capital.

xix. From OTPP's 2016 Annual Report.

xx. See its December 2016 paper "The American Prosperity Project".

xxi. See its September 2016 paper "The New Paradigm".

xxii. The LTSE project was initiated four years ago and has significant financial backing. It is seeking SEC approval to operate as a national securities exchange. Full disclose: I am an LTSE investor.

xxiii. See the 2017 discussion paper by the UN Environment Inquiry; Mercer, The 2-Degree Investment Initiative, and The Generation Foundation, "The Long Winding Road: How Long-Only Equity Managers Turn Over their Portfolios Every 1.7 Years".

xxiv. Even the 'long-term' components seldom stretch beyond three years in both corporate and institutional investing contexts.

xxv. I am not the first to pose this question. See, for example, the CFA Institute's report "Breaking the Short-Term Cycle", July 2006. There are strong parallels between the conclusions reached in that report and the conclusions I come to here. This makes the point that breaking the convention, exploitation, and information barriers to long-termism is not a short-term project. Eleven years later, much remains to be done. See also a new IMF Working Paper by Brad Jones. 2017. "Rethinking Asset Bubbles: Some Reflections in the Age of Institutional Investment Management".

xxvi. For example, there are active conceptual and research exchanges in both the academic and professional communities on such concepts as corporate sustainability, organizational effectiveness, 'value for money' measurement and benchmarking, and incentive compensation.

xxvii. See, for example, Bogle's cited 2014 FAJ article "The Arithmetic of 'All-In' Investment Expenses", and Alex Beath, 2015 "Value-Added by Large Institutional Investors between 1992-2013". CEM Benchmarking Inc. website.

xxviii. See Chapter 11 of "The Future of Pension Management" for more on the evolving meaning of fiduciary duty. The Australian, Dutch, and UK regulators have been proactively facilitating pension industry consolidation.

xxix. See, for example, Steve Lydenberg's 2017 essay "System-Level Considerations and the Long-Term Investor: Definitions, Examples, and Actions", The Investment Integration Project in collaboration with the PRI organization.

xxx. *The CFA Institute has just released a paper titled "The Future State of the Investment Profession" (April, 2017) which addresses the education challenge as one of many facing the investment industry.*

xxxi. *See, for example, Janet Kelly and Mark Van Clieaf. 2005. "The New DNA of Corporate Governance: Strategic Pay for Future Value", Corporate Governance Advisor; Roland Burgman and Van Clieaf. 2012. "Total Shareholder Return and Management Performance: A Performance Metric Appropriately Used, or Mostly Abused?" Rotman International Journal of Pension Management.*

xxxii. *Thanks to Dominic Barton, Rob Bauer, Stephen Brown, Barbara Petitt, Adam Robbins, Bob Swan, Ed Waitzer, and Sarah Williamson for providing helpful feedback on earlier drafts of this Letter. None are responsible for any remaining flaws, errors, or omissions.*

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