CFA Institute

THE FUTURE OF PENSION MANAGEMENT

KEITH P. AMBACHTSHEER

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In this engaging presentation with Keith P. Ambachtsheer, you will learn how to produce more transparent, cost-effective pension outcomes for plan participants by moving beyond the old DB versus DC dilemma, creating effective organizational governance and management, and rethinking what investment policy needs to accomplish and how it is executed.

Keith P. Ambachtsheer: This book is actually a bit of an accident in the sense that I did a book 10 years ago called *Pension Revolution*. And I thought that was it; three books, done.

And it was actually the CFA Institute conference last year in Frankfurt that changed my mind. And the reason was that Wiley had a book stand, and they had this old relic from 2007 on the shelves. And I couldn't help but just stand there and peek from some distance away, and I noticed that people were actually buying the book. And I thought, "Hm, that was 10 years ago. It's time to actually update. A lot of things have happened in this space. I've changed my mind about some things."

So I went back to Wiley and said, how about an update? And they said, great. So I just checked downstairs. There is actually a bookstand for Wiley again. And the new book's on the shelf.

The other thing, I think that there are 25 copies out there. So those of you at the back, I'm just thinking of Larry and sort of the importance of timing and positioning, those of you at the back have an advantage, because there's 25 copies out there that are free of charge. So good luck. We'll see how that works.

So what I want to do is just give you a little bit of a sense of the background of the book. Where it came from, some of the background to it. And then take you through what I think some of the key messages in the book are. And then I noticed the interaction is better if it's live and personal, but I think the notes are working reasonably well. JT, you ended up with lots of notes.

So I encourage you to — some of the things that I say, I think you'll go, hm, really? A little bit controversial. So I'm hoping that we can have a good conversation towards the end.

So let me start out by playing a little bit to the home crowd. This is Canada, after all. And there are some things in the book that relate to the Rotman School of Management. I've been on the faculty there for 10 years as an adjunct professor. So one of the things — this thing in the book is this notion of integrating. And if you go to the Rotman website, it says, "Integrative thinking is a discipline for solving real-world problems." And so, part of the idea here is, let's stop being silo people, and let's integrate across different disciplines and get better thinking, better outcomes.

Roger Martin is the former dean of the business school at the Rotman School. He wrote a little book also in 2007 called *The Opposable Mind*. And the message of the book is that we should stop positioning things in either/or contexts. And that if we just take a little bit longer, we can probably come up with a better answer that involves some of the "either" and some of the "or."

And so I've got three examples in the book that fit that philosophy. One is the traditional DB versus DC debate. It's either/or. And the book argues, well, that's just not true. It's not either/or. It's how you combine some of the best thinking of both dimensions.

In pension governance, the debate is around, do we have lay boards or do we have professional boards? And again, the argument is well, no. Actually, you want both. You want both representativeness, on the one hand, and you want expertise on the other. It's not either/or. In investing, active versus passive. Again, same idea. It's not either/or. It's, we're at the margin. You get the most value.

So the other thing that's in the book about the Rotman School of Management is that I started up something called ICPM, International Centre for Pension Management, 10 years ago. It's a consortium of 40 major pension organizations from 12 different countries, working together to basically become better organizations. We run a Board Effectiveness Program for board members. And we take them in Monday morning, send them out Friday afternoon. It's international, and people say it's a great experience.

Going a little bit beyond the Rotman School, the Ontario Teachers' Pension Plan stories in the book. It's a great story from the point of view — it was an opportunity to use Peter Drucker, his best thinking of how to create a great pension organization and to actually see it step by step, going from an idea to now an organization with a 25-year history.

Another element is the CEN benchmarking, which some of you may know. It basically measures value for money in the pension space globally. And the connection with Ontario Teachers', if you look at their annual report, you'll see that they actually rank number one in the world on a long-term basis in value for money both, on the investment side and on the benefit administration side.

Finally, the other local thing that had a significant Canada dimension is focusing capital on the long-term effort that was started three years ago by Mark Wiseman of CPP Investment Board. And Dominic Barton, managing partner at McKinsey, who some of you may not know, is actually also a Canadian. And I think what they've done is to follow up the ideas that were first expressed in the 1930s. Chapter 12, Keynes's general theory on investment beliefs, probably the best thing ever written on investment beliefs for my money.

And Graham and Dodd wrote their book, *Security Analysis*, about the same time. And they talked about long-term investing and the implications of it, but it kind of just sat there for a very long time. And I think we're now actually getting to a stage of actually implementing some of these ideas and rethinking what investing should be, and how we actualize that.

So having said that, stop waving the local flag, because this book is actually a global book. It's an international book. Thought leadership, I use. A lot of people I've mentioned. Keynes, he's in the book. Graham and Dodd are in the book. Drucker's in the book, Peter Drucker, on organizational effectiveness.

I've managed to corral six Nobel Prize winners in economics in the book: Merton, Samuelson, Tinbergen, Akerlof, Kahneman, Shiller. So all this hopefully adds to the credibility and the soundness of some of the underlying principles and I try and apply.

The other element is because it's a global book, I can kind of work my way across the world in terms of best practices. So, for example, Australia's an interesting situation right now where they're now starting to bolt income for life back ends on their DC plans. The Dutch have figured out that what they're doing currently with their collective schemes is too complicated, and they're trying to simplify them. The UK has gone to recognizing that all workers should have workplace pension plans and have created something called NEST.

And now we're in North America. We're looking at what the Brits have done in terms of, how do we actually, in North America, deliver Pillar 2 pension plans to private sector workers? So that's that element.

And finally, what I try and do in the book is to get people out of their boxes. So it starts on page 1 with George Bernard Shaw from his 1903 play, *Man and Superman*. Quote: "The reasonable man adapts himself to the world. The unreasonable one persists in trying to adapt the world to himself. Thus, all progress depends on the unreasonable man."

In the way that Keynes said it, I'm sure some of you have read this in this famous Chapter 12, is this idea that committees prefer to fail conventionally rather than succeed unconventionally. So part of the message in the book is that we need to step out of our conventional boxes if we're going to raise the game in pensions around the world in the design, governance, and investing dimensions.

So that's a little bit of the background. In fact, let me now show you. There it is. And so the other thing is that rather than have a dark, dreary gray cover, it's cheery. It's hopeful. And hopefully, that also is an element that gets conveyed throughout the book.

All right. That's a little bit of the background. Now let me go to some of the key ideas in the book, the assertions as to what we need to do to raise the game of pension management. So the first one on the design side. This is courtesy of the World Bank. They put out a piece in 1994, averting the old age crisis.

And what they suggested, if we're going to have sensible conversations about the design of pension systems, that we should think about them in the context of three pillars. Pillar 1 being a base, universal pillar. Typically, pay-go funded to provide some base for everybody. Pillar 2 being employment-based with a workforce orientation, where you have more ability to tailor Pillar 2 plans to specific kinds of workforces. And then Pillar 3, the individual piece.

And so immediately, I think the framework gives you a method of thinking about the big challenges. And here they are. Arguably in terms of the Pillar 1, the big challenge is sustainability, to not make the system so big that it becomes unaffordable down the road.

Most of the people in this room, I guess, relate more to Pillar 2, employment-based pension plans. And there's some interesting challenges there. As well, as you well know, I've already talked about the coverage in some countries, the coverage question.

There's an interesting discussion around adequacy. If you have Pillar 1, how much does Pillar 2 — how much should it add in order for people to maintain their standard of living? And as a rule of thumb, we'd be using a 70% income replacement as the target. It turns out that a lot of research now shows for many middle-income workers, something like 50% is actually adequate, which is a big deal, because shooting for 50% income replacement is a lot easier financially than shooting for 70% income replacement.

The risk pooling thing: I'll talk about that a little bit in some detail. It's been a conundrum, I think, for all of us as to how we deal with the question of risk in the design of retirement income systems. Pillar 3, the view that I've come to is that ideally, certainly at the middle-income level, a country, by the way it designs Pillars 1 and 2, Pillar 3 should not be a big requirement for middle-income workers. Why? For the obvious reasons, that a lot of people, for inertia reasons, won't save on their own until it's way too late.

The other problem comes under the heading of asymmetric information, which is the Akerlof notion that markets only work well when the buy side and the sell side works from the same amount of information. As soon as you get a system where sellers know more about what they're selling than buyers know about what they're buying, you get asymmetric outcomes. And what tends to happen — and this is empirically demonstrated — generally, people in this space pay too much for too little in terms of value they're getting.

So a quick global tour, taking these ideas. It comes pieces at the time. We'll put them all up. And by the way, there is now a global pension index. So we now keep score as to the quality of pension systems.

This was done by our friends in Melbourne, actually. David Knox led this effort of actually creating a system of ranking national pension systems based on adequacy, which is the income replacement idea of the adequacy of the system. Funding method really is sustainability of the system. And institutional structure is this notion of, how solid is the system institutionally from the kind of pension organizations that are there and the kind of regulatory processes that exist? And you can kind of think of that in the context of Pillars 1, 2, and 3.

So everybody wants to be number one. There's now a way to be number one. The Dutch were number one for a number of years until they got knocked out by Denmark. So that was a sad day for the Dutch. Australia's been number three in this derby all the way through. And on it goes. And it's sort of interesting to understand why countries or regions rank high or rank not so high.

Northern Europe scores best. The reason they score best is they have modest Pillar 1 systems. They have fully funded Pillar 2 systems with mandatory participation in these systems, with the result that there's very little use in Northern Europe of Pillar 3-type arrangements. They just aren't needed.

Southern Europe is a disaster. They have very large pay-go systems, very little funding with bad demographics. So good luck to them. Australia, I've already talked about. Australia and New Zealand, it's a sound system that has historically done only accumulation in DC plans. But now people with $200,000, $300,000, $400,000, $500,000 lump sums, they're recognizing that they really need to give these people an income for life back end. And that's now the big discussion in Australia of how to do that.

That leaves Canada, UK, USA. And the big issue there for my money is coverage of private sector workers in a cost effective, sustainable pension arrangement. And what's interesting is that the British have taken the lead. They've passed legislation to make it mandatory for employers to offer a qualifying Pillar 2 pension plan. They've created a national default option called NEST, National Employment Savings Trust.

And Canada now, we've been debating this thing here for 10 years of how to do it, whether to do it. And Ontario has taken a lead to actually create the Ontario Retirement Pension Plan, ORPP. It hasn't been launched yet. But some of the same principles that the Brits have applied are now in Canada. It can go, I think, national.

And even in the States, there's significant action at the state level of states looking at their private sector workforces and figuring out of how to give people without pension plans an opportunity to save and generate retirement income at a reasonable cost. So that's a very quick run through of the globe in terms of the status of financial income, or the retirement income systems.

So I want to take you through a thing that I struggled with for a long time, and you tell me what you think of it. And this is the design of Pillar 2 plans, workplace pension plans.

And on the one hand, people in this room understand the importance of return compounding in making Pillar 2 pension plans affordable. I mean, if you can compound at a good rate of return for a 40-year period of time, then most of the funding for the plan will come from returns rather than from contributions. So this is this notion that — and I think it's an underappreciated risk in retirement systems, is the risk of not compounding at a high enough return to make the plan affordable.

The one that we tend to focus on is this notion of payment certainty. Can you make the payment that you promised to make some time ago? Do you actually have the money to make the payment, the payment certainly part? And certainly, that's an important element.

But if you put it this way, you actually have two goals in the system. You have an affordability goal, and you have a safety goal. And that's where I bring in — I went through the Nobel Prize, the economics laureates. One of them is a Dutchman. In fact, he was the first one to win the Nobel Prize, Jan Tinbergen. And he won it for recognizing and demonstrating that in economic policy, you need as many instruments as you have goals.

And I think, I believe that equally applies to pension economics. So if we have an affordability goal and we have a safety goal, two instruments. And I argue that part of why we haven't been doing so well with the design of Pillar 2 plans is because we've been trying to do two things with one instrument. That's a problem.

So if you take the Tinbergen approach to defined ambition/target benefit, these are the names that we're now coming up with to replace DB and DC, recognizing that complete certainty is out of the question. But we can do a lot in terms of understanding the risks and controlling those risks to have actually a target retirement income goal that we can monitor over time and move toward. So that's the reason for the DATB lingo that I think we should be now starting to use instead of the old DB and DC lingo.

So the idea here with this approach is that you've got these two instruments. One focuses on a long-horizon wealth creation, and the other one focuses on short-term payment certainty for life. And then the question is, well, how do you actually make these two instruments work in practice? And it works something like this.

So people move through this system on an age-related basis. So for example — this isn't written in stone — but an example here that gives you the idea is that all the money prior to age 50 goes into the wealth creation program. Then you have a 20-year transition period where by the time you get to age 70, you've still got 20% in your long horizon, but you've now 80% in the payment safety program. So it's basically moving from one to the other over a period of time. A little bit like the target base fund idea, but with an income for life back end attached to it.

So here's my sales pitch for rethinking how we design Pillar 2 pension plans along these true instrument lines. It deals with the affordability versus safety dilemma. You can set it up as a default so that people, if they don't want to get involved in making decisions, they don't have to. But on the other hand, the idea of providing a limited number of choices is something that if you do surveys on this, a lot of plan participants actually would like some limited ability to make some choices about retirement age, being one obvious example.

This approach has clear property rights, which is one of the huge problems in defined benefit plans where you can shift wealth from one group to another without anybody noticing until after the fact. It deals with a longevity risk pooling, which is a problem with a traditional DC plan. And I think that once you think through the importance of being able to provide income for life, we really need to have this element in a functional DC plan, in my view.

On the other hand, the notion of long-term volatility in markets — not so much volatility as changes in pricing is a factor. And the way we can deal with that most effectively, the view that I've come to is to basically, rather than move people from one instrument to another on a given day, that you basically use a 20-year transition period to average through a long period of time to avoid doing it on a really bad day like September 2008, for example. And with this approach, you can actually monitor through time how people are doing in relation to targets and report back to them.

So I'll leave that with you for your thoughts and contemplation. Moving on to the governance area now. So this comes directly. Drucker, Peter Drucker, he wrote 39 books in his illustrious career as a management philosopher.

One of the 39 books was on pensions. He wrote it in 1976. It was called *The Unseen Revolution*. So my book, *The Pension Revolution*, was then sort of the evolution of the original Drucker book.

One of the things that Drucker observed and he wrote about in his book, other than the demographics that would become very important, is that he didn't think the governance processes of pension organizations that he looked around and saw in the 1970s were very effective. And as I was in the '70s doing my transition from applying portfolio theory to something bigger, I happened to be lucky enough to read *The Unseen Revolution*. And this idea struck me that that would become an important element in how well these organizations were able to fulfill their function over time, is the quality of the governance process.

And so I've done a fair amount of research over the last 30 years in that space. And the basic finding is: Things are getting a little better over time, but not a lot. And so what do you find if you do these surveys? Well, you find that the way boards are being put together out there doesn't really stand the test of best practice.

And it gets to this notion I mentioned earlier. You want both an element of representativeness of legitimacy, if you like, in how you put a board together. But a board should also have a collective skill experience set, about being able to ask the tough questions of what is effectively a complex financial institution. So you need both. And a lot of boards are not put together with that thought in mind.

Taking it back for a minute to Ontario Teachers', one of the things that happened at the beginning of the creation of Ontario Teachers' is that both the Teachers' Federation and the Ontario government took this notion seriously, and they created a board selection process. Nine members, independent chair, four from the teacher side, four from the government side. But with a collective understanding that there was a skill–experience matrix for the whole board that would, in fact, be reflected in how the nine-person board was put together. And they stuck to that agreement for 25 years now. And I think it stood the organization in extremely good stead in terms of the quality of the services that is provided over the 25-year period.

What you get when you have boards that are really not equipped to do governance is you get micro-management. Because people tend to move to kind of issues that they can wrap their heads around. So maybe — I don't know. Maybe it's the color of the boardroom. Maybe it's how many pencils the organization has.

Being a little bit facetious here, but this whole notion that you need boards to be strategic. And if they're not strategic, that's hugely problematic. And you end up with organizational structures that may not be as cost effective as they could be.

And then the remedies, well, they fall out of that, of course, is that organizations' sponsors need to rethink how they put boards together. Self-evaluation is a critically important element of board effectiveness. You've got to have a process where you look in the mirror on a regular basis. And education can play some role in raising the standard. So about a third of the book is on these kinds of issues and the research, and some of the solutions to the problems that are there. We can chat about that if you'd like. Let me move on to the investment side.

And again, if you look at — and I've been able to do some research over time into how well our investment programs are working out there. And again, what you find when you do this kind of research — and there are gaps in what's actually happening. Investment beliefs versus implementation gap. This came up recently with doing some work with focus in capital for the long term, where everybody seems to agree that long-horizon investing is critical to this success of retirement income systems, being able to generate pensions at affordable contribution rates.

But when you look at what a lot of these organizations that talk about the importance of long-horizon investing, what they actually do in practice is a long way from that. So there are material gaps between what people are doing, and what they're saying they would like to be doing, what they want to be doing.

Performance measurement. If you measure — if the key thing you talk about in board meetings is the return of the last quarter of your fund, guess what? That signals that that must be a really important thing. And so the whole notion is if you want to be a long-horizon investor, what do you talk about at quarterly meetings if quarterly returns are irrelevant? And there are good answers to that question, actually, as to how you can have sensible discussions about long-horizon investment programs, whether they're on their way to succeeding or not. But it certainly isn't about the short-term returns relative to some other funds.

The risk thing is equally important in the sense that volatility, I think, is an important risk metric for short-horizon situations where you have to make payments at any given point in time. But again, where's the notion of compounding risk? Who's measuring the risk that the program doesn't compound at a high enough return for a long period of time? How do you measure that risk? It's probably the most important risk in the system, and many organizations are not measuring it.

So applying some of these ideas now to the Tinbergen model, I think there should be a — yeah. There we go. An extra click. So when you think about a long horizon investment program, the way I've just sort of sketched it out for you, and you want to have a conversation about how well that's going, the view that I've come to, the key to successful long horizon investment programs is buying and nurturing cash flows at reasonable prices. It's not about capital values. It's about cash flows, first and foremost.

Well, if you can move your board or your clients to recognizing that when you talk about your long-horizon investor program that you should be talking about the quality and sustainability of the cash flows that you hold, and the quality of the organizations that are managing those cash flows on your behalf, that's a different conversation than what happens today in most boardrooms.

So now the conversation is around the quality, sustainability of the cash flows. Are they inflation indexed? Can you put some real growth into them? Why would that happen? And if you have those conversations in this program, the day-to-day valuation of the cash flows is obviously irrelevant.

So that's a big deal. And it shows up, I believe, this gap where a lot of the institutional asset owner versus investment management communities are. They're not talking about these kinds of things as the basis for understanding and in the long horizon, nurturing the long-horizon investment program.

The other one — sure. That's a shorter-term thing. Now we're interested in how well assets and liabilities match. We're interested if that we're pooling longevity risk on this balance sheet, how are we doing that?

And the reason it's currently not happening in a lot of DC plans is because the longevity piece is buried somewhere in the insurance companies, in a big black hole that nobody understands how the pricing works. And what the book argues, you've got to bring it out of the black hole. You've got to get it up in front. And we really need to understand of how to build these arrangements transparently so that they do what they're supposed to do at a reasonable price. And here are some of the elements then that come into play if you have the vision to build this kind of a program and offer it as part of your Pillar 2 pension plans.

Now this happens one line at a time. There we go. There we go. That's everybody. Now one of the problems with this then obviously is that it has a gender problem. They're all men. And the best I can explain is that this was based on what happened in the 19th and 20th centuries, and they're now behind us. And going forward, this will even out, I believe.

But having said that, it's really worthwhile thinking that if you use the wisdom of some of the people that had been deemed to be worthy to be Nobel laureates, then I think they can be really helpful in how we should be redesigning and managing pension systems. So on the design side, it was Samuelson and Merton that laid out the life cycle theory of personal finance, of thinking about the financial journey as pre-work, work, and post-work, and how they should fit together.

Tinbergen, we've talked about in terms of the notion that you need as many instruments as you have goals. Akerlof, the notion of asymmetric information. Because in Canada and the US, we haven't had mandatory participation in cost-effective Pillar 2 pension plans, a lot of the retirement savings has moved to Pillar 3. And Pillar 3 is rife with asymmetric information, which Akerlof predictably, the way that he set it out, would be problematical in terms of value for the people that had less information than the people who have more information.

Kahneman is the whole behavioral economics finance side, and how we need to design systems for people that allows them to go through a process that if they thought about it actively over time, they would agree with. But they don't, or they're not capable of it, so you have to build these systems on their behalf.

Drucker we've talked in terms of governance. We've been through him. And the investing. Well, let me do the little poll here. How many people have read Chapter 12 of *The General Theory* of Keynes?

It's a treat. I insist you all go out — other than this book, that you go and look at the original Chapter 12 in *The General Theory*. Just Google it. You can get access to it. It's the best thing that's ever been written on investment beliefs.

And the interesting thing is that I didn't find out until relatively recently why — this was supposed to be a book about the depression and how to fix it, right? So what's he doing writing on investment management? Does anybody know why he knew so much about investing?

There was actually an article in the *Financial Analysts Journal* not that long ago by Chambers and Dimson, actually. He ran the Cambridge University Endowment Fund from 1921 until 19 — he died in 1946. And Dimson and Chambers went back into the files. He kept meticulous notes. They went back and computerized his entire track record from 1921 until 1946.

And it turned out that after flailing around — I mean, he talked in the Chapter 12 about "beauty contest" investors as being phony active managers who really traded with each other zero-sum game, less cost, and all that. And he figured out very quickly he didn't want to be one of those and that he wanted to be a long-horizon, wealth creation investor. And it demonstrates how he actually was able to do that. So he ended up doing index plus 5%.

And at the same time — apparently they didn't know each other — Graham and Dodd writing their *Security Analysis* book. 1934, I think. Same ideas. And then you get Buffett, and then you get David Swensen. And there's sort of an interesting evolution of thinking and remarkable track records attached to this kind of investing.

And again, this notion, it is unconventional. It was then, it still is now, so it's not practiced very much. And it gets us back again to George Bernard Shaw and this notion of, How many people are willing to step outside the box and rethink what they're doing? So that's what the book is about. We've got lots of time left. And hopefully there's been so something that's come up, JT.

JT Grier, CFA: I think we've got a couple questions here. Give me just a second here to collect my thoughts. So there are several questions on the Tinbergen model. Some of them I think are just technical questions where they're looking for the average age and lifespan that you were using in there. Well, what would the typical asset allocation in that model be?

Keith P. Ambachtsheer: It's age dependent, of course, is the answer. Because the notion of risk changes fundamentally with people's age. If you're young, your risk is compounding risk. If you're a pensioner, your major risk is payment risk. So that should be reflected in the design of the program. Tinbergen would say, it's axiomatic that you would do that.

By the way, I've got another quiz for you. Is there a major pension system today in the world that actually has the two instruments operating side by side? It's very large. It's based in New York City.

It was originally funded by Andrew Carnegie in 1918. That was TIAA. That's how it got off the ground.

And then Bill Greenough added the CREF piece, College Retirement Equity Fund, the compounding piece, in 1952 when he figured out that in a world where long Treasuries were 3%, yielding 3%, and the S&P 500 was yielding 7%, that it was a slam dunk that participants should have an opportunity not just to be in an annuity, but also to be in a compounding arrangement. And so that's been in place for a long period of time.

The only thing that apparently for legal reasons they've never actually done is to create a default program that moves people from CREF into TIAA on an automatic basis. They tell me that the lawyers tell them that would make them too liable to lawsuits. So that's the downside of being in the US. Everything is subject to legal action.

JT Grier, CFA: So what do you think the potential uptake is with that model?

Keith P. Ambachtsheer: Oh, the world's going there. It's just a matter of when. I hope it's in my lifetime. Because it just makes logical sense. And so for example, in the US, I can think of Georgetown University. They're working on being activists at the state level. The Pew Trust is. Aspen Institute has now got into the space. So I think that we're moving in that direction.

Actually, Tuesday morning, you can look in the local newspaper, *Globe and Mail*, the report on business, the opinion piece. Ed Waitzer and I have got a piece in there as to why the ORPP can be a catalyst in Canada and eventually beyond Canada to move into this direction. What we argue in our piece is that we see the commercial financial services industry as sitting back on their haunches too much. That they need to become much more proactive in thinking through what plan members really need, and to deliver something which meets real need, and do it in a cost-effective fashion. They've got the bits and pieces to be able to do it, but they haven't had, this far, the inclination or the motivation to do it.

If you look at Australia, Australia's halfway there. They already had the DC part figured out, and they're now doing the back ends, bolting on the income for life back ends. Some of the Northern European countries are effectively there already. If you look at Pillar 2 plans, I had a group of Icelanders over just a couple of weeks ago with one of the Icelandic plans. It looks very much like the two-instrument plan that we were talking about here today. So it already exists in many places.

But I recognize there are significant impediments to actually getting to where you want to go. I mean, obviously, the whole sort of state, public sector pension system in the US is stuck, to a large degree. And I'm hoping that they'll move to this kind of a system without crisis. But it remains to be seen whether that will happen.

JT Grier, CFA: So I got a number of questions about negative interest rates and the low expected return in the equity markets, and how those affect the funded status. And whether or not that's really going to reflect the feasibility of the Pillar 2–type plans. Can you maybe just spend a little bit of time talking about the changed environment that we're in? And as I think we were talking earlier at lunch, is I got out and I listen to what asset managers are proposing as solutions there.

Keith P. Ambachtsheer: So the importance of the question is, do a simple example in the book. Assume a situation where a worker makes $60,000 a year. They need $40,000 in retirement. $20,000 of that's going to come from Pillar 1. And the other $20,000 for life is going to have to come from a Pillar 2 or some kind of an arrangement. And then if you do the math on that, say, well, assume that they live 20 years. That's life expectancy post-work, 20 years. If the return is zero, they'll need to contribute 17% of pay and die on time to be able to generate that $20,000 a year for 20 years.

If they can earn 4% on the accumulating and de-accumulating assets, the contribution rate goes down to 7% of pay from 17% of pay. So it shows you the importance of compounding.

And so, yes. If we live, and I think we will live in a lower return world than we have in that 30-year period, which is really — one of the chapters in the book is on the relevance of Piketty and his book, *Capital in the Twenty-First Century*, to pensions challenges. And he argues — and I agree with him — is that post-war period was an extremely unusual period. And I think McKinsey's just written a piece on the same thing.

That in the broad scheme of things, you know, this was a period of time that was preceded by a lot of capital destruction, and then a lot of capital rebuilding. The demographics were extraordinary in terms of birth rates. And also, prices were quite depressed in terms of national market prices post-Second World War.

Go back to CREF, starting CREF 1972 with the opportunity to buy a cash flow, 7% yield, plus growth over time, plus a recapitalization of the cash flow. I mean, that's what we've been through. We're not going through that again. And that has to be part of our ongoing reality.

One of the things that I'm sympathetic to, and I actually use the concept of the Heisenberg principle in the book, which is the notion that if you sort of interfere with something, it actually becomes something different. Which is the tremendous importance of using retirement savings to build value and future wealth. And because it's only by going down and creating new wealth, inventing new things, that we're going to be generating enough wealth to be able to do the kind of things we've been able to do in the past with the contribution rates that we've done in the past.

So I see, again, an interaction between potentially the pension sector and future economic growth that's quite symbiotic, if you like. I think one can lead to the other. But again, that requires a proactive, forward-looking mindset, and not one of — you know, I was at an event the other day about de-risking. And this whole notion of if we all de-risk, where's the growth? Where's the innovation? Where's the process that turns retirement savings into future wealth?

So these are the kind of things that I look at. But if we're going to give retirement savings the opportunity to do that, we need to create arrangements where they don't have to de-risk at the wrong time. Which, for example, is now a huge issue in the Netherlands. And that's why, again, it's an integrative challenge between the design, the governance, and the investing to think about how to create forward-looking solutions that fit current realities, which includes lower returns.

JT Grier, CFA: So just a quick follow-on question to that. What percentage of the pension funds do you think have switched to the Pillar 3 due to the decline in interest rates and the financing problems? And is Pillar 2 really something that's sustainable, given that a lot of governments have strained finances?

Keith P. Ambachtsheer: Well, the concept of the fact that we should be using part of society's savings and turning it into wealth-producing capital is sort of a universal concept. I mean, that should always be there. What I think the questioner is referring to is that we've made some arrangements, and especially the US is the worst offender of this, of creating a series of arrangements which required making promises which were difficult to keep at the best of times with great returns.

And it gets back to a fundamental problem with traditional DB plans, which is this notion that the argument goes that you can average through ups and downs through history because you can smooth out the ups and downs. Well, again, I should have John Nash on this list as another Nobel Prize laureate. Because Nash would say, well, from a game theory point of view, that's not going to work. Because what happens is when you get these surpluses after the '80s and the '90s, and you had the surpluses in the DB plans, the theory said, well, you're going to put that — those are rainy day funds. You're going to put those away and use them in 2000, 2010.

Did we do that? No, we did not do that. We said, ah, we live in a whole new world. Returns will be high forever. Growth will be high forever. Dot-com will save us all. And therefore, we can spend the surpluses. We can reduce contribution rates. We can increase benefits. And we did.

So again, you have to design systems that are sustainable. And the flip side, again, you look at the Northern Europeans. They've had regulatory processes that have been very well thought out in the context of not allowing pension organizations to make promises they can't keep.

So again, once you let a system go down a certain path for a certain period of time, as has now happened, especially public sector pensions in the US, there are going to be consequences. And because you don't have a regulator in the US to pull the system back on side, it's going to be done in a macro sense, in a not particularly coherent fashion. Very sadly, but that's what it looks like to me.

JT Grier, CFA: So since you mentioned smoothing in there, somebody asked the question about, what are your thoughts on market to market accounting on the pension liabilities?

Keith P. Ambachtsheer: I think that the fundamental concept is that promises made should be promises kept. And again, if you look at the Tinbergen model, the way that it deals with that is that it does have an instrument where promises made are promises kept. That balance sheet has to be market to market. And it's only if it's market to market that you can assess whether the assets and the liabilities continue to match over time. If it's a matched book, if the discount rate changes, assets and liabilities change by the same amount. I mean, nothing happens to the mismatch, right?

So that's that world. But what I'm also saying is that you can't have that money being managed. The growth money, the compounding money cannot be managed in a way that you have to market to market every month. The capitalization rate of those cash flows is going to be different over time. But that doesn't matter, because it's about the sustainability of the cash flows. And it isn't until you pull those two elements apart that it starts to finally make sense.

JT Grier, CFA: So let's transition a little bit, and maybe talk about, how do we shift the thinking of the stakeholders in the process here? And certainly, one of the things that is, I think, about even try to make small changes, it's very difficult to get boards that are reported by a legislature to change. I have some points that are made here where in some countries, it's clearly defined who has to serve on those boards. What's the catalyst to actually get change to happen?

Keith P. Ambachtsheer: Well, it depends on the topic, on the design side. There's some principles that I'm suggesting that you have to pay attention to create sustainability. And you can point to the Northern Europeans who have actually figured this out. So it can be done in practice.

But what I have learned that is very difficult is the concept of path dependency, which is that once something goes down a certain path long enough, and you find out you don't want to be here, you can't just turn a switch and say, we don't want to be here anymore. We want to be somewhere else. You have to deal with the reality that you are now out there. And that's what makes it very difficult.

Just on the governance side, which is a different question, which is, how do you get functional boards? It really is a matter of, what does logic tells you ought to happen? Well, logic tells you that you want boards that both have a sense of public duty and authenticity, if you like. And they need to be able to ask the tough questions about the strategic plan of the organization. I mean, saying it, it's obvious that you want that.

And further, in those cases where organizations have actually been able to do that — and it isn't just Ontario Teachers'. It's run through a lot of the Canadian pension organizations. If you look, for example, at the big ATP fund in Denmark, it follows exactly the same principles as Ontario Teachers'.

So it can be done. And then again, you get to the question of, if it can be done, if it logically makes sense and it can be demonstrated that it is done in certain places, then the question remains well, why can't it be done in other places? And the answer generally is, because people like where they are, for whatever reason.

And it raises a whole other question we could have another discussion around, which is the meaning of fiduciary duty. And I use this. Somebody here, Ed Waitzer, who is one of the world's experts in the evolution of the meaning of fiduciary duty. And Ed would argue that we can now, if it was a court of law, that if you had a board that, on a demonstrated basis, was not doing things which were demonstrated to be in the best interest of the stakeholders in whose interest they're acting, they're liable.

And so maybe we do need some court cases here around bringing fiduciary duty into the 21st century, and what that really means today if you're a member of a pension organization board. I'd be willing to be an expert witness in such a case.

[LAUGHTER]

JT Grier, CFA: I've got a couple questions about social security. And I don't remember reading much in your book about it, so you may not have too many insights there. But do you have any thoughts or comments on whether or not it's going to be a solvent system in the future? And what would a good governance structure look like for something like the social security system?

Keith P. Ambachtsheer: Pillar 1 systems are interesting, because, by definition, they're political creations, right? And what I've learned is looking at these political creations in different countries, in different time periods, is you can only understand them in the context of their history. And so I'm not an expert on social security going back to the mid-1930s. But you have to understand the evolution of the system to understand where it is today.

And then you have the question of, is it a sustainable system, is one question. And you know, I would say, as the friend north of the border here, well, it can be a sustainable system in the sense, there's enough wealth in the US. You know, what we did in Canada with the CPP investment board is we had the same kind of problem of ever-increasing contribution rates given the demographics, and given that we started off the system with people getting much more out of it than they put into it.

So if you take those realities, and if you want to stabilize the system, what we did in the 1990s is we basically doubled the contribution rate, the CPP, from effectively 5% of pay to 10% of pay in a relatively short period of time. Which, we went from being cash flow negative to cash flow positive, which is now — CPP investment board is managing $300 billion. And under reasonable assumptions, that's a big enough fund, and is still going to be cash flow positive for another 10 years to be able to sustain a level of contribution rate here going forward.

So again, here was a miraculous process where you got enough people in the political space agreeing that this should be done, that it was done. Now I'll let the Americans here tell a similar story with respect to how you stabilize Social Security in the US. But it does require a political process that is functional. And that at certain points in time, while it can be adversarial in many other ways, you pull together and you say, we've got to fix this thing and stabilize it.

The other observation I would make about the social security, it's become hugely complex. I mean, I read a dozen pages, and I'm only, like, 1/10 of the way through. And I get confused as to exactly what happens. Because there's all kinds of wealth transfers that happen within it. It's got far too complex for me to understand.

[LAUGHTER]

JT Grier, CFA: So you talked about the pension funds and pension solutions in a lot of different countries. And again, I don't recall anything about the Singapore fund being mentioned your book. But the question here is asking, would a model similar to what's used in Singapore where they consider all the real-life financial services savings demands that are needed by people be a better solution, where they take into consideration education, housing medical and various other aspects?

Keith P. Ambachtsheer: It's a remarkable system. And again, you stand back from it and you have to say, how did that happen? And again, I don't know all the details. But again, there's a 30-year story in Singapore of a series of events that led to this remarkable outcome.

I mean, the other thing is that I've met some of the people at GIC, the Government Investment Corporation. And there's very high quality people. So they've managed to create a system that seems to work in a very integrative way, not just with respect to retirement income, but also with respect to medical and education, and has some interesting elements in it that are very collective. But there are also elements in it that required fiscal stability and fiscal accountability. So I just take my hat off.

The other thing I would say is — what's the population of Singapore? Five million? And what you find — and this is a factor. The Northern European countries are the same. Finland, 5 million people. Norway, 5 million people. Sweden, 10 million people. Denmark. So I think there is a size factor as well in how much cohesion you can create within a group of people that come to certain kinds of decisions. And the US, China at the other end of that scale. The size, I think, is a significant constraint to doing anything collective on a massive scale.

JT Grier, CFA: So I've got a couple strategy questions for you. So what are your thoughts on the large Canadian pension funds plans by payout annuities to hedge longevity risk? And do you have any thoughts on the target return fund, such as risk parity?

Keith P. Ambachtsheer: So you've got to slow — that sounded like more than one question.

JT Grier, CFA: Yes. Two different questions. So one of them is — the first one is, do you have an opinion on the large Canadian pension funds buying payout annuities to hedge longevity risk?

Keith P. Ambachtsheer: Well, I'm not sure I understand. What is happening is that Canadian corporations like those in the US and the UK are getting out of their traditional DB liabilities by basically de-risking and writing checks to insurance companies. So in that sense, what's happening with Canadian corporations is no different than what's happening with other corporations.

What's interesting about this is that the corporate sector is exercising its option not to provide this kind of arrangement in the future. And I understand why that's a rational decision for them to make.

The flip side is that, who then instead is going to provide lifetime income security for private sector workers? And so what the UK has done is to say, well, we're going to create a default fund that provides that. But private sector, you can also participate if you want to offer a comparable plan. I'm hoping that will also happen in Canada, so that what happens, instead of all these new plans being pure DC plans, they are, in fact, target benefit plans with back ends.

And again, I believe that can be done in a cost-effective way. We just need sort of the creative capacity and innovation capacity of the insurance industry, for example, in North America, to wrap their heads around how to do this.

JT Grier, CFA: So the other question was, do you have an opinion on strategies such as risk parity?

Keith P. Ambachtsheer: Oh my gosh. Risk parity.

[SIGH]

I tried to do the math on that. And then when I compare that again to this simple notion of an investment program having these two elements, one being focused on wealth creation in the long term and the other one on providing payment safety, and they're operating side by side, I do believe that that is the ultimate destination. And that's what we need in order to provide retirees, workers what they want. So then the context is, where does a strategy like risk parity fit into that? It's not clear to me.

And let me go one step further. There's this whole big thing now. Risk parity, I would say, is one element of this new thing now where we not only have smart betas, but we've got scientific betas. And gosh know what other kind of betas, and various kinds of alphas, and whatever. And to me, again, how does that relate to investing? And again, it's not clear to me how it relates to taking savings and transforming it into productive wealth creation. Like, who's doing that?

And so to me, a lot of these scientific but basically statistical-type methods are attempts to get something for nothing. To basically ride historical trends where it's worked in the past. And a lot of these things, I believe they will continue to work until they stop working.

And that takes you back again to the fundamental question of, should we not be turning retirement savings into wealth-producing capital? And should we not be thinking how best to do that, how to intermediate that process? So that's what I come back to.

JT Grier, CFA: OK. So the last question. Do you have any challenges maybe to make for the asset managers out here in the audience, or any takeaways that they should think about as they go and talk to clients about how to help them better?

Keith P. Ambachtsheer: Well, I think the really tough thing is a lot of clients I think want the wrong thing. They're still looking for beauty contest investors that can win rather than lose. And you know, the dilemma is that if you're faced with clients who tell you — they wouldn't use those words. But if you interpret what they're saying, that's what they're looking for. What do you do if you're presenting to a group like that? Do you say, "Well, I'm sorry. We just don't do that kind of thing"?

I mean, you take the classic example being of Al Gore and David Blood, where they started Generation Investment Management in 2004, and they basically said, here's our offering. This is how we're going to run this investment program. It's going to be long horizon-based. We're going to buy cash flows. They're going to make sense. And 10 years later, they've actually generated Generation Capital Management index plus 5% per year. So it's a tough thing to be in a space where you're dealing with a lot of clients who haven't figured out what they should want. Sorry.

JT Grier, CFA: Very good. Thank you, Keith.

Keith P. Ambachtsheer: OK. Thanks for your time.