

EVALUATION OF THE FINNISH PENSION SYSTEM / PART 2

The pension system in Finland: Institutional structure and governance

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PREFACE

Finland has a pension system that, in a unique way, combines a compulsory legislative basis, similar benefits for all, partial funding and private organization of the pension provision. It is a hybrid, fulfilling the functions of first and second pillar pensions within the same scheme. The main pension scheme is a legislated and compulsory earnings-related scheme, which is supplemented by the residence-based, flat-rate pension scheme.

In order to get a fresh international view of the Finnish pension system, the Finnish Centre for Pensions decided in 2011 to commission an independent evaluation study of the Finnish pension scheme. The purpose of the evaluation was to get a forward-looking external view of the Finnish pension system from an international perspective, including recommendations.

The evaluation focuses on the following issues:

1. The adequacy of pensions and the financial sustainability of the system:
 - the roles of the earnings-related pension and the residence-based flat-rate pension, and the interplay of these
 - the functioning of the economic and actuarial incentives of the pension system.
2. The policy design of the Finnish earnings-related pension scheme:
 - how does the Finnish pension system look from the point of view of risk-sharing and social insurance?
 - the impact of the pension system on the economy, the labour markets (incentives to work and to retire), and society in general
 - the roles of the state, labour market organizations and other interest groups in the decision-making (pension legislation).
3. Governance issues in the earnings-related pension scheme:
 - the functioning of the organization of pension provision (the roles and relations of various actors in pension provision, including the administrative structures of these organizations)
 - the roles of co-operation and competition between pension providers
 - the administrative efficiency and cost-efficiency of the earnings-related pension system.

We were very lucky that two distinguished experts agreed to undertake this ambitious task. Professor **Nicholas Barr** from the London School of Economics agreed to evaluate the first two sets of issues outlined above (adequacy and sustainability issues and policy design), and Professor **Keith Ambachtsheer**, who is Director of the Rotman International Centre for Pension Management, Rotman School of Management, University of Toronto, to evaluate the governance issues. Both Barr and Ambachtsheer are internationally well-known and highly regarded experts in the pension field, and their services are frequently utilized internationally.

These two evaluations are the first ones of their kind made of the Finnish pension system. They comprise sharp analyses, which deserve broad attention in the public debate as well as among politicians and decision-makers. They emphasize that Finland has a pension system with many strengths deserving appreciation. They also provide suggestions for possibly making the system even better. The Finnish Centre for Pensions wishes to extend very warm thanks to Keith Ambachtsheer and Nicholas Barr for accepting our invitation, and for having provided thoughtful and fresh ideas to fertilize the pension policy discussion in Finland.

In connection with the evaluation reports by Keith Ambachtsheer and Nicholas Barr, three background papers will also be published. The key results of these three studies are utilized in Ambachtsheer's evaluation, and we wanted to make the results of the studies available in greater detail and hence decided to publish them.

Two of the studies are based on reports provided by CEM Benchmarking Inc. CEM is specialized in providing benchmarking information for pension investment and administration operations. Its clients are pension providers all over the world, who want to benchmark their own performance to the best pension providers in the world. The Finnish Centre for Pensions asked CEM to conduct a comparison of the Finnish pension providers with pension providers using CEM's databases and services. These studies focus on administrative costs and service levels, as well as investment costs.

We wish to thank Mike Heale from CEM Benchmarking Inc. for managing this assignment for us with high professional expertise. Eight Finnish pension providers participated in these studies, and we wish to thank them for being part of the project.

In CEM's analysis, eight Finnish pension providers were combined into a single entity, 'the Finnish Pension Fund', which is compared to individual pension providers. This analysis gives insight into the costs and service levels

in Finland compared with those of the peer group chosen from the database of CEM. The report is not meant to describe the costs at the national level, including all first and second pillar pension providers. In order to achieve this broader view, the Finnish Centre for Pensions conducted a comparative study of the administrative costs of first and second pillar pensions in Denmark, Germany, Finland, the Netherlands, Norway, Sweden and Switzerland. This study, based mainly on publicly available information, was carried out by Antti Mielonen, Eeva Puuperä, Hannu Ramberg and Mika Vidlund from the Finnish Centre for Pensions. We wish to thank them for this essential contribution to the evaluation.

Jukka Rantala
Managing Director

Hannu Uusitalo
Director, Professor

ABOUT THIS REPORT

This past January I was invited by The Finnish Centre for Pensions to undertake an evaluation of the effectiveness of the institutional structure and governance of Finland's pension institutions. This was to be a companion study to that of Prof. Nicholas Barr of the London School of Economics, who was invited to do a similar evaluation of the broader design elements of Finland's pension system as a whole. Institutional elements I was asked to evaluate in this study include the following:

- The design of the institutional structure of Finland's pension system
- The roles of co-operation and competition between pension services providers
- The governance structures and decision-making processes of Finnish pension institutions
- The cost-effectiveness of their investment and benefit administration functions.

Based on my findings, I was asked to make recommendations that could improve the organizational performance of Finnish pension institutions.

The resulting findings and related recommendations are set out in this Report. I would like to acknowledge and thank the many people who were helpful to me in the conduct of this study. Many gave unselfishly of their time in answering my questions, and pointed me to studies which turned out to be valuable in carrying out this assignment. There are far too many to acknowledge individually. I would, however, single out Mr. Jukka Rantala and Mr. Hannu Uusitalo at The Finnish Centre for Pensions for responding unflinchingly to my seemingly never-ending series of questions and requests for assistance of various kinds. I would especially like to thank them for organizing 16 face-to-face meetings involving 28 knowledgeable people in Helsinki at the end of September.¹ This study simply could not have been conducted without their energetic support.



Keith Ambachtsheer

¹ The participants in these discussions are listed in Appendix 1.

ABOUT THE AUTHOR

I am currently Director of the Rotman International Centre for Pension Management (ICPM) based in the Rotman School of Management, University of Toronto. ICPM is sponsored by 35 major pension organizations from 10 countries. It funds research on pension design and management, sponsors forums on the implementation of research findings, publishes the Rotman International Journal of Pension Management, and offers programs to raise the effectiveness of the supervisory boards of pension organizations. I have written three books on pension design and management issues, and have been a strategic advisor through my own firm KPA Advisory Services Ltd. to major pension funds around the world for over 30 years.

REPORT STRUCTURE

This Report is organized around four broad questions:

1. What is the institutional structure of Finland's employment-based pension system, how does it compare with other countries' systems, and how well do Finland's pension institutions contribute to the financial security of its citizens?
2. Using global benchmarks provided by CEM Benchmarking Inc., do Finland's pension institutions produce 'value for money' in their investment and benefit administration functions?
3. Using deductive reasoning and empirical investigations, what do 'ideal' pension institutions look like from their governance and organization design perspectives, and how do actual Finnish pension institutions measure up to those 'ideals'?
4. What ties do Finnish pension institutions have to Finland's corporate and financial sectors, and what can be said about these ties?

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SECTION I

Report summary, conclusions and recommendations

Finland's retirement income system is both comprehensive and robust. Its design is consensus-driven, covers the entire workforce, provides adequate pensions, facilitates worker mobility, and is institutionally robust. On the latter point, its institutions have clearly-defined roles, structures, and governance processes. The various components of the pension system are better integrated than in most other countries. It would continue to serve Finnish citizens well into the future even if nothing was changed. However, in my view, the employment-based part of the system could be made even more effective if initiatives were taken to simplify it, to make it more cost-effective, and to refocus the purpose of the some 150 billion Euros of Finnish pension assets. These initiatives would address four issues: 1. How the system is financed, 2. How its pension institutions are structured, 3. How those institutions are governed, and 4. The relative emphasis on investment opportunities outside versus inside Finland.

Financing Finnish pensions

Finnish pensions are partially financed (about 75%) by pay-go contributions, and partially by pre-funding (about 25%) contributions. The former flow through directly into pension payments; the latter are invested now, and paid out as pensions later. This structure raises important questions:

- Why and how should the current 75–25 ratio change over time? For example, should ratio changes be decided through *ad hoc* consensual decision processes involving Finland's major stakeholder groups as has been the case in the past, or should future changes be back-stopped by agreed-on, automatic decision-rules that take into account such factors as changing economic prospects and demographics?
- For example, the Finnish Centre for Pensions projects that at current pension benefit levels, today's 22.8 per cent contribution rate must rise significantly over the next 20 years to reflect the aging of Finland's population. Unless pre-empted by other over-riding decisions, should the current situation

not automatically lead to a higher proportion of pre-funding now to reflect intergenerational fairness in the future?

In managing the pension assets resulting from prefunding, Finland's Pension Insurance Companies (PICs) are subject to strict solvency rules to assure ability to pay. Arguably, some features of these rules are open to question. For example, the discount rate used in the solvency calculations is decided through *ad hoc* consensual decision processes rather than automatically determined by market developments. Once again, this raises important questions:

- Do the PICs really have 20 per cent solvency margins today based on a consensus-determined 3 per cent discount rate when the market-based discount rate today is more like 2.5 per cent?
- Do 100 per cent of prefunded pensions have to be guaranteed within the PICs? Or, for example, is it more realistic to invest pre-funding contributions into more long-horizon, return-seeking investment strategies than is currently the case...and then gradually convert the asset accumulations into guarantees for older workers and retirees?
- Or alternatively, does an integrated national retirement income system with effectively a single benefit design and a current 75–25 pay-go/pre-funded ratio need PIC solvency requirements at all? In the end, payment certainty depends on the health of the Finnish economy, and on the size and wealth-creation capability of the aggregate pre-funded asset buffer fund (about 150B Euros today).

These are not just theoretically interesting questions. For example, assigning a return-seeking mandate to the entire 150 billion Euro asset buffer fund (rather than to just part of it) could reorient its current solvency-driven 'short-termism' and arguably increase its expected return by 1 per cent/year, or 1.5B Euros/year in a country with a 190B Euro GDP economy.

Institutional structure and cost-effectiveness

The Finnish retirement income system costs over 1B Euros per annum to operate today (over 600M Euros on the asset side, and over 400M Euros on the benefit administration side).

Studies carried out by CEM Benchmarking Inc. on the aggregate cost-effectiveness performance of 8 major Finnish pension organizations provided

the following information about the investment management and benefit administration sides of the Finnish retirement income system:

- Finnish pension organizations outsource a significantly smaller proportion (average 35%) of the asset management function than do their international peers in the CEM database (average 88%). This choice reduces the overall cost of the Finnish asset management function considerably. However, that cost advantage is lost by paying higher fees for similar external services. So on the whole, total Finnish asset management costs of about ½ per cent of assets per annum matched those of the international peer group average.
- The CEM study indicated that the bulk of the estimated annual 537M Euros paid to external managers in fees in 2011 relate to private markets and hedge fund investment fees (some 400M Euros).
- Finnish pension organizations currently spend materially less money on the Internal Investment Oversight function than their international peers. These lower levels of spending also show up in the compensation of senior Finnish pension fund executives. Their average 244,000 Euros in total annual compensation ranks well below that of their international peers. These findings contradict the views of some observers who believe Finnish pension executives are over-compensated.
- In the investment return side, Finnish funds would have held their own against their international peers over 2007–2011, except for one thing: their 17 per cent exposure to Finnish equities at the start of the measurement period. This exposure cost Finnish funds, on average, a material 1.5 per cent/year in underperformance relative to their international peers over this five-year period.
- Estimated total benefit administration costs for Finnish pension organizations amounted to some 440M Euros in 2011. This implies an average 107 Euros/participant, compared to an average 60 Euros/participant for an international peer group. This material cost differential was estimated to be due to three factors: 1. The smaller size of the Finnish organizations (63% or 30 Euros), 2. The greater complexity of benefit administration in Finland (23% or 11 Euros), 3. Other factors such as marketing and sales costs, and maintaining the cross-insurance feature of the Finnish PICs (14% or 6 Euros).
- An important mitigating factor in assessing this cost performance is that in the case of Finland, the pension administration costs cover both pension Pillar 1 and 2 expenses. In most other countries, Pillar 1 (universal old-age pensions) and Pillar 2 (employment-based pensions) are administered

separately. The combined Pillar 1 and 2 unit costs in most other countries likely surpass those of Finland at the national level.

- On the member service ranking side, the Finnish organizations scored an average 70 versus 75 for the international peer group. CEM noted that the PICs devote considerably greater resources to servicing their employer-clients, likely due to the competitive element in the Finnish pensions market.

These findings point to the advantages of attaining scale in both asset management and benefit administration functions. On the asset management side, greater scale creates greater opportunities for in-sourcing investment mandates, especially in the high-cost private markets areas (e.g., private equity, real estate, and infrastructure). Such in-sourcing strategies could easily cut the estimated 537M Euro Finnish pension organizations spent on external investment fees in 2011 in half.

Greater scale also permits organizations to build more robust internal oversight functions. These functions are critically important in such areas as governance, strategic and risk management, and investment management. On the benefit administration side, greater scale drives down unit costs in such areas as member contacts, member statements, pension inception, websites, and member counselling.

It is not the mandate of this Report to propose specific strategies for how scale can be increased in the Finnish investment management and benefit administration functions. However, in my view, there is strong evidence that well-managed 'scaling up' strategies carry opportunities for both greater value-creation and lower operating costs in both the investment and administration spheres of Finland's pension system. A combined value-creation/cost reduction target in the 400 million Euros range is not unrealistic. This 400M Euros/yr in potential value-creation/cost reductions plus the 1.5B Euro/yr incremental return potential by moving the 150B Euros in Finnish pension assets into long-horizon return-seeking investment strategies is equivalent to a potential 1 per cent gain in Finland's GDP.

What about the value of creating a competitive environment between the PICs? Does it not raise service quality while keeping a lid on prices? In my view, there is no compelling evidence this is the case. On the investment side, logic and evidence suggests 'competition' creates longer term herding behavior between the competitors rather than superior investment returns. On the administration side, the PIC competition focus is predictably on employer-clients, as it is this group who make the 'hire-fire' decisions. The average PIC

ranking for member services of 70 versus 75 for the international peer group does not confirm Finnish employees and retirees have benefited from PIC competition.

Institutional governance

Finland has developed a detailed protocol for the governance and management of its pension institutions. However, as in other countries around the world, there is evidence of a gap between aspiration and reality. 'Stakeholder group representation', while important, should not outrank requisite skill and experience in the selection criteria for board members of pension organizations. Both criteria are important.

Fortunately, there are strategies that can address the 'representation vs. skill/experience' imbalance problem. The first step is for employer and employee groups to agree that the problem exists, and that the solution lies in raising the bar on requisite board skill and experience while maintaining the legitimate need for all stakeholder groups to feel their interests are well-represented.

From looking inward to looking outward

The financial and economic connections between Finland's pension system and its economy has historically been very close. In the last 10–15 years Finnish pension assets have been increasingly invested outside the country. However, even today approximately 1/3rd continues to be invested inside Finland.

This is a two-edged sword. On the one hand, it provides presumably knowledgeable capital inside a relatively small country by global standards. On the other, as the 2007–2011 experience cited above confirms, there is a 'double jeopardy' dimension to it. Because of its 75 per cent 'pay-go' financing, the health of the Finnish pension system is already heavily dependent on the health of the Finnish economy. This suggests its financial asset buffer should be fully invested outside Finland as a diversification strategy.

A more vigorous outward-looking approach to investing Finnish pension assets would also help defuse the ongoing perceptions in some quarters that (a) there is a continued risk of political interference in how Finland's pension assets are invested domestically, and (b) that the Finnish corporate and pension sectors are still not 'arms-length' enough. Finally, a higher level of collaboration

with leading pension organizations in other countries will uncover new investment ideas and opportunities for Finnish pension organizations.

In conclusion

We repeat our initial observation that Finland's retirement income system is both comprehensive and institutionally robust. It would continue to serve Finnish citizens well into the future even if nothing was changed. However, there are opportunities to simplify the system, to improve governance quality, to explore global investment opportunities, and in the process, to materially raise asset returns and lower investment and benefit administration costs. I encourage Finnish policy makers to carefully assess these opportunities, and to capitalize on them to the degree practically possible. Specifically, I recommend the following six questions be addressed:

1. Adjust retirement income system financing strategies?
2. Rethink role of pension assets and implications for investment policies?
3. Exploit significant 'economies of scale' opportunities in investments and benefit administration?
4. Shift incentive structures in pension system from competition to collaboration basis?
5. Raise governance quality by combining representation and skills/experience requirements?
6. Accelerate 'looking outward' momentum in pension asset management?

SECTION II

The institutional structure of Finland's pension system and its contribution to Finnish financial security: how well does it work?

A unique institutional structure

The institutional structure of any country's pension system is unique to that country, having evolved out of a series of circumstances, events, and the responses to them over many decades. Finland's pension system is no exception to that general rule. Briefly:

- In a design spectrum ranging from 'voluntary/fragmented' at one end to 'mandatory/collective' at the other, Finland's pension system is distinctly 'mandatory/collective', with a small number of pension arrangements and institutions effectively covering Finland's entire population.
- Organizations representing the country's employer and employee communities have played leading roles in the design of Finland's pension system and its evolution over time. Government has played a supporting role through passing pension legislation reflecting employer-employee preferences and decisions. The Finnish Centre for Pensions acts as the country's key pension R&D arm, facilitating ongoing research, debate, and discussion on pension system improvement. This collective, consensus-oriented approach has helped Finland maintain its position as one of the globe's thought-leaders in pension design and delivery.
- A key Finnish system design decision was to segment pension and related benefit financing into pay-go (about 75%) and prefunded (about 25%) components. Arguably, this is a middle road between fully pay-go and fully prefunded finance designs, each with its own pros and cons. The current 75/25 proportions raise an interesting question: is there an optimal pay-go/prefunded ratio for a country that maximizes sustainable benefit security? If so, what are the determinants of this 'optimality', and how might the answer change over time in response to changing demographic and economic factors?²

2 I pursue these questions in more detail later in the Report.

- The mandatory/collective philosophy of the Finnish system is reflected in its institutional structure, with 37 not-for-profit organizations currently licensed to provide insurance, investment, and benefit administration services to pension plan participants and their employers.
- However, there is significant institutional concentration. For example, 4 of the 37 private and public sector pension service providers managed a collective 103B Euros of pension assets at the end of 2011, out of a national total of 144B Euros (i.e., 72%).
- The bulk of the pension arrangements for private sector workers and employers are managed through 7 pension insurance companies (PICs). While PICs are not-for-profit entities, they do compete for market share based on service levels and profitability. Of the 7 companies, 2 have dominant market positions. For example, at the end of 2011, Varma and Ilmarinen managed 59B Euros out of a total PIC asset base of 83B. (i.e., over 70%).
- While PIC investment policies are not identical, asset mixes tend to be middle-of-the-road with about 40 per cent allocated to equities, 45 per cent to debt instruments, 10 per cent to real estate, and 5 per cent to alternatives such as hedge funds. Geographically, investments split roughly equally between Finland, Europe, and Rest of World. On a global asset capitalization basis, this implies significant home-country and Euro biases.
- Unlike Defined Benefit (DB) pension arrangements in the Anglo-Saxon countries, PIC solvency is regulated using insurance company principles. Specifically, Finland's insurance regulator requires that each PIC has a solvency margin sufficiently large to withstand shocks such as the 2008–2009 Global Financial Crisis. Further, if a PIC becomes insolvent, the remaining PICs are collectively obligated to cover its liabilities.³
- Specific views expressed by Finnish experts in the 16 Helsinki meetings in September are listed below. They should be read in the constructive context of people wanting to improve a system they deemed to be already broadly functional and effective:
 - Most Finns don't understand the complexities of their pension system, but have a high level of trust in it.

³ As a counter example, American state and local retirement systems are not regulated at all. As a consequence, the average funded ratio of these plans is about 75 per cent today versus a target 100 per cent despite the use of aggressive liability discount rates in the 7–8 per cent range. In contrast, Finland's reported PIC funded ratios average about 120 per cent today with a far more conservative liability discount rate of 3 per cent. These solvency measurement and management questions are further explored later in the Report.

- The intergenerational fairness issue should receive more attention, and there should be more openness to greater flexibility in benefit levels and retirement age.
- The PIC solvency rules, and their quarterly reporting, create herding behavior and leave too little room for long horizon investing with higher return prospects.
- Pension fund Boards are too big (e.g., 12 people and 4 alternates) and have too little genuine governance expertise.
- The concept of PIC competition-based client rebates is not well-conceived.
- PIC investment policies are too Finland-oriented, especially since the 75 per cent Pay-Go component of the pension system is already fully dependent on the health of the Finnish economy, the potential size of its labour pool, and the participation rate of that pool in the labour market.

This institutional summary leads to a number of conclusions and questions that require further exploration.

Resulting conclusions and questions for further exploration

Specifically, the following come to mind:

1. On the whole, the institutional structure of Finland's pension system, while complex, is one of the most robust in the world (e.g., see footnote 3 below on the fiscal situation of US state in local retirement systems). A question for exploration: can the Finnish system be simplified, made more cost-effective, and stay robust at the same time?
2. The pay-go/prefunded financing ratio is a key policy lever in the Finnish system. Developing dynamic/automatic decision rules for why and how that ratio should be adjusted over time would represent an important pension policy innovation for Finland.⁴

⁴ The Finnish Centre for Pensions estimates that at current benefit levels, today's contribution rate of 22.8 per cent for earnings-related pensions must rise by a material amount over the next 20 years to reflect the aging of Finland's population. Arguably, it would be fairer to the next generation of workers to prefund a higher proportion of future benefits by raising the contribution rate more rapidly to a 'steady state' rate now. Canada made this decision in 1997 with its Canada Pension Plan (CPP) by raising the CPP contribution rate from approximately 5 per cent to 10 per cent of pay over a 5-year period. The sustainability of the 10 per cent rate (9.9% actually) is now subject to automatic 3-year reviews.

3. There is significant institutional concentration in Finnish pension management and delivery. Is this a good system feature or a problem? The Report revisits this question in Section III.
4. There is a significant Finland/Euro bias in the investment policies of most Finnish pension institutions. Is this bias justified or a problem? The Report revisits this and other investment policy questions in Sections III and IV.
5. Given the regulatory application of insurance company principles, how effectively are the PICs managing their balance sheet risk? What are the prospects for taking PIC solvency risk management to a higher level? Or more radically, should the investment policies of the PICs (and other Finnish pension funds for that matter), be constrained by solvency rules at all?
6. Where do 'competition' and 'co-operation' between PICs fit into all this?

An assessment of the three questions in Point 5, and possible responses to them, follow below. Then we address Point 6.

The essence of PIC solvency risk management

While actuarial terminology and methods employed to assess and manage balance sheet solvency in organizations like Finland's PICs often sound arcane and complicated, the underlying principles are actually simple and intuitive. The key is to understand how the values of future payment promises (i.e., balance sheet liabilities) should be calculated today. For example, assume a PIC promises to pay 103 Euros one year hence, and that the current yield on 1-year duration risk-free bonds is 3 per cent. As a result, the future payment promise of 103 Euros has a present value of 100 Euros today, and can be perfectly hedged by the purchase of a 100 Euro risk-free bond that will pay 103 Euros one year from now. In PIC balance sheet terms, there is a perfect balance today: the 100 Euro liability is matched by a 100 Euro asset. One will exactly extinguish the other one year from now.

What if the payment promise was 101 Euros in one year plus the 1-year rate of inflation? Now the 3 per cent risk-free bond would only be the matching asset if the inflation rate happened to be 2 per cent. The perfect matching asset would now be a risk-free bond that paid 101 Euros in one year plus the 1-year rate of inflation. So if inflation was 0 per cent, it would pay 101 Euros. If inflation was 5 per cent, it would pay 106 Euros. In balance sheet terms, if such an asset traded

in the market today for 100 Euros, we can also set the today's liability value for a payment promise one year hence of 101 Euros plus the rate of inflation at 100 Euros. Once again, there is a perfect asset/liability balance today, with the asset able to exactly extinguish the liability one year from now.

What would be the PIC balance sheet impact if the nominal 3 per cent market interest rate (in Case 1) or the 1 per cent inflation-indexed market interest rate (in Case 2) changed tomorrow? The simple answer is that while the 'fair value' of both the assets and the liabilities on the two balance sheets would change, **the changes in asset and liability values would exactly offset each other**. Conversely, if the duration and inflation-sensitivity of a PIC balance sheet did **not** match perfectly, that PIC would be carrying asset/liability mismatch risk on its balance sheet, against which insurance company regulations require a solvency buffer. The greater the mismatch risk, the greater the solvency buffer required.

The key lesson here is that **the ideal benchmark for measuring PIC balance sheet solvency risk is a portfolio of securities that match the accrued payment obligations in duration and inflation sensitivity**. A PIC balance sheet is 'at risk' to the degree its assets don't provide such a match, and a large-enough solvency buffer will be required to ensure that pensions promised will become pensions paid. Establishing this 'large-enough' buffer will require the employment of state-of-the-art simulation and stress-testing techniques.⁵

How Finnish PICs actually measure and manage solvency risk

My readings and conversations on how PIC balance sheet mismatch risk is actually measured, managed, and regulated, suggest that actual practices do not align closely with the ideal framework set out above. As the pre-funded component of Finnish pension obligations are not explicitly inflation-indexed, Case 1 applies, requiring the creation of a benchmark liability-hedging portfolio of nominal, Euro-pay, high-quality debt securities that match the duration structure of accrued payment promises.⁶ The appropriate liability discount rate at any point in time is the duration-weighted average market yield on such a portfolio, or a reasonable proxy thereof.

This is not how the actual PIC liability discount rate is set in Finland. Instead, it is set as part of the periodic processes of updating Finnish pension

⁵ There are active European Union discussions underway about applying the Solvency II regulatory framework for the regulation of insurance companies to the pensions sector under the rubric of the 'holistic balance sheet' balance sheet proposal. These discussions are far from resolved.

⁶ Or derivatives based on those securities.

arrangements in response to changing times. The rate was set at 5 per cent in the 1970s, and reduced to 3 per cent in 1997 as part of a broader pension reform package implemented at that time. A nominal 3 per cent liability discount rate was conservative for the PIC-relevant liability-hedging portfolio in 1997. With the dramatic fall in high-quality interest rates since then (especially over the course of the last five years), a 3 per cent liability discount rate is no longer conservative. For example, the yield on Long AAA Euro bonds is 2.5 per cent today. That discount rate, and assuming an average liability-duration of 10 years, would imply that PICs are now understating the risk-free economic value of their accrued liabilities by some 5 per cent today. This in turn implies that the economic values of the PIC solvency buffers are more like 14 per cent today, rather than the reported average +20 per cent.⁷

These economic realities do not mean that a 100 per cent asset/liability-matching strategy is always the right investment strategy, even if it could be implemented. Solvency buffers can be invested in return-seeking strategies involving balance sheet mismatch risk. An important message from the traumatic 2007–2011 capital markets experience is that balance sheet mismatch risks not likely to be rewarded should be hedged away. The Danish national pension scheme ATP adopted this philosophy a decade ago and as a result, had matching asset gains offsetting the liability increases resulting from falling bond yields over the course of the last five years. As a result, ATP has been able to maintain its positive solvency buffer on a 'fair value' basis during this period despite having to discount its liabilities at much lower rates.⁸

Like many other pension organizations around the world, Finland's PICs have concentrated their risk management function on the asset side of their balance sheets.⁹ No doubt, asset-only investment risk can be an important contributor to overall balance sheet risk. But it cannot tell the whole risk story.

7 A simplifying rule of thumb is that at a duration of 10 years, a 0.5 drop in yield increases the liability by 5 per cent. So, for example, assume reported assets are 120 and the reported liability 100, leading to a reported funded ratio of 120 per cent. If the economic liability is really 105, then the economic funded ratio is $120/105=114\%$.

8 For more detail, see The Ambachtsheer Letter "Effective Pension Management: the Cases of ATP and HOOPP", which is appended to this Report. The Letter notes that ATP's annualized asset return for the 2007–2011 period was 11.8 per cent vs. 3.9 per cent for the median Euro fund in the CEM Benchmarking Inc. database. The reported asset returns for Finnish PICs Varma and Ilmarinen over this period were 2.2 per cent and 1.4 per cent respectively.

9 This involves understanding the asset portfolio exposure risks and diversification potential of broad economic and geographic investment factors, of specific industry factors, and of risks specific to individual government and corporate securities issuers in home countries and abroad. The liability side can be brought in to some degree by simulating possible real asset return outcomes versus the 3 per cent real return requirement. What such simulations miss of course, is that the liability discount rate is in fact not constant, but also variable, and subject to considerable future uncertainty.

Recognizing that high-quality pension promises are effectively high-quality PIC bonds is an equally important contributor to understanding and managing PIC balance sheet risk. It leads directly to the recognition that the risks associated with servicing pension debt can be 'immunized' (even if only imperfectly) by a portfolio of matching assets or their derivatives. It further clarifies the only justification for undertaking balance sheet mismatch risk: to earn additional return while maintaining balance sheet solvency at the same time.

Taking PIC balance sheet risk management to the next level

What could be done to take PIC balance sheet risk management to the next level? The preceding logic and experience suggests Finland should consider the following three steps:

1. Consider changing the PIC liability discount rate from an arbitrary value-setting process (e.g., from 5% to 3% in 1997) to one that always reflects current market realities (e.g., currently about 2.5%).
2. Recognize that not the entire prefunded pension benefit needs to be guaranteed. For example, an age-related proportion could be guaranteed (and as closely matched with like-assets as possible). The rest of the assets could be placed in a unitized, well-managed, long horizon, global return-seeking fund without guarantees, with plan members owning fund units regularly valued at 'fair value'. This split follows logically from the Tinbergen Rule requiring that the number of goals must be matched by the number of instruments designed to achieve them.¹⁰ Denmark's ATP and America's TIAA-CREF have successfully implemented the principle of separating the return-seeking and liability-hedging goals of their stakeholders into separate implementation instruments. QSuper in Australia is moving in a similar direction.¹¹
3. Decide how the resulting lessons learned are best adapted to, and implemented in the Finnish pension system.

These suggestions are made in the context of the current Finnish pension financing model, which effectively treats the 75 per cent pay-go-funded pension

¹⁰ The Dutch economist Jan Tinbergen was awarded the first-ever Nobel Prize in Economics in 1969 for his 'the number of goals must be matched by the number of instruments' principle.

¹¹ For more detail, see the Ambachtsheer Letters "The Dysfunctional 'DB vs. DC' Debate: Why and How to Move Beyond It" and "Turning DC Frogs into Pension Prince Charmings: Building Pension Plans that Serve Real People", which are appended to this report.

component and the 25 per cent pre-funded pension component as separate, independent pieces of the total pension pot. In other words, the question raised here was whether 100 per cent of the liabilities accruing in the pre-funded part of the system needed to be guaranteed, or whether that requirement could be relaxed so that a greater proportion of accumulated pension assets could be allocated to long-horizon return-seeking investment strategies.

Are PIC solvency requirements needed at all?

Some Finnish pension and investment experts made the argument during my Helsinki conversations that the forced segmentation of pay-go/pre-funded pension liabilities in the Finnish system causes unnecessary investment inefficiencies and unnecessarily constrains to investing for the long term. The essence of the argument is that the earnings-based component of the Finnish pension system is effectively a mandatory collective pay-go system with about 600B Euros in accrued payment obligations, and a financial assets buffer of approximately 150B Euros.

The logic that follows from this framing is that the entire 150B Euro asset pool should be released from any solvency-related constraints, and should be assigned a long-horizon return-seeking mandate. In this framing, it would be clear to all that pension system sustainability is ultimately determined at the national level in an integrated manner. It would take into account pay-go premiums, pre-funded premiums, and investment income from the buffer fund vs. projected pension payments all at the same time. This is how the Canada Pension Plan operates.¹² If Finland's current 150B Euro buffer fund generated an additional average annual 1 per cent per year by moving to a long-horizon return-seeking mandate, its pension system (and hence Finnish citizens) would be an expected 1.5B Euros per year richer over the long run.¹³

Traditional thinking and theory would assign a higher degree of risk exposure to such a strategy. A credible counter-argument is that over long

12 See "Measuring the Sustainability of National Social Insurance Plans: The Case of the Canada Pension Plan" by Jean-Claude Menard (The Rotman International Journal of Pension Management, RIJPM, Fall 2010) for details on how Canada does this. An outcome is that the CPP Investment Board manages the CPP buffer fund (currently about \$170B) with a global, return-seeking mandate and a modest short-term liquidity reserve.

13 For example, assuming a long term 3 per cent risk premium of equity-like investments over debt-like investments, shifting the current (roughly) 45–55 Finnish mix to an 80–20 mix would increase the expected return on the asset pool by 1 per cent/yr. Detailed 21st Century capital markets prognostications fall outside the scope of this Report. In my view, projections of a 4 per cent net real return for equity-like investments and 1 per cent for debt-like investments are not unrealistic.

investment horizons in the 21st Century, a diversified portfolio of cash-flows (e.g., dividend payments or their equivalents) being generated by well-managed global corporations with dividend-paying cultures may in fact be less risky than the coupon payment-related cash-flows of a portfolio of bonds issued by the governments of countries with deteriorating demographics and fiscal positions. If the cash-flows attached to the former are less risky than those attached to the latter, so are their long horizon principal values.

Where do 'competition' and 'co-operation' between the PICs fit into this story?

'Competition' and 'co-operation' make for strange bedfellows. Maybe less so in a 'mutual' setting without shareholders interested a rising stock price, and without a need to raise capital in the financial markets, as is the case with Finnish pension institutions. Nevertheless, a rationale for the current Finnish pension industry structure, and a logic framework to assess its potential effectiveness, are needed.

Let's start with some actual industry experience. Data provided by TELA shows a steady decline in the number and type of Finnish pension organizations over time (e.g., from 164 in 1970 to 37 in 2012), with most of that decline due to a fall in corporate pension funds from 137 to 15. At the same time, client turnover within the PIC sector has been averaging about 5 per cent per annum recently. This experience suggests massive pension industry consolidation over the course of the last 40 years, and a modest rate of client turnover between PICs in the last decade.

Now let us employ some deductive thinking to see where the Finnish pension industry could/should go from here. The standard economic rationale for fostering competition in an industry is that it raises product/service quality and keeps the lid on prices. Pension industry organizations offer two very different services: 1. Investment Management, and 2. Benefit Administration. Thus in theory, the ideal pension organization is a 'competitive' supplier in both fields, and can demonstrate it with persuasive evidence readily understood by current and prospective customers.

Unfortunately, such demonstrations are difficult to achieve in both service areas. A further confounding factor is that there is not a single coherent customer base. Finnish employers are the primary beneficiaries of extended superior investment performance and operational efficiencies, while employees

are the primary beneficiaries of service quality in benefit provision. These realities suggest that an emphasis on co-operation/collaboration strategies rather than on competitive strategies may produce better outcomes for all, including for employers of all sizes. Specifically:

1. **Investment management:** logic suggests and research confirms that most buyers of investment management services are unsophisticated, and chase recent good performance. Unfortunately, logic also suggests and research also confirms that recent good performance is far more likely to be noise than signal. So once an investment management organization has sufficient market share, the rational thing to do is to defend it by 'herding'. In other words, to navigate investment policy into the middle of the pack, thus ensuring no significant underperformance and loss of market share. The Swedish AP Funds offer an interesting example of this behavior. As part of Swedish pension reform a decade ago, four equal-sized buffer funds were created to foster competition and diversify investment risk. Predictably, the strategy achieved neither goal, as the AP Fund managers rationally herded together with very similar investment policies and hence very similar investment results. There is now an active debate in Sweden on how to amalgamate the four smallish 25B Euro Funds so that a single, much larger-scaled buffer fund can become a competitive world-class investor.¹⁴
2. **Benefit Administration:** as in investments, there are strong scale economies in pension administration services (e.g., record keeping, pension payments, member communications, etc).¹⁵ With a strong governance/management function in place, scale drives down unit costs here as well. At the same time, a strong governance/management function ensures PIC customers receive a suite of high-quality pensions and insurance services.

In short, there is no compelling logic that suggests competition between the PIC will increase investment returns or create more cost-effective pension and insurance administration services in Finland. In contrast, it appears much could be gained through well-thought-out co-operative strategies on both the investment and benefit administration sides of the fence. So for example, two or more of the Finnish pension organizations could merge their investment functions into a single, much larger-scaled global investment organization.

14 See the article "Pension capital reform 'does not go far enough'", Financial Times, September 17, 2012.

15 See the working paper "The Impact of Scale, Complexity, and Service Quality on the Administrative Costs of Pension Funds: A Cross-Country Comparison" by Bikker *et al.*, De Nederlandsche Bank, 2010.

Similarly, on the administration side, the consolidation of some of the Finnish pension and insurance administration functions could result in significant cost savings.

Counter arguments

It is important at this point to acknowledge some of the counter arguments to these scale-based consolidation arguments. These counter arguments include:

- The PIC structure creates a standardized framework within which to assess organizational behavior and performance.
- The PIC structure ensures the Finnish pension system maintains a strong asset buffer through time.
- The PIC structure fosters cost and risk sharing, and creates a competitive environment at the same time.
- The PIC structure creates a powerful bulwark against government overreach (e.g., asset confiscation), as has in fact occurred in other countries.

These arguments should be taken seriously. However, it **does** seem worth-while to try to estimate what the return gain/cost reduction potential of a material consolidation of Finland's pension industry might add up to. It will put a price on some of the perceived advantages of the current structure.

Accordingly, the Report now moves from the deductive to the inductive. Specifically, how do the aggregate Finnish investment and benefit administrative functions stack up against a global peer group as value propositions? Section III of this Report addresses that question.

Section II summary and conclusions

1. On the whole, the institutional structure of Finland's pension system, while complex, is one of the most robust in the world.
2. The pay-go/prefunded financing ratio is a key policy lever in the Finnish pension system. Developing dynamic/automatic decision rules for why and how that ratio should be adjusted over time would represent an important pension policy innovation for Finland.
3. In a solvency context, PICs may now be understating the economic value of their accrued liabilities by some 5 per cent. This in turn implies PIC solvency buffers are now likely below the reported average +20 per cent.

4. Not the entire accrued prefunded pension benefit needs to be guaranteed. For example, only an age-related proportion could be guaranteed (and as closely matched with like-assets as possible). The rest could be placed in a unitized, well-managed, long horizon, global return-seeking fund without guarantees, with plan members owning fund units at 'fair value'.
5. There is an argument that solvency buffers are redundant in the Finnish pension system. Why? Because the employment-based component of the Finnish pension system is a mandatory collective pay-go system with 600B Euros (approximately) in accrued payment obligations and a financial assets buffer of 150B Euros (approximately). It follows from this perspective that the entire 150B Euro asset pool could be released from any solvency considerations, and should only have a return-seeking mandate. Such a switch in framing the purpose of Finland's 150B in pension assets could increase their long term annual return by as much as 1 per cent/yr, or \$1.5B/yr in current Euro terms.
6. There is no compelling deductive logic that suggests competition between the PIC will increase investment returns or create more cost-effective pension administration services in Finland. In contrast, much could be gained through well-thought-out co-operative strategies on both the investment and benefit administration sides of the fence.
7. However, there are credible arguments in favor of keeping the institutional structure as it is (e.g., standardized assessment framework, bulwark against government overreach). An objective cost-benefit analysis would help clarify the costs and benefits of material consolidation of the asset management and benefit administration functions.

SECTION III

Do Finland's pension institutions produce 'value for money' for their stakeholders?

Benchmarking 'value for money' in pension institutions

Pension institutions perform two essential functions:

1. Invest the financial assets under their care.
2. Communicate with stakeholders, and calculate and pay benefits.

Effective pension institutions perform these two functions very well. The Boards of pension institutions have a responsibility to assess organizational effectiveness, and hence a responsibility to assess how well the organization is performing its two essential functions. This in turn requires establishing 'value for money' standards. In other words, a Board must know how much its organization is spending to execute its investment and benefit administration functions, and what results stakeholders are realizing for the money spent. Then, ideally, the Board is able to compare its organization's results against those of a relevant peer group in order to make an informed 'value for money' assessment.

With the assistance of Finland's Centre for Pensions and 8 major Finnish pension institutions, CEM Benchmarking Inc. performed 'value for money' benchmarking studies of both the aggregate investment and benefit administration functions. In other words, the data of the individual Finnish institutions was combined to produce a single pan-Finland investment function and a single pan-Finland benefit administration function. The measured 'value for money' of each of these pan-Finland functions was then evaluated versus comparable global 'value for money' standards. The findings of these studies are reported next, first for the investment function and then for the benefit administration function.

Benchmarking investment costs

In order to create a composite 'Finland Pension Fund' (FPF), CEM combined the investment function data of 8 actual Finnish pension organizations: Etera, Fennia, Ilmarinen, KEVA, Tapiola, VER, Veritas, and Varma. A single 125B

Euro FPF resulted, which was benchmarked against 2 global peer groups in the CEM database: a 15-member Larger Funds group (average asset value 80B Euros) and a 20-member Smaller Funds group (average asset value 20B Euros). The rationale for the creating two separate peer groups was to benchmark FPF against a peer group with fund sizes comparable to that of the aggregate total FPF, and also against a peer group with fund sizes comparable to the average size of the 8 individual Finnish pension organizations that comprise FPF.

All 2011 costs reported below are comparable when reported in basis points (i.e., bps, in units of 1/100th of 1%) relative to average 2011 fund values. Total costs comprise 2 broad cost categories: direct investment management costs and indirect costs (e.g., fund oversight, custodial fees, consulting fees, legal fees, etc.). Direct investment management costs are further disaggregated into internally-managed vs. externally-managed mandates, active vs. passive mandates, and by asset classes.

CEM calculations indicate total FPF asset management cost in 2011 amounted to 615M Euros. Table 1 splits the total into four components: direct internal and external investment management costs and other internal and external asset management-related costs. The latter group of costs includes such categories as asset custody, consulting, audit, and internal oversight and general management. Note that the bulk of the 615M Euros in asset management costs were external investment management fees (i.e., 537M Euros). In turn, the bulk of those external fees (about 400M Euros) were spent on private markets (e.g., private equity, real estate) investing and hedge fund fees.

Table 1. FPF total asset management costs in 2011 (millions of Euros).

	Investment management	Other	Total
Internal	46M	21M	67M
External	537M	11M	548M
Total	583M	32M	615M

Source: CEM Benchmarking Inc.

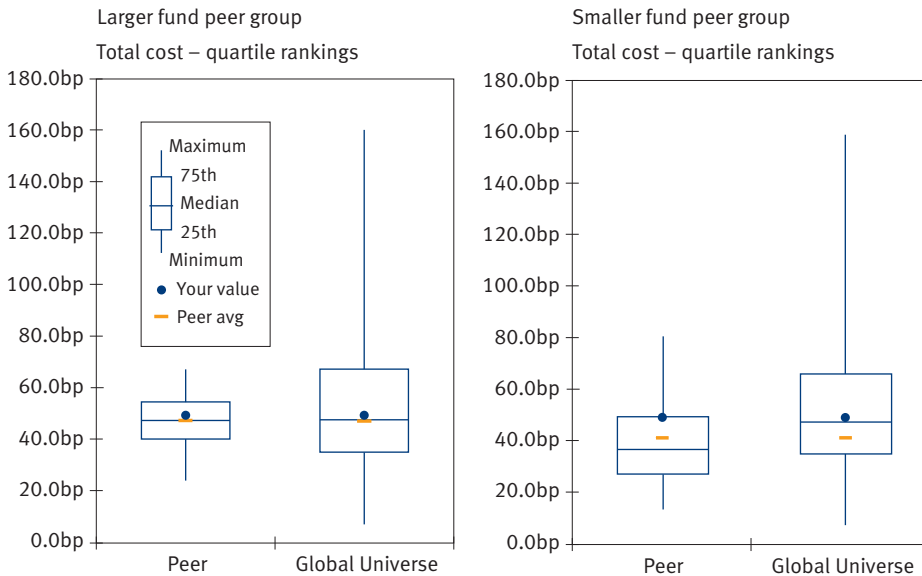
Figure 1 converts the 615M Euros of total asset management costs into 49.2bps in relation to FPF average 2011 asset value of 125B Euros. This cost experience compares to an average 47.4bps for the Larger Fund peer group, and 41.3bps for 'Smaller'. So FPF total cost experience is quite similar to average global Larger Fund experience, but higher than that of Smaller Fund experience. How should

we interpret these findings? Why was FPF investment cost experience so similar to that of 'Larger'? And higher than 'Smaller' experience? According to the CEM study:

- The main reason for FPF and global 'Larger' having higher average investment costs than global 'Smaller' is asset mix-related. Specifically, FPF and 'Larger' had 5 percentage points higher exposure to high-cost (e.g., 200+bps) asset classes such as Private Equity and Hedge Funds than did 'Smaller'.
- What the average investment cost numbers do not show are two largely offsetting differences in direct investment management cost experience between FPF and both 'Larger' and 'Smaller'. First, FPF manages a significantly higher proportion of its assets internally (on average 65%) rather than non-Finnish funds do (on average 12%). This leads to material cost savings (-5.2bps or 64M Euros vs. 'Larger' and -6.2bps or 78M Euros vs. 'Smaller'). However, these cost savings are offset by paying relatively higher management fees to outside investment managers (+4.9bps or 62M Euros vs. 'Larger' and +2.3bps or 30M Euros vs. 'Smaller').
- FPF's other asset management costs in 2011 amounted to 32M Euros, or 2.4bps of assets. This cost performance lies in between 2.1bps for 'Larger' and 3.2bps for 'Smaller'. The latter is the more relevant benchmark, as the funds in the 'Larger' group benefit from material economies of scale. In contrast, 'Smaller' funds are more comparable to the average value of the 8 Finnish funds comprising FPF. A major reason for the superior FPF cost performance here was paying 0.8bps (9M Euros) less in custodial and consulting fees than the average global 'Smaller' fund.

So on the whole, FPF investment cost performance is in line with that of comparable non-Finnish pension funds. While on the one hand greater use of high-cost asset classes and paying relatively-higher external investment management fees for similar mandates pushed costs up, the greater use of lower-cost internally-managed investment mandates and paying less for services such as asset custody and consulting pushed them back down again. The 'in line' investment cost performance observation is confirmed by the fact that FPF's total investment costs of 49.2bps is only marginally above CEM's Global Universe median experience of 47.5bps. (See Figure 1).

Figure 1. FPF investment costs vs. global larger and smaller fund peer group investment costs.



Source: CEM Benchmarking Inc.

Benchmarking the internal oversight function

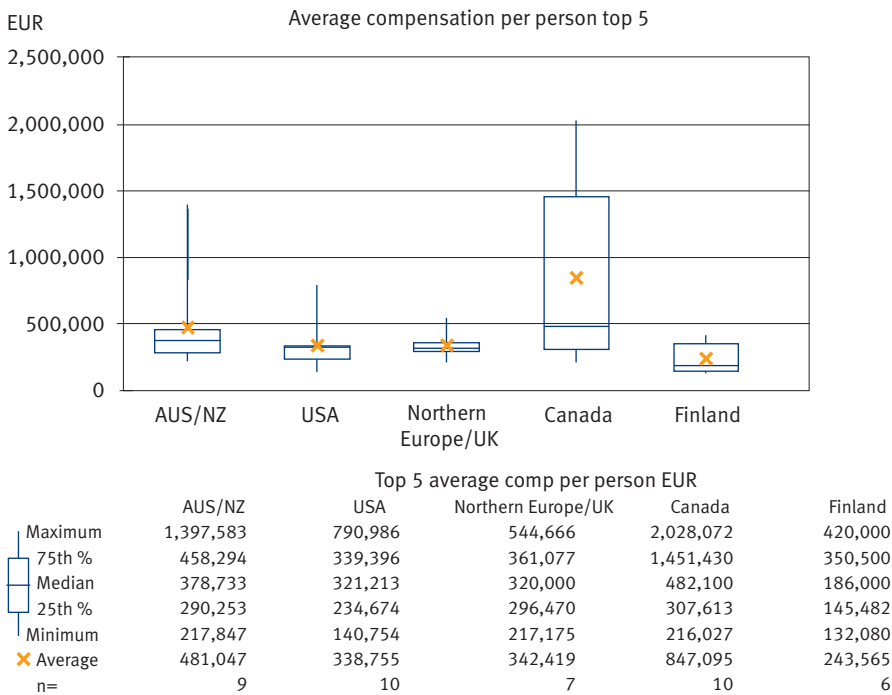
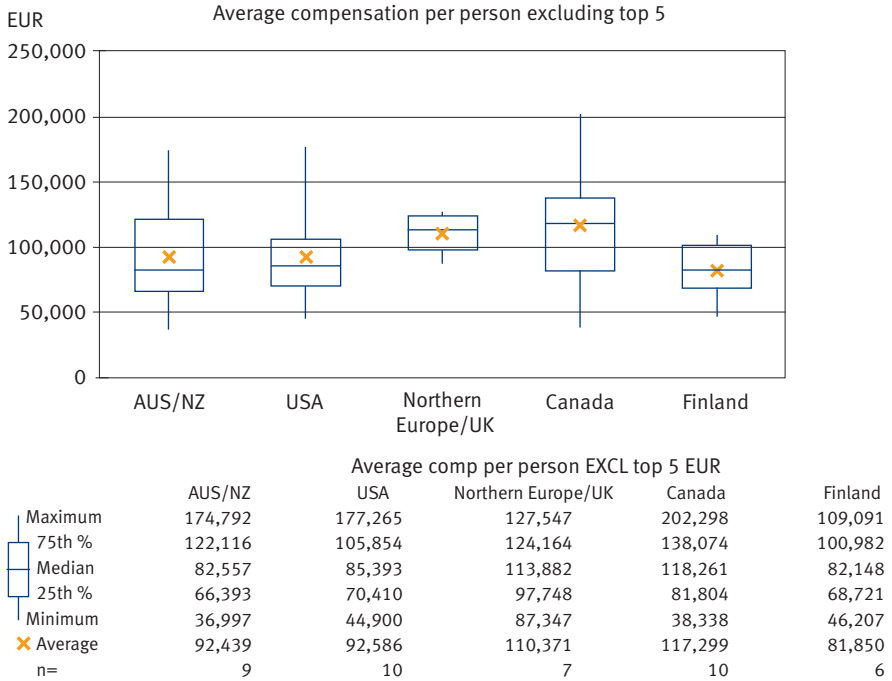
The internal oversight function is of special interest because that is where a pension organization's strategic decisions are made and where most control and monitoring activities are carried out. Importantly, ranking 'low cost' in this function may not be a good thing if it materially impacts the quality of the organization's strategic decision-making and control processes. The CEM benchmarking process led to a FPF cost estimate for this function of 1.6bps (20M Euros for the 8 Finnish funds together, or an average 2.5M Euros per fund). This compares an average 1.5bps for global 'Larger' (which converts to 12.0M Euros for a single 80B Euro fund), and 1.7bps for global 'Smaller' (which converts to 3.4M Euros for a single 20B Euro fund). These comparisons suggest that, on average, Finnish funds spend almost 1M Euros/year less on internal oversight than an international peer group of funds of a similar size. Both 'Smaller' groups spend considerably less on Internal Oversight than the 'Larger' group, which spends an average 12M Euros/year on this function. Arguably, the

incremental 9M Euros gives 'Larger' funds a material comparative advantage in building their internal strategic decision-making and control processes.

Benchmarking investment function compensation

In order to dig even more deeply into the annual cost of the Internal Oversight function, we collected total compensation data (salary, benefits, and incentive-related, most recent fiscal year) for the entire investment function of the major Finnish Funds. Figure 2 compares Finnish fund total compensation experience for the investment function against that of fund samples drawn from Australia/New Zealand, Canada, Europe, and the USA. In the top chart, the five individuals with the highest total compensation experience are excluded. The bottom chart displays the same information for the 'Top 5' in each participating fund. The charts indicate that total compensation experience of the Finnish investment function falls significantly below that of the experience in all of the other four regions. For example, the average 'Top 5' total compensation experience for pension funds in Australia/New Zealand, USA, Europe, Canada, and Finland was (in Euros) 481K, 339K, 342K, 847K, and 244K respectively. These comparative total compensation findings are consistent with the Internal Oversight expense findings drawn from the CEM benchmarking study cited above. They confirm that by international standards, Finnish Funds spend less on their internal investment function than their peers in other parts of the world.

Figure 2. Benchmarking investment function compensation.



Source: KPA Advisory Services Ltd.

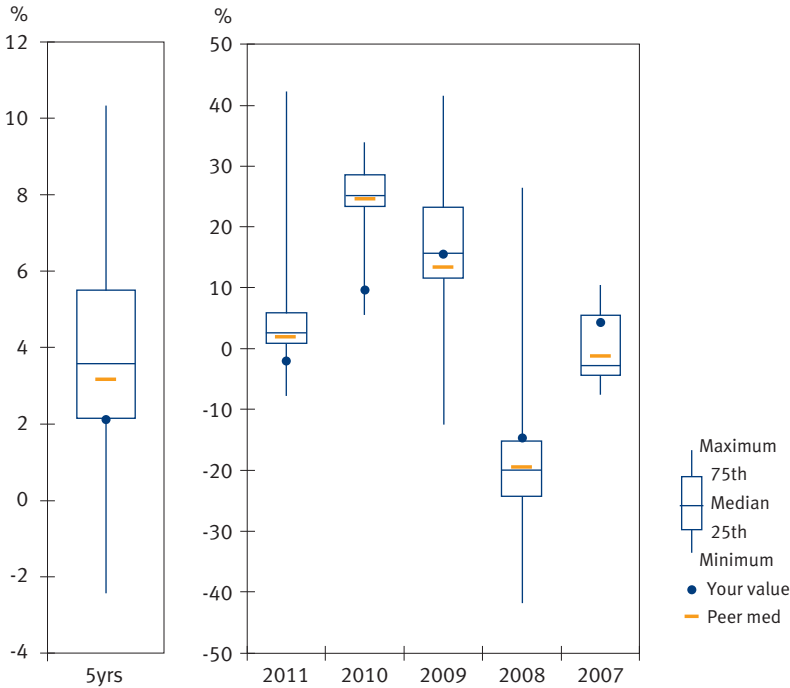
Benchmarking investment performance

The CEM investment benchmarking study reported a 5-year annualized net return of 2.5 per cent for the Finland Pension Fund (FPF) for the 2007–2011 period. The median net return for the Global Larger Funds peer group was 3.5 per cent over the same period. CEM also calculates a 'policy return' for each fund in its investment benchmarking database, which is the estimated return the fund would have achieved if it had implemented its chosen investment policy passively. FPF's 5-year policy return was 2.1 per cent versus a median 3.6 per cent for the Global peer group. The implication is that FPF actually outperformed its policy benchmark over the period (i.e., 2.5% vs. 2.1%) while the median Global Fund did not (i.e., 3.5% vs. 3.6%). These findings raise the interesting question why FPF's policy return was an average 1.5 per cent per year lower than that of the median Global Fund over the 2007–2011 period. How did its broad investment policy differ from that of the global peer group?

Figure 3 helps identify the problem, which were the relatively poor FPF policy returns in 2010 and 2011. What happened in those two years? It was a combination of two things: 1. The Finnish stock market performed poorly relative to other stock markets, and 2. FPF had a 14 per cent weighting to public Finnish stocks at the end of 2008, and an additional 3 per cent to private Finnish equity versus very small Finnish weightings at best for the global peer group.¹⁶ In short, FPF's strong home-country bias in its investment policy over the course of 2007–2011 led to a material drag on its investment performance during this period.

16 The 5-year return on the MSCI Global stock index was -1.1 per cent over the 2007–2011 period versus -9.8 per cent for the Finnish stock index. The share price of Nokia dropped approximately 90 per cent over this period.

Figure 3. Global policy returns – quartile rankings.



Source: CEM Benchmarking Inc.

Benchmarking pension administration costs

CEM has been benchmarking the pension administration functions in pension organizations around the world since 1998. Recognizing the differing rules and conventions between countries, a standardized benchmarking protocol evolved that has served some 100 organizations in 7 different countries. A customized CEM benchmarking report was created for this study, using data from the same 8 Finnish organizations comprising the FPF as defined above.

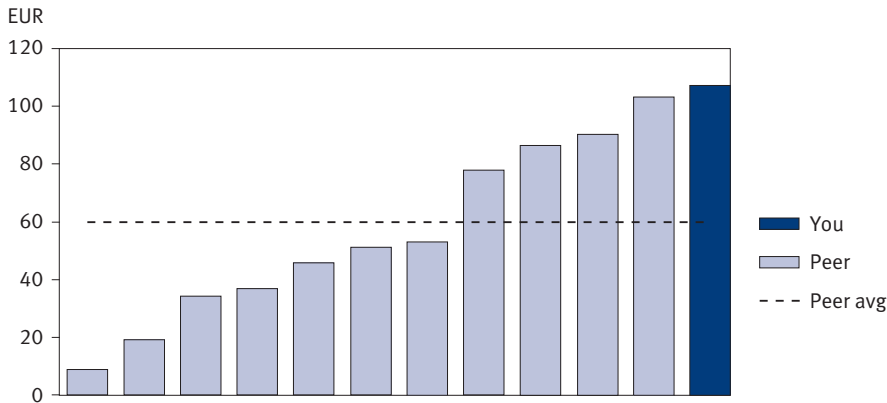
Figure 4 displays the 2011 pension administration costs for FPF versus those of 11 large pension organizations from other countries. The total number of workers and pensioners serviced through FPF was 3.7M versus an average 1.5M per organization for the entire sample. At the employer level, FPF serviced 347K clients versus an average 45K for the peer group. Total pension administration costs for FPF in 2011 amounted to 440M Euros, or 107 Euros/participant. Note that this was the highest per-member cost in the peer group,

where the average was 60 Euros/participant. In explaining the difference, CEM noted the following 3 factors:

- FPF is not a single organization, but a composite of 8 much smaller organizations. The resulting negative scale impact is estimated at +30 Euros/annuitant. In other words, the scale-adjusted peer average against which to compare FPF is not 60 Euros/participant, but 90 Euros/participant.
- The Finnish employment-based pension system is more complex than the Pillar 2 (i.e., employment-based pension plan) component in other countries (e.g., pension insurance companies are Finland's primary long term disability administrators). This leads to higher transaction volumes (i.e., workloads) for Finnish pension organizations. These higher transaction volumes add an additional 11 Euros/participant to the FPF-relevant benchmark, taking it up to 101 Euros.
- The Finnish employment-based pension system is also unique in the sense that on the private sector PIC side, there is a competitive element which generates marketing and sales costs, as well as an additional client service level which focuses on the PIC's employer-clients. Further, the cross-insurance feature of the PICs requires an additional layer of participant calculations which are performed by the Finnish Center for Pensions, which is financially supported by the PICs. It is a reasonable assumption that these additional costs unique to the Finnish employment-based pension account for most of the remaining difference between the 107 Euros/participant cost experience of FPF and the average 60 Euros experience of the global peer group.

In short, the relatively high Finnish benefit administration costs are due to the joint effects of smaller scale (63% or 30 Euros), greater complexity (23% or 11 Euros), and a number of special costs due to the unique structure of the Finnish Pension Insurance companies (14% or 6 Euros).

Figure 4. Total pension administration costs per active member and annuitant.



Source: CEM Benchmarking Inc.

There is another element to be considered in comparing benefit administration costs across countries, and that is the presence or absence of statutory Pillar 1 pension arrangements. In the case of Finland, its employment-based pension system effectively combines Pillar 1 and 2 together. In contrast, many other countries have separate Pillar 1 social security arrangements (e.g., Australia, Canada, Germany, Netherlands, UK, USA). Ideally, the Finnish benefit administration cost experience should be compared to the **combined** Pillar 1 and 2 benefit administration costs of other countries.¹⁷ This ideal does not negate the validity of the benchmark findings set out above. However, it **does** mean that Finland benefits from an efficiency that many other countries do not have: the effective integration of Pillar 1 and 2 benefit administration services.

Benchmarking member service levels

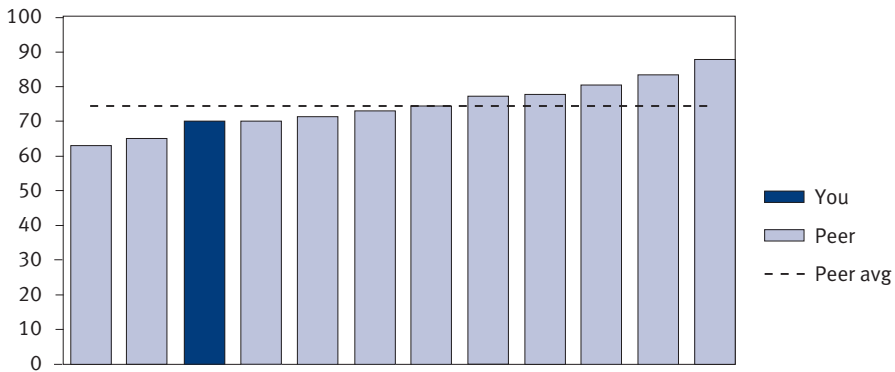
Member service levels are also benchmarked by CEM by creating metrics in such areas as member contacts, member statements, pension inception, websites, and member counseling. Based on these metrics, a composite service score is created for each participating pension organization. Figure 5 shows

¹⁷ Information at the national level is becoming available on the Pillar 1 and Pillar 2 benefit administration costs in some countries. A forthcoming study by the Finnish Centre for Pensions titled "Administrative Expenses in Statutory and Occupational Pension Schemes: A Cross-country Comparison" (2013) indicates combined Pillar 1 and 2 costs per person in other countries (e.g., Switzerland, Netherlands, Norway) are considerably higher than the combined Finnish per person costs.

FPF with a composite score of 70 versus a peer average score of 75, indicating member service levels below global standards for large pension organizations. Contributing factors included marginally lower scores for member call time windows, member own-data access, speed of pension annuity inception, and one-on-one counseling incidence. On the positive side, the unique cross-insurance feature of the PIC system was not scored in the CEM system.

In its report commentary, CEM notes Finnish pension organizations spend considerably more time and energy interacting with employers than do their international counterparts. Specifically, they reported 55 per cent of their administration costs being employer-related versus 10 per cent for the global sample. These interactions are not explicitly benchmarked by CEM. Interestingly, one of the cited reasons for this greater employer focus in Finland is pension insurance company competition to retain current clients and attract new ones. There is no obvious connection between these employer client retention activities and providing quality pension and related services to enrolled employees.

Figure 5. Total service scores, score out of 100.



Source: CEM Benchmarking Inc.

Section III summary and conclusions

1. CEM calculations indicate the total FPF asset management cost in 2011 amounted to 615M Euros. The largest cost category was external investment management fees at 537M Euros, within which about 400M Euros related to private markets and hedge fund investment fees. FPF is the aggregate portfolio of eight Finnish pension funds.

2. The 615M Euros convert into 49.2bps in relation to FPF average 2011 asset value of 125B Euros. This cost experience compares to an average 47.4bps for the Larger Fund global peer group, and 41.3bps for 'Smaller'.
3. FPF and 'Larger' both had higher cost experience because both used higher proportions of 'high-cost' investment strategies than 'Smaller'. FPF in-sourced a far greater proportion of its asset management function than either 'Larger' or 'Smaller'. However, this cost advantage was offset by FPF by paying higher fees for external management.
4. FPF spends less on its Internal Oversight function than either 'Larger' or 'Smaller', according to the CEM study. A separate KPA study of 'TOP 5' total compensation found Finnish funds paid their 'TOP 5' materially less than their counterparts in North America, Europe, and Australia/New Zealand.
5. FPF earned a net return of 2.5 per cent over the 2007–2011 period, versus 3.5 per cent for the median global fund. FPF actually outperformed its benchmark policy return (2.1%), while the median global fund underperformed its policy return (3.6%). The 1.5 per cent difference in policy returns was due to FPF's 17 per cent weighting in Finnish equities at the end of 2007, which materially underperformed global equity indexes over the 2007–2011 period.
6. FPF's 2011 pension administration costs and member service levels were benchmarked versus those of 11 large pension organizations from other countries. The total number of workers and pensioners serviced through FPF was 3.7M versus an average 1.5M per organization for the entire sample. Total pension administration costs for FPF in 2011 amounted to 440M Euros, or 107 Euros/participant. This was the highest per-member cost in the peer group, where the average was 60 Euros/participant.
7. FPF's materially-higher cost experience is driven by three factors: 1) FPF is not a single organization, but a composite of 8 much smaller organizations, resulting in a negative scale impact of approximately 30 Euros/annuitant, 2) The Finnish employment-based pension system is more complex than the Pillar 2 in other countries, resulting in a complexity impact of approximately 11 Euros/participant, and 3) The remaining 6 Euros/participant relates to there being a competitive element in play, generating marketing and sales costs. Also, the cross-insurance feature of the PICs requires an additional layer of participant accrued benefit calculations.
8. In aggregate, FPF's materially higher benefit administration costs are due to the joint effects of smaller scale (63%), greater complexity (23%), and a number of special costs due to the unique structure of the Finnish Pension Insurance companies (14%).

9. An offset to these higher benefit administration cost is the fact that Finland's employment-based pension sector effectively combines the social security and supplementary pensions sectors of its pension system. These two sectors are administered separately in many other countries, thus incurring separate benefit administration costs in each sector.
10. FPF's member service score at 70 was lower than the average 75 score in the global peer group. CEM noted that the Finnish PICs devote considerably more energies to servicing employer-clients than the global peer group, likely due to the competitive element in the Finnish pension services market. However, the unique PIC cross-insurance feature is not scored by CEM.
11. An implication of these Section III findings is that significant potential scale economies exist in Finland's pension structure in both the investment and benefit administration functions. For example, further internalization of investment management (especially in private markets) would materially reduce the current 500M+ Euros being spent annually on external management fees. However, achieving these cost savings will require larger Finnish pension investment organizations that can attract and retain private markets investment specialists. Similarly, the CEM analysis of the benefit administration function suggests significant unit cost savings are possible through consolidation of the multiple benefit administration functions currently operating in Finland.

SECTION IV

How 'ideal' is the governance and organization design of Finnish pension institutions?

The Drucker model

Thirty-seven years ago, Peter Drucker, considered by many to be the father of modern management theory and practice, wrote a short book expressing his concerns about the stewardship of assets that would cover future pension and other long-horizon liabilities.¹⁸ Most importantly, he wondered in whose interest the coming flood of assets related to these liabilities would be managed. He worried that the power embedded in these large asset pools would be hi-jacked by possible power groups such as business, organized labour, government, or the financial services industry.

He argued strongly that to prevent this from happening, long-horizon assets would have to be ring-fenced into large-scale trust arrangements dedicated to serving the interests of beneficiaries. He further argued that these trust arrangements should be overseen by Boards of Directors who were not only committed to serving the interests of beneficiaries, but also had **the collective skills and experience to oversee the management of a complex financial institution with (a) value-creating long- and short-horizon asset management functions, and (b) a value-creating benefit administration function.**

A few years ago, a few months before he died at age 96, I had a chance to ask him how he thought "pension revolution" was turning out. He responded that it could have been better, but it could have been worse too. On the one hand, he said, there has indeed been some hi-jacking going by the power groups he identified back in 1976. On the other hand, we have also seen the emergence of pension management organizations with mandates to operate free of 'power group' influence, and with Boards of Directors willing and able to carry out their fiduciary duties with both care and skill.¹⁹

18 Peter Drucker, "The Unseen Revolution: How Pension Fund Socialism Came to America", Harper & Row, 1976.

19 See the article "Reclaiming Fiduciary Duty Balance" by Hawley, Johnson, and Waitzer in RIJPM, Fall 2011, for a clear exposition of the fiduciary duties of pension fund fiduciaries in the 21st Century.

Confirming research findings

A growing body of research findings is confirming Drucker's 1976 premonitions. Organizational autonomy and alignment of interests **do** matter.²⁰ Good governance **does** matter.²¹ These two key 'success' building blocks are the foundation for three others. They lead to a series of **sensible investment beliefs** to guide investment decisions, and an organization design capable of effectively implementing those decisions. **Scale** plays an important role in organization design, as it permits the acquisition of the resources required to do the job well, while at the same time keeping unit costs low. Finally, attracting and retaining the right people inside the organization requires **being able to pay competitively** for the requisite skills and experience.

In the earlier report section on risk management I referenced the Denmark-based ATP and Canada-based HOOPP pension organizations. I consider them 'live' exemplars of this Drucker-inspired governance and organization design philosophy (see p. 9). Here I add Ontario Teacher's Pension Plan (OTPP) as a third exemplar as, to my knowledge, it has by far the longest track record operating under the Drucker management philosophy (since 1990). Over the course of its 22-year existence, OTPP has achieved outstanding track records in both its investment and pension administration functions. In its investment function, for example, OTPP has generated an unprecedented net excess return of 2.14 per cent per annum over its passive benchmark portfolio during this period. At the same time, in its pension administration function, OTPP has generated top 'value for money' scores ever since CEM has been producing these rankings.²²

Recent research findings by Dyck and Pomorski further generalize the OTPP story. Using the CEM Benchmarking Inc. database, they found significant economies of scale accruing to large funds, driven by internalizing private markets (e.g., private equity, real estate, infrastructure) investing.²³ This

20 For example, the performance difference between commercial retail mutual funds and wholesale co-op pension funds with similar investment mandates is well-documented. For example, a 2007 ICPM-funded research study "The Performance of US Pension Funds" by Bauer *et al.* concluded "... pension funds performed close to their benchmarks whereas size-matched retail mutual funds strongly underperformed theirs..."

21 For example, in the article "The Pension Fund Governance Deficit: Still With Us", RIJPM, Fall 2008, Ambachtsheer *et al.* concluded: "...as was the case in 1997, we found a positive correlation between governance quality and organizational performance..."

22 For more detail, see the article "Effective Pension Governance: the Ontario Teachers' Story", RIJPM, Fall 2008, by OTPP's now-retired CEO Claude Lamoureux.

23 "Is Bigger Better? Size and Performance in Pension Fund Management", Dyck and Pomorski, Rotman-ICPM Working Paper, 2011.

strategy has reduced the cost of operating in these markets materially while generating competitive gross returns. It is well-known that the move in this direction has been led by OTPP in the 1990s, and since followed other Canadian pension funds such as AIMCO, bcIMC, CPPIB, La Caisse, OMERS, and PSP Investments.

Pension governance and organization design in Finland

The bulk of Finland's pension investment and administration activities related to private sector are conducted through its 7 licensed not-for-profit pension insurance companies (PICs). Relevant documents suggest that key PIC governance and organization design features include:

- PICs can only provide statutory pension insurance and manage accumulated assets. No other lines of business or cross-ownerships are allowed.
- An established process creates an Election Committee representing the PIC's stakeholders.
- The Election Committees elects a Supervisory Board (SB) at each PIC Annual General Meeting, with SB compensation set by the Election Committee.
- The SB selects the PIC's Board of Directors (BofD) and confirms its remuneration. BofD selection criteria include stakeholder group representation (e.g., employers, employees), as well as professional skills/experience in such areas as strategic management, pension design, investments. The BofD should have functioning governance, audit, and human resources (HR) committees. A 2/3^{rds} BofD majority is required on major decisions.
- PIC management is delegated to a Chief Executive, with a Responsible Actuary required to approve and monitor the PIC's investment plan, as well as the calculation of PIC liabilities, its solvency margin and solvency limit.
- Excess solvency margins may be bonused back to employers or used as an additional buffer for seeking additional returns.
- PICs compete for employer business through their 'performance' in generating excess solvency margins, and in providing client services. However, they jointly guarantee each others' liabilities.
- The Finnish FAS and Competition Office monitor PIC financial stability and competitive practices.

This conceptual design looks good, and no doubt guides actual Finnish governance practices in positive ways. However, subsequent discussions with knowledgeable individuals provided the following additional information and insights²⁴:

- Finnish pension organizations are struggling with the same challenge many non-Finnish pension organizations continue to struggle with: to assemble Boards that are seen to be both representative and effective. Too often, effectiveness is sacrificed in the determined quest to ensure all stakeholder groups have 'their people' on the Board. A frequent result is an imbalance of power in favor of senior management relative to the Board.
- Board education programs are at a too basic level.
- The drive for representativeness also shows up in the size of many PIC boards: 12 members (often plus 4 alternates) plus is above the 'ideal' 9-member size benchmark set by many governance experts.
- The current PIC 'rules of the game' make it difficult for PIC Boards to establish the organization's priorities. Is it to control the PIC's solvency ratio in the short term? How does the Board trade off the short-term solvency ratio goal against the long-term return-seeking goal for the PIC's investment portfolio? How does the Board trade off service quality and unit cost in the benefit administration function?
- Is there enough of an 'arms-length' relationship between PIC Board members and senior managers and the Board members and senior managers of the PIC's corporate clients? There is a feeling in some quarters that some of these relationships are not 'arms-length' enough.

These observations should not necessarily be taken as specific criticisms of the governance practices of Finnish pension organizations. Based on personal experience, I suggest they could just as easily have described the governance challenges facing the Boards of pension organizations anywhere in the world.

A possible response

Last year, the International Centre for Pension Management and the University of Toronto's School of Management began to jointly offer a 1-week Board Effectiveness Program for board members of pension organizations. One of the small-group assignments in the Program is to advise the Chair of a hypothetical

24 In my September conversations in Helsinki and in email correspondence.

pension organization board that is suffering from too much 'representiveness' and too little governance experience and expertise. After considerable discussion, the group offered the following advice to the hypothetical Board Chair:

- Involve the Board Governance Committee in finding a solution. (If there is no Board Governance Committee, create one).
- Think beyond 'either/or'. That is, don't frame the problem as more governance experience and specified expertise **at the expense** of less 'representiveness'. Instead, frame the challenge as 'how do we get **both**'?
- Get 'buy-in' from the various stakeholder groups (e.g., representing employers and representing employees) on the importance of answering the 'how do we get **both**?' question.
- Develop a requisite skills/experience matrix for the board of a pension organization. For example, the ideal pension organization board has skills/experience in the key areas of organization strategy, investments, actuarial science, audit/risk management, HR management.
- Get agreement from the various stakeholder groups that they will work together to create a board appointment process that produces a board that collectively passes the requisite skills/experience test as set out in the agreed-upon matrix.
- Devise a practical plan to implement the agreement.

Generalizing from this specific example, Board Chairs of pension organizations (together with the Board Governance Committee) have an explicit responsibility to do whatever it takes to build and maintain a high level of board effectiveness. They must be held accountable for achieving this outcome.²⁵

Section IV summary and conclusions

1. The writings of management philosopher Peter Drucker offer a sound foundation for thinking about effective governance and organization design of pension organizations. There is mounting empirical evidence that when put in proper practice, this foundation translates into the creation of value in both the investment and benefit administration functions of pension organizations.

25 See "Reclaiming Fiduciary Duty Balance" by Hawley, Johnson, and Waitzer in RIJPM, Fall 2011 for a 21st Century legal perspective on the fiduciary duties of board members of pension organizations.

2. Finland has developed a detailed protocol for the creation and management of its pension institutions, covering the selection of boards of directors and CEOs, the creation of board committees, the creation and approval of investment plans, as well as the calculation of liabilities, solvency margins, solvency limits, and the rules inter-PIC competition and risk-sharing.
3. However, as in other countries, there appears to be a Finnish gap between aspirations and realities. The desire for 'representiveness' on boards is often stronger than the desire for collective board skill/experience and effectiveness. Education programs are too basic. The PIC solvency rules often conflict with long-horizon wealth-creation, which in turn can conflict with the perceived need to be 'competitive'.
4. The current aspiration-reality governance gap can be addressed through a set of explicit strategies that focus on creating pension organization boards which are **both** representative and effective.

SECTION V

The connections between Finnish pension institutions and Finland's corporate and financial sectors: what issues does it raise?

Some history

In his 380-page PhD Thesis titled "Pension Fund Capitalism in Europe: Institutional Organization and Governance of Finnish Pension Insurance Companies", Ville-Pekka Sorsa provides a good summary of the evolution of the Finnish pension system through the post-WWII decades.²⁶ The following points are relevant to the topic of this Section of the Report:

- The decades of the 1960s into the 1990s were the "premium lending" period for the PICs, with their main assets in the form of 5 per cent interest loans to Finnish borrowers.
- The credit quality of these loans declined materially in the late-1980s/early-1990s.
- With the passage of the 1997 pension reforms, PIC investment policies began to shift away from lending to Finnish borrowers towards equity investing both inside Finland, and abroad. Sorsa characterized this as a paradigm shift from supporting national economic development to professional international portfolio management.
- Nevertheless, the large PICs continue to be major players in Finland's financial and economic affairs. On the flipside, the large Finnish employers also continue to be major players in the governance and financial policies of the PICs.
- PICs have significant equity holdings in Finland's major corporations, though no major control blocks. At the same time, the PICs continue to have home-country corporate loan windows.
- The PICs are actively engaged in Finnish corporate governance through corporate board nomination processes, and through setting guidelines for executive compensation policies.

²⁶ Thesis submitted for the degree of Doctor of Philosophy, St. Peter's College, University of Oxford, 2010.

Recent investment and ownership data for the PICs as well as for KEVA and VER from TELA confirm Sorsa's observations. TELA provided the following information for the year 2011:

- Total Finnish pension assets were 144B Euros, of which 51B (35%) was in public stocks and private equity investments. Of the 51B Euros, 15B (i.e., almost 1/3rd) was in listed Finnish stocks (12B) and private Finnish equity (3B).
- The 12B Euros in listed Finnish stocks held by Finnish pension organizations represented 9 per cent of the total value of all Finnish listed stocks in 2011.
- Looking through the aggregate 144B Euros, about 1/3rd was invested in Finnish public stocks, private equity, real estate, loans, bonds, and money market paper from Finnish issuers.

In short, while Finnish retirement savings may no longer be the primary engine of Finnish economic development and asset ownership, it is still a very significant force in Finnish finance and economics.

Current perceptions

The late-September Helsinki interviews and other communications added a qualitative dimension to the 'economic and financial 'impact' question. Here are some of the insights offered by Finnish insiders:

- The ties between Finland's corporate sector and the PICs are still close. For example, 'block deals' (i.e., delivering pension business in exchange for the PIC providing loans and other financial services to the client) and other non-transparent PIC-corporate client transactions still occur.
- Finland's 'power elite' runs across the pension, labor, corporate, and government sectors. There are a lot of 'between friends' relationships across these four sectors.
- The Finnish pension industry is too insular and inward-looking. It would benefit from an organization like Denmark's ATP coming in and shaking things up.
- There is still too much of a 'we need to use pension capital for economic development inside Finland' mindset in Finland. People should recognize that financial markets are now global and that Finland is no longer dependent on its own retirement savings for further economic development. Finland's pension capital should be deployed across the globe.

While these observations do not necessarily represent majority opinions, I believe they are worth serious reflection.

Implications

In my view, Finland's pensions sector would indeed benefit from making conscious decisions to become more outward-looking. For example, thought-leading pension organizations around the world are developing collaborative strategies and networks around originating and developing real estate and infrastructure investment opportunities. Similar innovative initiatives are underway in areas ranging from pension plan design to redefining fiduciary duties to active corporate ownership strategies. Finland's pension organizations should be proactive participants in at least some of these international initiatives.²⁷

Section V summary and conclusions

1. The financial and economic connections between Finland's pension system and its economy used to be very close.
2. In the last 10–15 years, Finnish pension assets have been increasingly diversified outside the country. However, even today approximately 1/3rd continues to be invested inside Finland. This is a two-edged sword. On the one hand, it provides knowledgeable capital inside a relatively small country by global standards. On the other, there is also a 'double jeopardy' dimension to it. Because of its 75 per cent 'pay-go' financing, the health of the Finnish pension system already heavily dependent on the health of the Finnish economy. This suggests its financial asset buffer should be fully invested outside Finland as a diversification strategy.
3. A stronger emphasis on external investing also lessens the risk of political interference in how Finnish pension assets are invested.
4. A more vigorous outward-looking approach to investing Finnish pension assets also helps defuse the ongoing perception in some quarters that Finland's corporate and pension sectors are still not 'arms-length' enough.

²⁷ Some of these initiatives are more effective than others. Conscious choices will need to be made which to join, and which to avoid.

SECTION VI

In conclusion

I close by once again noting that Finland's retirement income system is both comprehensive and robust. Its design is consensus-driven, covers the entire workforce, provides adequate pensions, facilitates worker mobility, and is institutionally robust. It would continue to serve Finnish citizens well into the future even if nothing was changed. However, there are opportunities to simplify the system, raise governance effectiveness, explore global investment opportunities, and in the process materially raise asset returns and lower investment and benefit administration costs. I encourage Finnish policy makers to carefully assess these opportunities, and to capitalize on them to the degree that is practically possible.

SECTION VII

Appendices

List of persons with whom Keith Ambachtsheer discussed in the connection of his evaluation:

Tapiola Pensions

Satu Huber, Managing Director
Petteri Vaarnanen, Head of Fixed Income

Ilmarinen

Harri Sailas, CEO
Kristian Pullola, Member of the Board of Directors
Jaakko Tuomikoski, former vice CEO

Etera

Hannu Tarkkonen, Managing Director
Jari Puhakka, Director

Varma

Matti Vuoria, CEO
Sakari Tamminen, Chairman of the Board of Directors

Keva

Merja Ailus, CEO, Managing Director
Allan Paldanius, Director (Long-term Financial Planning)

Veritas Pension Insurance

StaffanSevón, Chief Investment Officer

Finnish Pension Funds Association

Ismo Heinström, Lawyer (Finnish Pension Funds Association)
Hannu Hokka, CEO (Pharmacy Pension Fund)
Varpu Hyvönen, Financial Manager (Pharmacy Pension Fund)
Erkko Ryytänen, Deputy Chairman of the Board of Directors (Finnish Pension Funds Association), CEO (OP-Pohjola Group Pension Fund)

The Finnish Pension Alliance TELA

Minna Helle, Director, Legal Affairs and Policy Development
Reijo Vanne, Director, Economic Analysis

The Ministry of Social Affairs and Health, Insurance Department

Outi Antila, Director General

Financial Supervisory Authority

Anneli Tuominen, Director General
Hely Salomaa, Chief Advisor

The Confederation of Finnish Industries, EK

Ole Johansson, Chairman of the Board, Deputy Chairman of the Board of Directors (Varma)

The Central Organisation of Finnish Trade Unions, SAK

Olli Koski, Leading Economist

Finnish Confederation of Professionals STTK

Markku Salomaa, Director
Ralf Sund, Leading Economist

Akava – Confederation of Unions for Professional and Managerial Staff in Finland

Sture Fjäder, President

University of Helsinki

Ville-Pekka Sorsa, Ph.D, University Lecturer, Political Science

Enfia Ltd.

Pekka Vainikka, Managing Director



The AMBACHTSHEER Letter

Sustainable Pension Design • Effective Pension Management

June 2012

THE DYSFUNCTIONAL 'DB vs. DC' DEBATE:

WHY AND HOW TO MOVE BEYOND IT

"We find that a DB pension plan can offer the same retirement benefit at close to half the cost of a DC retirement savings plan..."

From "A Better Bang for the Buck:
The Economic Efficiencies of Defined Benefit Pension Plans"

By Beth Almeida and William Fornia, FSA

Really???

If the finding quoted above from a much-cited 2008 study sponsored by the US-based National Institute on Retirement Security were true, the world should be awash in DB pension plans. In fact, quite the reverse is true. Traditional employment-based DB plans are rapidly becoming an endangered species, even in public sector contexts, where they have been traditionally been the pension arrangement of choice. Below we argue that the time has come to stop defending the indefensible, and instead to design and implement 21st Century pension arrangements that pass the dual sustainability test of adequacy and affordability. This *Letter* sets the stage for this much-needed transition in public discourse.

The Almeida-Fornia defense of the traditional DB pension model offers a good starting point for our quest. How did they arrive at their 'close to half the cost' conclusion? In their own words, from the following three cost savings relative to DC plans:

- Longevity risk pooling in a DB plan saves 15%
- Maintenance of a balanced portfolio diversification in a DB plan saves 5%
- A DB plan's superior investment performance saves 26%

On close examination, each of these three assertions is open to serious challenge.

Pooling Longevity Risk

Almeida-Fornia argue that by pooling longevity risk among a large group of participants, they avoid the 'over-saving' dilemma inherent in DC plans. Risk pooling allows everybody to only save enough money to maintain their standard of living to average life-expectancy, rather than maximum life-expectancy. True, as far as the argument goes, but does it go far enough? In our view, it does not.

For example, the traditional DB plan forces all participants into a standard life annuity, starting at the retirement date. Don Ezra points out in his article "How Should Retirees Manage Investment and Longevity Risk in a DC World?" (RIJPM, Spring 2011) that standard life annuities are in fact unpopular with many retirees. Why? Because many retirees don't want to tie up all of their retirement savings in an irrevocable, inflexible blended contract that is partially a bond and partially longevity insurance. Most would prefer to keep these two instruments separate, with the longevity insurance only covering the contingency that a retiree lives longer than her or his life expectancy.

The key point here is that the availability of, and access to, longevity insurance is not contingent on membership in a traditional DB pension plan. It can also be engineered to be part of any capital accumulation plan, either through self-insurance

among the participants, or through a third-party insurer.

Maintaining Portfolio Balance

Almeida-Fornia argue that “because DB plans do not age...they are able to take advantage of enhanced returns that come from a balanced portfolio over long periods of time.” There are two problems with this assertion. First, DB plans can, and do age. Many DB plans have in fact seen their ratio of retirees to actives rise in recent years, with further increases projected in the years ahead. Second, ironically, at the time Almeida and Fornia were writing their study (i.e., in 2008), many DB plans were selling rather than buying risk assets into falling markets as they attempted to slow the declines in their funding ratios.

Now contrast these DB plan realities with those of a hybrid plan with separate payment-certainty and return-seeking instruments (e.g., a TIAA-CREF-type plan). The hybrid plan participants have exposure to both instruments, with younger participants favoring return-seeking exposure and older participants favoring payment certainty exposure. Arguably, assuming equal management competence in the two plans, the hybrid plan participants are in no worse financial shape today than participants in traditional DB plans. They may even be in better financial shape, depending on who is underwriting the DB plan unfunded liability.

Superior Investment Returns

Almeida-Fornia argue that the biggest DB plan cost reducer is their ability to earn higher returns than DC plans. They attribute this outperformance to

economies of scale, lower fees, and the professional management of plan assets. At first glance, Table 1 appears to support their ‘higher returns’ assertion, with the average realized DB fund return at 8.26% vs. a 7.08% average for the DC funds. The data in the table comes from the CEM Benchmarking Inc. database, and indicates average annual experience for all US DB and DC funds in the database between 1997 and 2010.

However, a closer look at Table 1 reveals some interesting details. The average gross return difference is entirely due to differences in average asset mix exposures (i.e., as indicated by the average Policy Returns) between DB and DC funds over the period. Maybe surprising to some, the average investment costs for DC funds is actually lower than that for DB funds over the period. On a Net Value-Added basis, DB and DC funds ended up in a virtual tie, indicating no material differences in average management skills between the two types of pension arrangements. Table 2 explains the reason why DB funds had both higher average policy returns and investment costs over the 14-year period. They had a combined weight of 7% in the high return-high cost Real Estate and Private Equity asset classes versus 0% for DC funds. In contrast DC funds had an average weight of 19% in the low return-low cost Stable Value asset class versus 0% for DB funds.

So what do Tables 1 and 2 tell us? That the average DB-DC return-difference in the CEM database originated solely from the average weighting differences in Private Markets vs. Stable Value. Are these differences inherent to the DB vs. DC formulas? Or did they simply arise because of traditional ‘we’ve always done it this way’

Table 1: DB versus DC Return and Value Added—U.S.

	DB 14-year Average ²	DC 14-year Average ²	Difference
Total Return	8.26%	7.08%	1.18%
- Policy Return ¹	7.68%	6.60%	1.08%
= Gross Value Added	0.58%	0.47%	0.11%
- Investment Costs	0.45%	0.31%	0.14%
= Net Value Added	0.13%	0.16%	-0.02%
Admin Costs	0.07%	0.10%	-0.02%
# of Observations	2,456	1480	
1. DC policy return = weights of holdings X benchmarks 2. 14 years ending 2010. Equals simple average of annual averages.			

Source: CEM Benchmarking, Inc. (2011)

Table 2: U.S. DB versus DC Asset Mix

	14-yr avg weights ¹		14-yr Gross Returns ²	
	DB	DC	DB	DC
Large Cap Stock	31%	36%	8.2%	8.0%
Small Cap Stock	6%	7%	10.7%	10.9%
Foreign Stock	21%	6%	8.9%	10.0%
Company Stock	0%	18%	n/a	10.7%
Fixed Income	32%	11%	7.2%	6.7%
Stable Value	0%	19%	n/a	5.2%
Cash	2%	4%	3.7%	3.6%
Real Estate, REITs	4%	0%	10.0%	n/a
Hedge Funds	2%	0%	5.4%*	n/a
Private Equity	3%	0%	13.2%	n/a
Total	100%	100%	8.3%	7.1%

of observations

2,456 1,523

1. 14 years ending 2010. Equals simple average of annual asset mix percentages. Balanced and target date funds have been allocated 60% to Large Cap and 40% to Fixed Income.

2. Reflects the simple average of the annual averages.

* reflects 11 yr average as this was not a separate asset class prior to that.

Source: CEM Benchmarking, Inc. (2011)

mindssets? We vote for the latter. Hybrid plans such as TIAA-CREF have long been private markets participants, as have the DC-based Australian super funds. At the same time, the Stable Value option seems to be a passing oddity in the US DC space. Also, the surprisingly low DC cost experience comes from the dominance in the CEM database of large 401(k) plans with significant passive management components. Again, the point is that factors other than ‘DB vs. DC’ determine cost experience.

The Dark Side of DB

The fact that each of Almeida-Fornia’s three ‘DB vs. DC’ cost-reducing assertions is open to serious challenge is not the end of the story. The “How DB plans work” section of their study offers a far too simplistic, idealistic narrative, implying that DB plans represent complete, fair, explainable contracts between retirees, employees, and employers. In the real world, this is seldom the case. DB contracts are often not complete, not fair between all stakeholder groups, and too complex for mere mortals to understand.

For example, the value of the guarantees embedded in DB contracts is often understated by using discount rates that embody the assumption that projected risk premiums will become realized risk premiums. In game theory terms, this is a mechanism for shifting wealth to current plan participants from whoever is underwriting the embedded payment guarantees. These ‘paper’ wealth transfers are eventually realized through demands that benefits be increased in the good times, and by enforcing the embedded payment

guarantees unwittingly made by guarantors in the bad times. The seriously underfunded condition of many public sector plans today is finally forcing public sector employers to recognize these fundamental design problems of traditional DB plans. Finally, a serious quest for sustainable 21st Century pension designs that balance the dual goals of adequacy and affordability in an explainable manner has begun.

Principles of Sustainable Pension Design

So what does a sustainable 21st Century retirement income system design look like? To start, it must meet the dual tests of pension adequacy and cost affordability. At the broad macro level, these two goals are achieved through a balanced 3-pillar structure (i.e., universal, employment-based, and individual/family-based pillars). At more granular micro levels, the size and design of each of these pillars plays out differently in different countries. While this *Letter* focuses on retirement systems’ employment-based pillar, the importance of how well (or poorly) this Pillar 2 is integrated with the universal Pillar 1 (e.g., old age pension) and individual/family-based Pillar 3 (e.g., IRAs, RRSPs) should not be underestimated.

So a series of key design questions for 21st Century Pillar 2 (i.e., employment-based) pension plans might be:

- Taking the role of the universal Pillar 1 into account, what proportion of a worker’s income should the Pillar 2 plan target to replace?
- How much is the employee/employer willing to pay to achieve that target pension?

- What is a reasonable prospective net real investment return that can be assumed on a conservatively-invested portfolio of retirement savings today? What additional reward for risk-taking is it reasonable to project?
- What respective lengths of the work and post-work periods should be assumed in funding the plan? How is retirement age flexibility best built into the plan design?
- To what degree, and how, should uncertainties about net real returns, inflation, and longevity be mitigated? If the plan offers guarantees, what are the mechanisms through which these guarantees are priced and enforced?

The Tinbergen Principle that the number of policy goals must equal the number of policy instruments required to achieve them is helpful at this point. If the two fundamental goals of the pension plan are adequacy and affordability, then two instruments will be required to achieve them.

Two Goals, Two Instruments

The nature and shape of the two pension policy instruments follow logically from the two policy goals they have been assigned to achieve. The focus of achieving the adequacy goal should be retirement savings sufficiency and life-time payment certainty as workers transition to the post-work phase of their lives. So the key capabilities of the adequacy instrument are to convert accumulated retirement savings pools into regular payment streams to retirees, and to price and offer longevity insurance. The implication is that the adequacy instrument constitutes a reasonably matched balance sheet of assets and liabilities, with sufficient risk capital to ensure payment certainty.

In contrast, the focus of achieving the affordability goal is to generate the highest possible return on accumulating retirement savings without taking undue risks. So the key capability of the affordability instrument is entrepreneurial investment prowess...to create genuine wealth with the retirement savings under management. The key people managing this instrument are not (in Keynes'

words) 'beauty contest' investors who trade pieces of paper with each other. Instead, their private and public markets activities are both geared to generating growing, sustainable, re-investible cash-flows.

The 21st Century Pension Institution

Note how both the plan design questions and the implications of the Tinbergen principle signal a critical requirement for integrative thinking, and for dynamic modeling, communications, and implementation expertise to pull all these elements together. In short, 21st Century pension plan designs require 21st Century pension institutions. *Letter* readers know pension institution design is a regular topic in this publication (see, for example, our March *Letter* contrasting the Norway, Yale, and Canada Investment Models).

Suffice it here to say that we agree with the Almeida-Fornia assertion that organizational effectiveness matters a great deal in the global pensions space. Modern pension institutions integrate effortlessly across the disciplines of pension finance, corporate finance, human behavior, investment beliefs, risk management, stakeholder communications, and information technology. They are well-governed by Boards that have the right skill-experience sets, and have a 'public good' mindset at the same time. Modern pension institutions have scale, and can compete for the internal talent they need to be high-performance organizations.

Once again, we make the obvious point that the presence or absence of these institutional features has nothing to do with whether the underlying plan design is DB or DC.

Moving Beyond the 'DB vs. DC' Debate

By now the key message of this *Letter* should be obvious. We can no longer spend precious time debating pension plan designs that are well past their 'best before' due dates. Fresh thinking brings the fresh design insights the pensions sectors around the world desperately need. Let's get on with it!



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The AMBACHTSHEER Letter

Sustainable Pension Design • Effective Pension Management

July 2012

EFFECTIVE PENSION MANAGEMENT:

THE CASES OF *ATP* AND *HOOPP*

“ATP’s vision is to ensure basic financial security for all of Denmark....”

ATP Annual Report, 2011

“HOOPP’s liability-driven investment approach is designed with the sole purpose of delivering on the pension promise....”

HOOPP Annual Report, 2011

In Search of Effective Pension Management

We are a strong proponent of ‘deductive’ discovery processes. Such processes start with basic truths or principles and reason towards their operational implications. Then these operational implications are subjected to the ‘reality check’ of empirical confirmation. Readers have seen the application of this process to the discovery and validity-confirmation of the five drivers of effective pension management on more than one occasion:

1. Arms-length, interests-aligned, legal platform
2. Good organization governance
3. Sensible investment beliefs
4. Right-scaled
5. Able to attract and retain the right people

This *Letter* stands that deductive discovery process on its head by going ‘inductive’. Specifically, we start by identifying two pension organizations that have developed reputations for exceptional performance and competence in recent years, and ask why this is the case. The resulting discovery process uncovers the key success drivers that these two organizations have in common. Through this *Letter*, we invite you to join our search for, and discovery of, the drivers of effective pension management through the cases of *ATP* and *HOOPP*.

The full names of the two organizations are *The Danish Labour Market Supplementary Pension Plan (ATP)* and the *Healthcare of Ontario Pension Plan (HOOPP)*. In an important sense, the two short quotes lifted from their Annual Reports (see above) identify the most fundamental common success driver of all: a clear statement that the primary mission of the organization is to provide post-work financial security for its members. However, many pension organizations say this is their mission. How do we test if they really mean it? Logically, by addressing three questions.

First, is the pension design the organization is implementing sustainable? In other words, what is the nature of the pension promise and is it deliverable in both the shorter and longer terms? Second, does the organization possess the resources necessary to get the job done? And third, is the organization producing actual results consistent with its vision/mission? We address each of these three questions in turn. The *Letter* ends with five implications of the *ATP* and *HOOPP* lessons learned for fiduciary manager organizations with multiple pension plan and other clients.

Sustainable Pension Designs?

ATP’s pension design falls in the ‘Collective DC’ category. The keys to its sustainability are (a)

provide a pension guaranty on only 80 cents for every dollar contributed, (b) hedge that guaranty with a series of matching financial instruments, and (c) invest the assets not needed to support the guaranty in a portfolio of risk-controlled, return-seeking investment strategies. Subject to maintaining a target 20% balance sheet risk buffer, the proceeds from the return-seeking strategies are used to enhance the basic guaranteed pension. Note this design meets the Tinbergen Test that the achievement of two pension plan goals (i.e., affordability and payment certainty) requires two instruments (i.e., a liability-hedging portfolio and a return-seeking portfolio).

HOOPP's pension design falls in the 'Collective Target Benefit' category. The keys to its sustainability are (a) a regulatory regime that requires regular testing of balance sheet solvency in relation to the target benefit, (b) recognition by *HOOPP's* Supervisory Board that there are no external pension guarantors, (c) Board power (subject to stakeholder agreement) to adjust both contribution rates and benefits to maintain balance sheet solvency, and (d) an explicit split of plan assets into liability-hedging and return-seeking components. So *HOOPP's* pension design too passes the Tinbergen Test.

Resources to Get the Job Done?

Why are both the *ATP* and *HOOPP* pension designs sustainable? Because both have explicit solvency targets that they manage to, and mechanisms to dynamically monitor and steer the plan's solvency ratio (i.e., the balance sheet A/L ratio) in the right direction over time. Specifically, they have tools that dynamically monitor the duration and inflation-sensitivity of the accrued and accruing pension payment obligations, monitor overall A/L mismatch risk, decompose it into its major components, and have trigger mechanisms for making adjustments in real time, if needed.

These return and risk monitoring and management requirements have profound organizational implications in both design and requisite skill sets. The complex data/information needs lead directly to IT, finance, and risk measurement and management functions that can cope with that complexity. The need for separate hedging and return-seeking portfolios has already been noted. Skilled, dedicated people must be found to manage each of these portfolios and their components (including the accompanying in- vs. outsourcing decisions).

Similarly, the administration of benefits and member communication is an exacting business. A CEO must be found that 'gets' both the pension business model and the need to produce the desired results in practice. A Supervisory Board must be assembled that fully appreciates the need for both a sustainable pension design and effective implementation strategies.

The *ATP* and the *HOOPP* Annual Reports offer strong evidence that both organizations have indeed assembled the complex bundle of resources needed to get the job done. Specifically, *ATP* reports a total of 794 FTEs on staff, and *HOOPP* 450, with both organizations winning 'best employer' awards. Relative to their net asset bases of \$100B and \$40B respectively, *ATP* reports investment expenses of 24bps and pension administration expenses of 6bps. *HOOPP* reports 23bps and 10bps for these two categories. As a standard of comparison, *CEM Benchmarking Inc.* reports median global experience for investment and pension administration expenses in the 50bps and 10bps areas respectively.

Actual Results?

There are two ways in which the organizational performances of *ATP* and *HOOPP* have stood out over the course of the last five years: in balance sheet performance and in asset return performance. Ultimately, balance sheet performance matters most. Table 1 displays the key indicator of the pension organization's ability to meet the accrued pension promises: the funded ratios of their balance sheets (i.e., assets as a percent of liabilities) over the 2007-2011 period. Note that while the 2008 global financial markets debacle did pull down the funded ratios in both organizations, it did not sink them into unrecoverable territory. Today, *ATP* and *HOOPP* (and more importantly, their plan members) find themselves in a small, elite group of pension organizations with funded ratios exceeding 100%. (For example, median funded ratios in North America have fallen into the 75% area, and the median Dutch plan funded ratio has fallen below 100% versus a 125% target).

Table 1 ATP and HOOPP Funded Ratios Experience – 2007 to 2011

	2007	2008	2009	2010	2011
<i>ATP</i>	126%	113%	118%	117%	115%
<i>HOOPP</i>	104%	90%	97%	103%	108%

Sources: Calculated by the author from data in the *ATP* and *HOOPP* 2011 Annual Reports

Table 2 offers the key explanation why the *ATP* and *HOOPP* balance sheets held up so well over the course of the last five years: strong asset returns. In short, their 5-year return experience was materially better than that of most other pension funds. Why? Knowledgeable readers will know the answer. Through their liability hedging activities, both *ATP* and *HOOPP* were long interest rate duration during a period of dramatically falling bond yields, providing material capital appreciation offsets to the generally poor returns on equities. Note that these capital appreciation offsets resulted from investment prudence, not investment brilliance. The interest rate exposures on the asset side of the balance sheet were there to hedge against equivalent interest rate exposures in accrued pension liabilities. On a cautionary note, it is difficult today to see the yield curve falling materially further. Locking in low bond returns by shifting asset mix exposure further towards bonds could now be a return-reducing, rather than a return-enhancing strategy.

An interesting difference between the two organizations is that in *HOOPP*'s case, the liability-hedge portfolio contains most of its physical assets and the return-seeking portfolio is mainly derivatives-based. *ATP* has done the reverse. Its liability-hedge portfolio is derivatives-based, and its return-seeking portfolio holds its physical assets. This is likely because Canada does not have a well-developed long-dated interest rate swap market, so *HOOPP* uses its physical assets to hedge its interest rate duration risk. In both the *ATP* and *HOOPP* cases, these liability-hedging strategies can lead to the counter-intuitive result of being levered in a financial sense (e.g., long bonds and short cash), but risk-reducing in a balance sheet mismatch sense.

Return-Seeking Strategies

The 2011 Annual Reports offer evidence that *ATP* and *HOOPP* have also been successful investors with their return-seeking portfolios. In line with their focus on balance sheet risk control, the organizations have structured their return-seeking investment programs into the groupings set out in Table 3. Note that both organizations have moved away from the traditional asset class categorization of investment policy, towards a more economics-based approach to measuring and managing the collective risk exposures of the return-seeking strategies.

An important element of this shift has been to make major investments in risk management tools in order to estimate the diversification power within the return-seeking investment program, and to estimate the remaining net risk exposure that the program contributes to the plan balance sheet. With these overall risk monitoring and management disciplines in place, the investment specialist teams in both organizations are encouraged to generate net excess returns on the risk capital allocated to them. In both cases, the bulk of the return-seeking investment strategies are managed inside the organization, rather than outsourced to external managers.

Table 3 Components of the *ATP* and *HOOPP* Return-Seeking Strategies

<i>ATP</i> :	1. Interest Rates, 2. Credit, 3. Equities, 4. Inflation, 5. Commodities, 6. Alpha
<i>HOOPP</i> :	1. Credit, 2. Public Equity, 3. Private Equity, 4. Asset Allocation, 5. Absolute Return, 6. Options

Sources: the *ATP* and *HOOPP* 2011 Annual Reports

Table 2 *ATP* and *HOOP* Investment Returns vs. Euro and Canadian Median Pension Fund Experience – 2007 to 2011

	2007	2008	2009	2010	2011	5 Year Annualized
<i>ATP</i>	-2.6%	18.8%	2.0%	17.2%	26.2%	11.8%
Median-Euro	4.5%	-12.6%	14.4%	11.6%	3.7%	3.9%
<i>HOOPP</i>	6.2%	-12.0%	15.2%	13.7%	12.2%	6.6%
Median-Cdn	2.8%	-16.5%	15.1%	11.0%	2.6%	2.4%

Sources: the *ATP* and *HOOPP* 2011 Annual Reports and CEM Benchmarking Inc.

Lessons for ‘Fiduciary Managers’

In our view, an important element in the *ATP* and *HOOPP* success stories is their ability to focus on a single pension design and a single, well-defined ‘client’ group. This raises an important question. What lessons should ‘fiduciary manager’ organizations looking after the financial interests of multiple client groups with multiple types of pension or other liability structures take away from these two stories? Examples of such organizations include *QIC* in Australia, *SWIB*, *Florida SBA*, and *Commonfund* in the USA, *Hermes* in the UK, *APG*, *PGGM*, *MN Services* in the Netherlands, and *bcIMC*, *AIMCO*, and *La Caisse* in Canada. A large new Ontario-based fiduciary manager might launch as early as next year. The size and importance of these organizations suggests the question we pose is an important one, worth careful attention and thought.

It seems to us that the most important lesson from the *ATP* and *HOOPP* stories may well be that fiduciary managers serve their clients best by anchoring their ‘value proposition’ broadly on helping their clients achieve their financial goals, rather than focusing more narrowly on achieving or surpassing some investment return target. This broader perspective has at least five practical implications:

1. An effective fiduciary manager helps its clients define their financial goals in ways that translate into the financial characteristics of a ‘liability-hedging’ portfolio that makes the achievement of those financial goals as likely as is reasonably possible.
2. An effective fiduciary manager has the internal capability to actually create and manage as many ‘liability-hedging’ portfolios through time as are needed to serve its clients.
3. An effective fiduciary manager can reach agreement with each client on the maximum

amount of mismatch risk relative to the ‘liability-hedging’ portfolio (or risk-budget) acceptable to the client, and on the minimum ‘expected return-on-risk’ (or hurdle rate) required for assets to be placed ‘at risk’.

4. An effective fiduciary manager has the internal capability to manage a competitive ‘return-seeking’ investment program capable of dynamically converting available risk budgets into investment returns that, over time, meet or surpass the pre-established hurdle rates of return. This risk-integrated investment program is capable of operating in both public (physical and derivatives) and private market places.
5. An effective fiduciary manager has the requisite governance, executive, professional, administrative, and IT resources to deliver its value proposition.

Ending Back Where We Started

We started this *Letter* by stating a preference for deductive discovery processes over inductive ones. Most of the rest of the *Letter* made the counterpoint that starting with pension management success stories and then discovering the ‘whys’ behind the successes has its own merits. In the end, both discovery journeys confirm the key success ingredients of effective pension organizations to be aligned interests, good governance, sensible investment beliefs, and marshalling the requisite resources.

However, for us at least, the story approach taken in this *Letter* does result in an additional insight: never underestimate the role of mission clarity in powering organizational success. Achieving financial security for plan members was the clearly stated goal of both the *ATP* and *HOOPP* organizations. Their funded ratios suggest that, to date at least, that is what they are in fact achieving.



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The AMBACHTSHEER Letter

Sustainable Pension Design • Effective Pension Management

August 2012

TURNING DC FROGS INTO PENSION PRINCE CHARMINGS:

BUILDING DC PLANS THAT SERVE REAL PEOPLE

“The current system is not working for many people. The root problem is that the USA has never had a coherent plan for a universal private retirement system. That is why I am proposing something new – USA Retirement Funds....If you have any ideas or suggestions, please contact me...”

Statement by Senator Tom Harkin,
August 2012

“Our goal is for QSUPER trustees to exercise their fiduciary authority to best assist plan members in first accumulating assets, and then to help them transition to maintain an adequate income in retirement...”

Statement by Australian superfund QSUPER,
July 2012

DC Pension Plans that Serve Real People

The masthead of this publication sets out its dual goals. To foster “Sustainable Pension Design...and...Effective Pension Management”. And of course, while distinct, the two goals are inextricably linked. The study in last month’s *Letter* of the cases of *ATP* and *HOOPP* made that very clear. Both pension organizations demonstrated their understanding that delivering post-work income security to members requires a sustainable pension formula and an organization that can reliably implement it. We continue that theme in this *Letter*, though from a distinctly different vantage point.

That different vantage point is best understood in the context of what we called “the dysfunctional DB vs. DC debate” in the prior June *Letter*. There we argued that the traditional DB and DC pension formulas both have serious shortcomings, and that we need to move to new pension formulas fit for the 21st Century. Such formulas must recognize that the days of hard guarantees by credit-worthy outside parties embedded in traditional DB plans are fast disappearing. But these formulas must also keep the ultimate post-work income security

goal clearly in mind, which has not been the case in most traditional DC plans.

In short, this *Letter* addresses the challenge of turning traditional DC frogs into 21st Century Pension Prince Charmings.

Powerful Global Impact Potential

A successful DC frog-to-prince transformation would have a powerful global impact on post-work income security. Pension arrangements in the developing world are far more likely to be DC - rather than DB-based. Supplementary pension arrangements in many non-Anglo-Saxon countries are taking on DC-flavors. In the Anglo-Saxon countries, most large private sector large employers have already abandoned traditional DB plans and even public sector employers are recognizing they must move in that direction. Further, as Senator Harkin notes (see above), the employees of smaller employers and the self-employed are largely left to fend for themselves in the USA.

The Senator argues for a sensible *USA Retirement Funds* collective action solution (details to be determined). Canada is now in its third year

grappling with the design of its *PRPP (Pooled Registered Pension Plan)* 'solution'. The UK is materially further along on the road to higher private sector pension coverage rates with *NEST (National Employment Savings Trust)* now beginning to accept and invest payroll deductions. Australia and New Zealand are further along still with the operation of the *KiwiSaver* plan since 2007 in New Zealand, and compulsory superfund participation in Australia since 1992.

DC Frog-to-Prince Transformation Principles

The Lifecycle Theory of Personal Finance provides a clear blueprint for the design of any functional pension formula:

- Decide initial post-work standard-of-living pension target
- Make initial projections/assumptions about working life length and income, longevity, real return term structure, age-based risk tolerance
- Understand risk pooling opportunities for real investment risk and longevity risk
- Decide initial savings rate/pattern and investment policy
- Make life-course adjustment decisions about the pension target and projections/assumptions with the passage of time and experience

These key pension formula design elements define the role and functions of the pension delivery organization:

- Facilitate plan members making pension target decisions and decide on default target on their behalf
- Facilitate plan members making initial assumptions about working life length and income, longevity, real return term structure, risk-tolerance and decide on default responses on their behalf
- Create and implement transparent, fair plan member risk pooling opportunities for real investment risk and longevity risk
- Facilitate plan members making the initial savings rate/pattern and investment policy decisions and decide on default responses on their behalf
- Facilitate plan members making life-course adjustment decisions about the pension target and projections/assumptions with the passage of time and experience, and decide on mechanisms required to make thoughtful, defensible default responses on their behalf

- Create and manage an organization with the requisite authority, scale, skills, infrastructure, and aligned interests to support the tasks set out above in a cost-effective manner

Of course saying is one thing, doing another. We now turn to the case study of a pension organization that has made the strategic decision to base its plan member services offering directly on the design blueprint set out above.

From Principles to Practices: the Case of QSUPER

QSUPER provides pension services to 540,000 public sector employees and retirees in Australia's State of Queensland. It has about \$30B in assets and employs 600 people. Here is a summary of a recent QSUPER presentation setting out a number of important strategic decisions taken by the organization, their rationale, and their implementation implications:

- Australian super funds have historically had virtually identical, unchanging default options and strategies for its DC members
- This is so despite significant market disruptions, changes in the socio-political environment, changes in required contribution rates, and important developments in the theory and implementation of pension design and delivery systems over the course of the last decade
- These observations raise an important question: are the trustees of Australian super funds acting in the best interests of their plan members?
- In QSUPER's view, there is currently too much emphasis on peer-relative performance, and not enough on the financial well-being of plan members.
- As a result, QSUPER is taking the following steps in the management of its default option:
 1. Cease participation in super industry peer surveys,
 2. Redefine its fundamental goal as delivering a target pension to plan members at a target age,
 3. Segment plan members into age/account size-based cohorts,
 4. Restructure financial decisions around relationship between actual member balances today, and the 'target' balance required to be 'on track' to deliver the ultimate target pension,
 5. Reorganize the investment function into 'return-seeking' and 'target pension-hedging' components.

- In a longer-term timeframe, QSUPER will also research the provision of member annuitization options, and restructure its member counselling and reporting services so that they directly align with the strategic decisions summarized above.

It would seem QSUPER is taking the lessons of the Life Cycle Theory of Personal Finance and its organizational implementation implications very seriously.

“DBization”

The importance of the change of direction in client needs logic and its implementation consequences should not be underestimated. The traditional ‘frog’ DC model simply accumulates financial capital with no particular goal in mind. The wildly popular ‘target date fund’ (TDF) innovation does not change this fundamental reality, as it simply introduces an age-based equity exposure rule into the mix. The game changer is the shift to a target pension by a target date. In their book “The Retirement Plan Solution: The Reinvention of Defined Contribution” (Wiley 2009), Ezra, Collie, and Smith call this the “DBization of DC”.

In their article “What DC Plan Members Really Want” (RIJPM, Fall 2011), Tretiakova and Yamada explore the consequences of the DBization of DC. They begin by noting that even near-dated TDFs had average returns close to -25% in 2008, with individual returns for individual products ranging from -4% to -41%. From there, they go on to demonstrate the benefits of implementing what they call a “dynamic glide path strategy”. Such a strategy focuses on producing a target pension (e.g., 70% of final salary) by a target date. The essence of the strategy is to regularly compare actual member balances along the glide path to a target balance calculated with the final target pension destination in mind.

In their simulations, the authors introduce a rule to reduce investment risk if the actual balance exceeds the target balance, and to increase risk if it is below the target. They test the efficacy of the rule using both long term historical data and simulated possible futures based on long term history, and on the specific 2000-2010 experience. Alternative benchmark strategies include 100% equities, 100% bonds, a fixed 60-40 mix, and a typical TDF fixed glide path. They find their dynamic glide path strategy produces better results than the alternatives. For

example, the typical TDF hits the target balance on the target date only 52% of the time versus 97% for the dynamic glide path strategy in their simulations.

An important note here is that in their simulations, Tretiakova and Yamada only used the investment policy lever to make glide path course corrections. In practice, other levers (e.g., contribution rate changes, retirement date changes) are also available. All this points to the urgency of getting the design of the default option right, as well as the design of the plan member-pension organization interface.

Really Understanding Plan Members’ Post-Work Wants and Needs

In his article “How Should Retirees Manage Investment and Longevity Risk?” (RIJPM, Spring 2011), Ezra offers interesting perspectives on these post-work design questions. He makes three important points:

1. Help members convert post-work needs and aspirations into consistent financial implications: a feasible spending/bequest policy, a cost-effective longevity protection policy, and a financial balance target at retirement consistent with achieving these goals.
2. Help members understand that longevity risk increases with age: though it might seem counterintuitive, the older one gets, the more longevity risk dominates investment risk. For example, for a male aged 75, Ezra calculates that longevity risk is greater than investing in a 100% equity portfolio.
3. Separate the investment and longevity risk mitigation decisions: lifetime income annuities are unpopular because they are inflexible blends of fixed income and insurance products. Two practical ways to separate them are to (a) spend about 15% of the member financial balance at retirement (e.g., age 65) to buy an advanced life deferred annuity that would commence if the member outlives his/her life expectancy (e.g., age 85), or (b) purchase a lifetime withdrawal guarantee that ensures monthly payments (subject to some maximum) continue even after the member’s balance has been exhausted.

The major point is that 21st Century DC-driven plans don’t just have intelligent asset accumulation designs. Their asset decumulation designs must receive an equal share of innovative thinking.

Institutional Implications

Predictably, Senator Harkin’s call for the development of a coherent, cost-effective, universal plan to cover US workers without employer-based pension plans under the banner of *USA Retirement Funds* has not be welcomed with universal acclaim. A spokesperson for the right-wing Heritage Foundation commented “...The problems we’ve got with the plan include the fact that it appears the Senator is creating a large central pension plan that will compete with many of the existing plans...”. In the UK, the *NEST* initiative continues to face similar criticism. In Canada, Finance Minister Flaherty rejected our *Canada Supplementary Pension Plan* proposal for apparently similar anti-competitive reasons, and has countered with a *Pooled Registered Pension Plan* proposal to be delivered by the private sector. In Australia, the Cooper Review has called for a transition to fewer, larger, more cost-effective, member-responsive super funds.

We mention these initiatives because pension delivery is as important as pension design. The best pension designs in the world go for naught without interest-aligned, right-scaled, expert, motivated, cost-effective pension institutions to deliver them. Such

institutions understand what their members/clients want, and have clear mandates to design and implement the services needed to satisfy those wants. Should such institutions operate in a competitive environment? Of course they should. But it should be a competitive environment shaped by the reality of the profound informational asymmetry that exists in the market for pension and investment services. Sellers know a great deal more about what they are selling than buyers know about they are buying. Without intervention, that asymmetry predictably leads to customers paying too much for too little, and service providers earning too much for too little. In stronger words, it leads to market failure.

There are only two (not mutually exclusive) paths to solving the market failure problem. One is to foster the creation of more well-governed, co-op pension institutions (e.g., like the QSUPER organization featured in this *Letter*). The other is to create far-stronger, smarter regulatory institutions that understand the asymmetry problem, and that proactively and aggressively protect customer interests by only licensing pension institutions that can demonstrate the delivery of customer value at a reasonable cost.



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