How Should Pension Funds Pay Their Own People?

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Much attention in compensation strategy is focused on the corporate sector, and on how pension funds should exercise their say on pay responsibilities as investors in that sector. In contrast, little is been written on how pension funds should pay their own people. This article draws a number of parallels between the corporate say on pay debate and the internal compensation question for pension funds. However, there are differences too. The most difficult part is the design of an effective pay-for-performance scheme in the investment function. This article describes how the Canada Pension Plan Investment Board has tackled this challenge, and comments on a number of issues requiring further study and resolution.

Keywords: Canada Pension Plan Investment Board (CPPIB), Pay-for-Performance, Pension Fund, Say on Pay

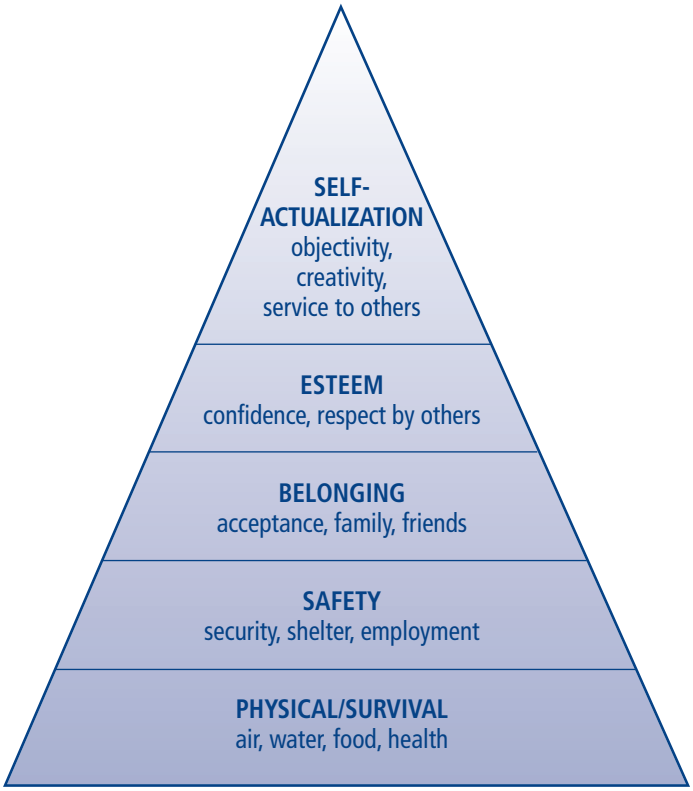
Human Needs and Compensation

Let's start by asking a very basic question: What do people really need? What is it that motivates human behavior? Even today, it is difficult to better Abraham Maslow's answer (Maslow, 1943) as captured in Figure 1.

He suggested humans have five levels of needs, starting with survival (e.g., food), then moving up to safety (e.g., employment, shelter), followed by belonging (e.g., family, friends), esteem (e.g., confidence, respect by others), and finally, self-actualization (e.g., objectivity, creativity, service to others). Where does compensation fit in this needs hierarchy?

> ***"Cheapest, say the prudent, is the dearest labor."***
>
> Ralph Waldo Emerson, 1841

Figure 1: Maslow's Hierarchy of Needs



Source: Maslow (1943)

Arguably, compensation plays important roles right up the human needs chain, providing the means to acquire not only tangibles such as food and shelter, but intangibles such as self-esteem and respect by and service to others as well. Indeed, as compensation rises well above levels required to meet tangible needs, meeting intangible needs become increasingly important (e.g., "I provide just as much value to my organization as Bob does to his. Why is he paid twice as much as I am? It's not fair and I am very unhappy about it").

Using compensation to meet intangible needs of this kind raises important questions. Where do Boards of pension funds draw the line on pay? When does inadequate become adequate? When does adequate become generous? When does generous become excessive? How much should compensation weigh in overall job satisfaction? Is it really the prime motivator for doing the best job possible?

Peter Drucker is regarded by many as the father of modern management theory and business ethics. He had strong views on these questions. His simple yardstick was that a Chief Executive Officer's pay should be capped at 20x average compensation in the organization. When that ratio rocketed through 100x in the American corporate sector in the 1980s, Drucker said, "This is morally and socially unacceptable…we will pay a heavy price for it." Then he shifted his focus almost entirely to working with not-for-profit organizations (Krames, 2008).

The Performance Conundrum

The modern compensation mantra is *pay-for-performance*. This is hard to argue with…until the time comes to actually define performance. There are two schools of thought on this definition question. In the public corporations arena, Roger Martin, Dean of the Rotman School of Management, (2011a) has characterized the distinction as a choice between measuring *real market* results derived directly from the organization's purpose, and the attainment of *progress markers* towards achieving that purpose, and measuring *expectations market* results derived from stock price performance. Martin (2011b) argues performance compensation in the corporate sector should be based on real market results. In contrast, Kay and Bout (2011) argue that stock-based compensation can play a useful incentive role, as long as it is carefully designed.

In my view, a similar performance definition distinction is relevant in the pension fund arena. The tasks of the pension fund organization are to invest productively, administer efficiently, and advise wisely. To do these things well requires aligned interests with stakeholders, good governance, sensible investment beliefs, effective use of scale, and competitive compensation. A series of progress markers could be set reflecting these tasks and what the organization must do to successfully achieve them. This approach is the analogue to Martin's real markets path (2011a, 2011b). Performance is measured against achievement (or non-achievement) of the progress markers. The expectations markets path would be to simply say that all that matters is properly-benchmarked investment performance. Out-performance leads to more pay; under-performance leads to less. We look at both these paths in greater detail next.

The Real Markets Path

The mindset here is forward-looking. What needs to be done now to achieve the goals of the organization tomorrow? The Board rewards management for adopting this mindset and for assembling and executing the organization's strategic plan around it. Here are six key questions around which a pay-for-performance program could be built when the real markets path is chosen:

1. ***What does it mean to invest productively?*** What are the investment beliefs that guide the organization's investment policies and programs? Can we demonstrate they reflect current realities better than the alternatives? Is there clear alignment between investment beliefs and investment decisions? Whose risk tolerances do our investment policies reflect and how do we acknowledge our accountability to these people? How cost-effective is our investment function?
2. ***What does it mean to administrate effectively?*** How close are we to our principal stakeholders (e.g., plan beneficiaries and their representatives)? Do they think we are doing a good job? Are we doing a good job? How do we know? Is there a continuous improvement program in place? How cost-effective is our pension administration function?
3. ***What does it mean to advise wisely?*** Are the pension arrangements we invest for and administer sustainable? Could they be redesigned to work better? Are we proactively communicating our views on these matters to the right people?
4. ***How well does our governance process work?*** Do we have a Board selection process that places the right people on our Board? Does the Board provide the right kind of moral compass and oversight? Is it effective at evaluating management's performance? Does it evaluate its own performance? Does it have a clear view of the pay-for-performance question? What other factors (e.g., stakeholder perceptions) may impact the pay policy question?
5. ***Are we using our scale to maximum advantage?*** How do we know?
6. ***Are we attracting and retaining the right people?*** What kind of people do we need to be successful in the pension investment, administration, and advice businesses? Do we recognize that executive innovation, collaboration, and creativity are critical drivers of organizational excellence?

> Can we attract and retain people with these qualities? If not, why not? If we have a problem, how do we fix it? Is it that we do not pay competitively…or are other motivational factors more important?

Any pension institution that systematically addresses these key questions and is passionate about getting the answers right will become a high-performance organization.

The Expectations Markets Path

A good starting point from which to develop an expectations markets perspective is to note that the value of an investment at any point in time is based on expectations about the future. These expectations can be about future interest payments, dividend payments, free cash-flow, growth, capital repayments, etc. In a risk-averse world, the perceived likelihood that the expectations about these future events will in fact come to pass also plays an important valuation role.

Investment values based on these expectations and risk perceptions can be established through public or private markets. In public markets, millions of buyers and sellers set market values every day for thousands of investments through a public auction process. In private markets, hypothetical calculations are made to establish what price an investment might fetch at a particular point in time if a public market for it existed.

Seen through this expectations markets lens, performance is the measured return on an investment relative to a specified benchmark over a specified period of time. Two fundamental features are embedded in the expectation markets path to performance measurement. First, the approach has a backward-looking dimension in the sense that it is based on the value of investments today relative to their historical cost, or some previously recorded value. Second, the forward-looking expectations supporting today's values may not be realized – indeed, they may not even be reasonable. Over the course of the last hundred years, investors became progressively too optimistic or too pessimistic about the future return prospects of stocks in 10 to 20 year timeframes (Ambachtsheer, 2010). In short, investor expectations are not only often wrong, they are sometimes predictably wrong.

In addition to these two fundamental features of the expectations markets' approach to measuring performance, the actual calculations raise challenging technical questions that must also be addressed. For example:

- ***What is the relevant benchmark?*** Is it some absolute target rate of return or hurdle rate? If so, where does that return target come from? Alternatively, is the benchmark the return on an investment (or portfolio) that represents a reasonable alternative to the investment(s) actually made? If so, what is a good reasonableness test?
- ***How to convert gross returns to net returns?*** The cost of investing can make or break any investment program. Thus understanding and measuring these costs is critical. They can range anywhere from a few basis points on a large, liquid, passively-managed securities portfolio to very high but hard to measure costs on outsourced hedge fund and private equity management mandates.
- ***How to adjust net returns for risk?*** The search for the right prospective price of risk has been as elusive as the search for the Holy Grail. For example, the realized price of risk (as measured by the realized equity risk premium) has swung between +12% and -6% per annum for holding periods spanning 10-20 years (Ambachtsheer, 2010). Some years ago, we floated the idea of using the cost of a put option that would eliminate the risk of a negative realized risk premium as a proxy for the price of risk; there were no takers for this idea (Ambachtsheer, 2007).
- ***How to pay for skill, rather than noise, and recognize and control the open-ended nature of option-like payoffs?*** Even well-intended compensation schemes can have unintended consequences. For example, the measured out-performance of a portfolio relative to a benchmark may be due to random (and hence reversible) events or measurement error rather than investment skill. As another example, asymmetrical performance-based compensation schemes with a downside floor and unlimited participation in upside participation induces excessive risk-taking and are inherently adversarial and unfair (Molenkamp, 2010).

In short, while the expectations markets path may seem to lead directly and easily to the pay-for-performance destination for the investment function, it is in fact a difficult, treacherous road to navigate.

The Case of the Canada Pension Plan Investment Board

So what conclusions can we draw from all this? It seems to me that the *how to pay* question for pension funds has both obvious and less obvious answers. The obvious answer is that pension funds wanting to excel must set goals in line with their mission and design performance-based compensation schemes that attract and retain the requisite human resources to achieve those goals. The more subtle answer is that there are two quite distinct paths to pay-for-performance design. Using Roger Martin's terminology (2011a, 2011b), there is the real markets approach, and there is the expectations markets approach.

Of course, the two paths are not mutually exclusive. Both approaches can play constructive roles in a pension fund's compensation policy. However, pension fund Boards and senior management must think carefully about where the

best balance between the two approaches lie. My sense is that funds may be placing too much emphasis on the approach fraught with the greatest behavioral and technical difficulties: the expectations markets path…and too little on the more direct, less-complicated real markets path.

An actual case study can throw considerably greater light on these questions. The 2010 Annual Report of the Canada Pension Plan Investment Board (CPPIB) provides an opportunity to do so, as it discusses the organization's compensation philosophy and its implementation in considerable detail.

This is how Board Chair, Robert Astley, introduces the topic (CPPIB, 2010):

> *"We give due and careful consideration to management compensation. The CPPIB has developed a compensation framework that meets, and in many ways exceeds the best-practice principles set out by the G20 nations. This includes a pay-for-performance formula, within a risk framework approved by the board of directors."*

Measuring CPPIB's Real Markets Performance

The 2010 Annual Report identifies a series of specific CPPIB performance markers in four real markets areas. Below, I organize the performance markers into these four areas and use the term organizational performance to capture the overall real markets results:

1. ***Strategic Planning and Organization Design:***
   - Built-in convictions, expertise, and financial strength permitted the acquisition of large-scale quality assets at distressed prices.
   - Continued to build internal capacity to strengthen CPPIBs comparative advantages.
   - Realigned senior management structure to strengthen collaboration across investment departments.
   - Launched new in-house portfolio record-keeping, accounting, and performance measurement system.
   - Continued to institutionalize organization capabilities to ensure future sustainability and scalability.
   - Achieved measurable cost savings through expanding internal capabilities.
   - Updated corporate strategic plan for 2011 and beyond.
2. ***Branding and Stakeholder Relations:***
   - Board Chair and Chief Executive Officer held nine public meetings across Canada to take questions and comments from CPP stakeholders.
   - Received highest-possible rating in the required Special Examinations Report based on an eight-month study by the external auditor.
   - Successfully completed evaluation of financial reporting and disclosure controls using the Committee of Sponsoring Organizations of Treadway Commission Standards.
   - Developed International Financial Reporting Standards conversion plan.
   - Created position of an external Ethical Conduct Advisor.
   - Website expanded to over 1,200 pages, including listing of all investment holdings and investment partners.
3. ***Research and Innovation:***
   - Achieved three geographical and structural investment *firsts* in the process of broadening fund diversification.
   - Continued development work on the structure of the Canada Pension Plan (CPP) Reference Portfolio as a transparent, low-cost strategy to achieve the CPP's long term target net real return of 4.2%.
   - Continued development work on CPPIB's Risk/Return Accountability Framework, its accompanying Active Risk Limit, its multiple risk components, their translation into economic exposures, and its tie-in to CPPIB's compensation system.
   - Developed a comprehensive Enterprise Risk Management system to integrate the investment risk framework with the identification and management of other types of corporate risk exposures.
4. ***Attracting and Retaining the Right People:***
   - Increased employee base by 16% in FY 2009/10 (76 new people), with half coming through networking or referral from CPPIB employees.
   - Organization well-positioned to retain talent and attract further-needed talent, with retention and hiring focus on competence, integrity, compatibility, and passion for achieving the CPPIB mission.

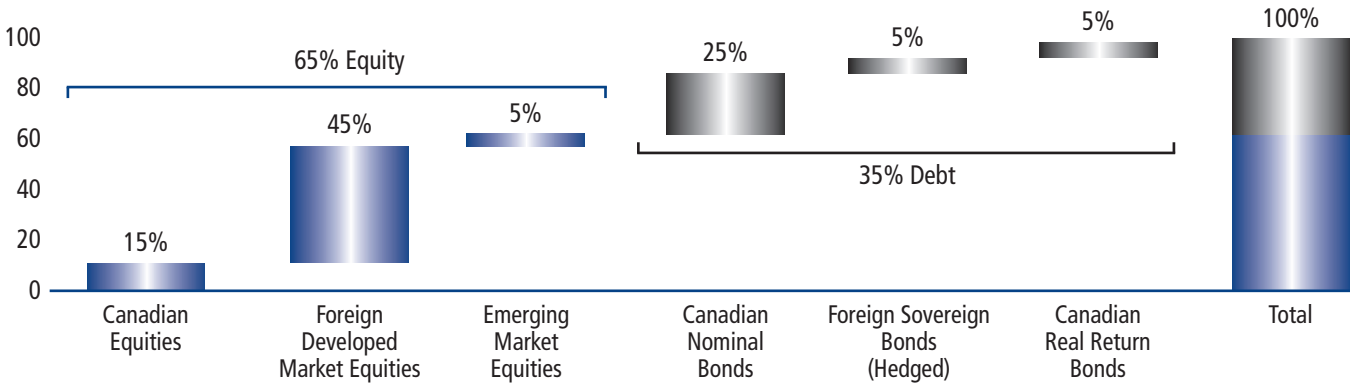
The Report also provides detailed information on the measurement of CPPIB's expectations markets (i.e., investment) performance.

Measuring CPPIB's Expectations Markets Performance

Following convention, I use the term investment performance rather than expectations markets performance below. CPPIB's investment performance benchmark is called the CPP Reference Portfolio, which is constructed from three ingredients:

1. The long-term target net real return of 4.2% projected by the CPP's Chief Actuary.
2. CPPIB's interpretation that the stricture to invest without undue risk of loss means that the investment risk embodied in a typical pension fund 65-35 equity-debt asset mix is not an undue amount.
3. A belief that the benchmark portfolio can, to some degree, be structured to hedge against such socio-economic factors as inflation, wage growth, and demographics.

Figure 2: CPP Reference Portfolio (March 31, 2010)

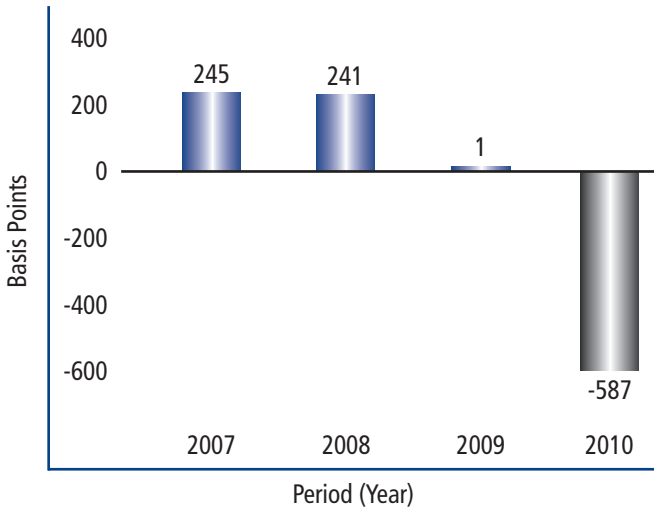


Source: CPPIB 2010 Annual Report

Figure 2 sets out the resulting asset mix of the CPP Reference Portfolio. Its annualized return over the four-year period ending March 2010 was 1.4% versus 1.3% for the CPP Fund. To achieve the target actuarial return, the Fund would have had to earn 6.1% over the four-year period.

Figure 3 sets out the four value-added returns (i.e. the net return on the actual CPP Fund minus the return on the reference portfolio) for the last four fiscal years. The cumulative four-year underperformance was 34 basis points. In commenting on the disappointing result for FY 2009/10, the Annual Report notes that the returns on CPPIB's private markets assets lagged well behind their public markets counterparts, which rebounded strongly in 2009. The Report expresses confidence that these valuation differentials between similar assets in private and public markets will resolve themselves over the course of the next few years.

Figure 3: CPPIB Annual Net Value-Added Returns (for years ending March 31, in basis points)



Report of CPPIB's Board Human Resources and Compensation Committee

In commenting on these results and on CPPIB's compensation philosophy and its application in the 2010 Annual Report, the Human Resources and Compensation Committee (HRCC) noted:

- CPPIB does not need to be positioned as the maximum compensation opportunity for the people it wants to attract and retain. The organization has other important attributes which make it an attractive place to work.
- The management of organizational growth is a current key organizational objective.
- In assessing performance, how work gets done is as important as what gets done.
- An evaluation using the G20 Principles on Compensation in Financial Services led to the conclusion that CPPIB's compensation principles and practices meet, and in many cases exceed, the G20 standards.

Overall, the Committee concluded that CPPIB's compensation framework continues to be appropriate, and that the investment performance results for FY 2010 are consistent with the design and intent of the system.

CPPIB's Compensation Framework

The 2010 Report sets out the following key principles of the Management Compensation Framework:

1. It should enable CPPIB to attract experienced investment and management expertise.
2. It should embody a pay-for-performance approach.
3. It should measure performance against objective benchmarks where possible and over longer periods of time.

A more detailed summary of how the Framework rewards success in generating value-added investment performance follows:

1. Value-added performance is averaged over rolling four-year periods to determine incentive compensation payments.
2. Investment returns are compared against external benchmarks that are considered most relevant to each investment program in order to determine value-added performance.
3. The long-term component of incentive compensation is modified by the CPP Fund's cumulative four-year return to insure that incentive compensation is also aligned with the absolute return performance requirement of the CPP Fund.
4. Investment returns take into account all operating costs and external manager fees.
5. Annual value-added performance calculations are subject to maximum positive and negative caps to ensure that no single-year result has undue impact and that maximum achievement levels are appropriate.
6. By design, the only element of compensation shorter than four-years is a discretionary component tied to the achievement of annual individual objectives.
7. The majority of compensation is incentive-based.

All this leads to three key distinct compensation elements.

Three Key Compensation Elements

In the total compensation package for CPPIB executives, three key components dominate:

1. ***Base Salary:*** reflects skill level, ability, experience, performance, and labor market conditions.
2. ***Short-Term Incentive Plan (STIP) Components:*** there are two parts: performance versus annual individual objectives; and, value-added investment performance over a four-year period. Target awards to both are set at a percentage of salary, to which a multiplier is applied. STIP payouts can be deferred up to two years at the option of the recipient, with deferred amounts increased or decreased by fund performance.
3. ***Long-Term Incentive Plan (LTIP):*** target awards set as a percentage of salary to which a multiplier is applied. Amounts vest and pay out four-years later. The award value is increased or decreased based on CPP Fund's compounded rate of return for the four-year period.

Figure 4 sets out the STIP and LTIP payout formulas. To understand how the formulas work, keep in mind:

- The four-year investment performance multiplier is the average of four one-year investment multipliers. These one-year multipliers are set at 1x when the annual CPP Fund return exceeds the CPP Reference Portfolio return by a net 40 basis points (bps) for those whose incentives are based on total CPP Fund performance.
- The one-year multipliers are subject to caps and floors, as is their four-year average (capped at 2x the four-year investment component target payout and assigned a minimum value of zero).

Next, we look at outcomes of this compensation structure in FY 2009/10.

Figure 4: The STIP and LTIP Payout Formulas

Short-Term Incentive Plan (STIP)

Annual Individual Objective Target ($)	x	Individual Performance Multiplier (0 to 2)	+	Four-Year Investment Component Target ($)	x	Four-Year Investment Performance Multiplier (0 to 2)	=	STIP Payout ($)

Long-Term Incentive Plan (LTIP)

Target LTIP Award ($)	x	Four-Year Investment Performance Multiplier (0 to 3)	+	CPP Fund Four-Year Compounded Rate of Return	=	LTIP Payout ($)

Source: CPPIB 2010 Annual Report

Outcomes for FY 2009/10

To illustrate the application of the CPPIB compensation structure, we focus below on the FY 2009/10 compensation calculation for the Chief Executive Officer. The calculation adding up to a total of slightly under $3M is set out in Table 1. The following explanatory notes illuminate the calculation:

- Salary and STIP (based on annual individual objectives) are determined by the Board of Directors, based on their assessment of Chief Executive Officer performance against objectives. Recall that the STIP component is subject to a 0-2x multiplier range.
- The investment component of STIP is based on the formula set out in Figure 4. The four-year investment performance multiplier plays an important role, and its calculation of 1.66x for FY 2009/10 is set out in Table 2. Again, the multiplier range here is 0-2x.
- LTIP is based on the formula set out in Figure 4. It reflects the amount vesting in FY2009/10. The multiplier range is 0-3x.

Note that while the framework is the same, the compensation calculations for other CPPIB executives will vary depending on their departments and responsibilities. Total compensation in 2009/10 for the Chief Financial Officer and the three most highly-compensated investment officers was $0.9M, $2.8M, $2.0M, and $1.7M respectively.

Table 1: CPPIB Chief Executive Officer Compensation for FY2009/10

Salary	$490,000
STIP (Individual Objectives)	$612,400
STIP (Investment Component)	$1,013,800
LTIP	$801,200
Pension and Other	$69,167
TOTAL	**$2,986,567**

Source: CPPIB 2010 Annual Report

Table 2: Calculation of the FY2010 Four-Year Investment Performance Multiplier

	Threshold [1] Value-Added	Target [2] Value-Added	Maximum [3] Value-Added	Actual Value-Added	One-Year [4] Multiplier
FY 2010	19.8 bps	40.0 bps	200.0 bps	-587.0 bps	-3.00
FY 2009	16.2 bps	40.0 bps	200.0 bps	1.0 bps	-0.38
FY 2008	13.7 bps	40.0 bps	200.0 bps	241.0 bps	5.00
FY 2007	n/a	35.0 bps	195.0 bps	245.0 bps	5.00
				Four-Year Investment Multiplier [5]	**1.66x**

[1] *The threshold represents CPPIB's actual operating expenses: this is the value-added return that the CPP Fund must generate above the CPP Reference Portfolio before a positive annual investment performance multiplier is assigned for incentive compensation purposes in respect of the CPP Fund performance. As fiscal 2007 was a transition year, there was no operating expense threshold.*

[2] *Represents the value-added return that the CPP Fund must generate above the threshold for a 1.0 annual investment performance multiplier to be assigned.*

[3] *Represents the value-added return that the CPP Fund must generate above the threshold for a 5.0 annual investment performance multiplier to be assigned.*

[4] *For a more detailed explanation of these multipliers, see the CPPIB 2010 Annual Report.*

[5] *Average of the four one-year multipliers.*

Source: CPPIB 2010 Annual Report

Two Observations

What are the take aways from this CPPIB case study? Two messages stand out for me. First, CPPIB is to be commended for its willingness to tackle the competitive compensation question so publicly, and in such detail. Their initiative could well be the catalyst for launching a much-needed global debate on pension fund compensation principles and practices. This is essential if we want to enhance and solidify pension fund legitimacy in the eyes of the general public and pension fund stakeholders. Establishing this legitimacy is also essential if pension funds are to play a leadership role in resolving the corporate say on pay debate.

Second, efforts to create an effective internal pay-for-performance structure comparable to that of CPPIB should always be seen as a work-in-progress. We can strive for perfection, but it is never fully achieved. This is not a criticism, but simply a statement of reality. In that light, it seems to us that at least four elements of the current CPPIB compensation framework should be subjected to further reflection.

Four Elements for Further Reflection

The first of these elements is a clearer distinction between CPPIB's investment and non-investment objectives. While the Annual Report does make the distinction, more could be made of it. For example, the term non-investment objectives could be replaced by the more affirmative organizational objectives to give them greater salience. Further, organizational objectives could be related to a number of major strategic areas. I used four above: strategic planning and organization design; branding and stakeholder relations; research and innovation; and, attracting and retaining the right people. Arguably, these are the key drivers of future investment performance and hence these are the areas where the organization must concentrate its current state of development.

A second element is the relative weighting of achieving organizational and investment objectives in setting incentive compensation. The CPPIB Chief Executive Officer compensation split in FY2009/10 was roughly 25% organizational and 75% investment. Arguably, the achievement of organizational objectives in a still-growing organization warrants a higher weighting than 25% in the current incentive compensation structure.

The third element is the investment composition of STIP and LTIP payout formulas. While they are sensible in many respects, the reality is that the STIP formula produced a four-year investment performance multiplier of 1.66 times target in a four-year period when the CPP Fund actually underperformed the CPP Reference Portfolio by a cumulative 34 bps. This outcome is clearly not an intended consequence of the formula.

Finally, if LTIP is to reflect the CPP Fund's absolute return achievement to some degree as a symbol of solidarity with CPP participants, how should that return achievement be linked to the LTIP payout calculation? As currently specified, the formula effectively sets the CPP Fund return trigger for a positive LTIP payout adjustment at a four-year return of 0%. Should the bar for a positive payout adjustment not be raised to at least achieving the four-year return on real return bonds? Or the target actuarial rate of return?

These difficult questions do not have easy answers. But they are the kind of questions all thought-leading pension funds must struggle with, and resolve the best they can. Their legitimacy depends on it.

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ISSN 1916-9841 (Online) – no charge