Knowledge & Insights

MORNEAU SHEPELL

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Accounting for employee benefits: Revisions to discount rate assumption

Accounting standards require that corporations report in their financial statements the cost and value of their employee benefit programs, including pension plans, based on discount rates that reflect current yields on high quality corporate bonds. But this presents a challenge in the Canadian market since there are very few long-term bonds in that category.

CIA approach (Fiera Capital)

In September 2011, the Canadian Institute of Actuaries ("CIA") published the Educational Note *Accounting Discount Rate Assumption for Pension and Post-employment Benefit Plans*, in which an approach was proposed by the Task Force on Pension and Post-retirement Benefit Accounting Discount Rates ("Task Force") to help plan sponsors select an appropriate discount rate to value their benefit plan liabilities in their financial statements. In addition, the CIA retained the services of Fiera Capital to produce the monthly discount rate curve. Due to the scarcity of high quality Canadian corporate bonds (rated AA) with maturities beyond 10 years, the approach used provincial bonds (adjusted for credit spread) to extrapolate the long end of the yield curve.

Since then, the number of high quality corporate bonds with maturities beyond 10 years has decreased to only two (mainly due to bond rating downgrades and no new issuance of long-term bonds), bringing the CIA approach into question. As a result, the members of the Task Force met again in early 2016 to explore ways to adapt the approach to the current bond market conditions. In October 2016, the Task Force presented its new proposed approach to the actuarial community. The following month, the Task Force confirmed the proposed approach would be in effect starting November 30, 2016.

The revised approach still uses provincial bonds to extrapolate the long end of the yield curve, but the credit spread adjustment is now based on the ratio of average yield spreads of corporate bonds (rated AA) and provincial bonds over the Canada bond yields. The discount rates resulting from the new yield curve are very similar to those of the previous approach.

Morneau Shepell's approach

Following the announcement of the revised approach by the CIA Task Force, Morneau Shepell updated its own discount rate methodology as well, in effect starting on December 31, 2016. The revised methodology uses provincial bonds as well as corporate bonds rated A to extrapolate the long end of the yield curve. As with the CIA revised approach, ratios of average spreads are used to determine the credit spread adjustments to provincial and corporate bonds.

As a result, the discount rates from the updated Morneau Shepell methodology have increased slightly (compared to the previous methodology), but are very close to those from the revised CIA approach.

The following table summarizes the differences between the approaches:

	CIA/Fiera Capital		Morneau Shepell	
	Before Nov. 30, 2016	From Nov. 30, 2016	Before Dec. 31, 2016	From Dec. 31, 2016
Bond credit rating	High quality by at least one rating agency	High quality by at least one rating agency	High quality by at least one rating agency	High quality by at least one rating agency
Spread adjustment methodology	One fixed spread	Ratios of average spreads over Canada bond yield curve	Smoothed spread yield curve	Ratios of average spreads over Canada bond yield curve
Final subset	AA corporates, Provincials	AA corporates, Provincials	AA corporates, Provincials	AA corporates, A corporates, Provincials

Conclusion

The revised approaches will be less dependent on the breadth of the Canadian high quality corporate bond market, even if the number of bond issues were to decrease even further. It is important to note that auditors generally consider such revisions as changes in accounting estimates (as opposed to changes in accounting policies), so there should be no need to restate prior financial statements to reflect the revised discount rate estimate.

Pharmacoeconomics: New ways to manage drug plan costs

The influx of new drugs entering the market year after year is clearly putting considerable upward pressure on health plan costs. A new approach can help manage those costs.

Pharmacoeconomics: What is it?

Pharmacoeconomics (PE) is a scientific discipline that evaluates the economic value of a drug therapy. The PE specialist's role is to compare the cost/effectiveness ratio of a new drug to existing treatments, as well as to evaluate the budgetary impact on health insurance plans based on anticipated use of the drug.

Let's look at the two examples below to better understand this specialist's role:

Example 1:

Current drug: $40/month –
drug must be taken three times per day

New drug: $100/month –
drug must be taken once per day

In this example, the PE specialist will examine not only the price, but also the impact and consequences of medication adherence. With the new drug to be taken only once a day, we can expect better adherence to treatment and thus better control of the patient's disease, effectively reducing the negative consequences of non-adherence: relapse, hospitalization, potential need for a more expensive drug, etc.

Depending on the analysis results, the PE specialist may recommend adding or not adding the new drug to the approved formulary, or limiting its use either to specific stages of the disease or after failure of a lower-cost alternative.

Example 2:

New unique cancer drug:

- Increases life expectancy by 3-5 months
- Treatment cost: $200,000

In this example, the PE specialist's analysis will factor in any budgetary impacts on the plan, and may include an additional component: value of life. While no one likes putting a dollar value on life, that's exactly what the specialist strives to do by using objective criteria and specific budget parameters. Once again, the recommendation could be to add or not add the drug to the formulary.

In short, the specialist creates a list of covered drugs (the formulary) by comparing the cost/effectiveness ratio to existing treatments, taking into account direct and indirect costs, the impact on quality of life, and the value of life itself.

Potential role of PE for group health plans

Pharmacoeconomics comes into play in health plans that limit coverage to a set list of eligible drugs (known as a formulary). The purpose of such a list is to manage the financial impact of new drugs coming to market.

While many plans cover all prescription medications, very few physicians are aware of the financial impacts when they prescribe a drug, and pharmacists typically cannot change what the doctor has prescribed. As a consequence, health plans face financial pressures when low value drugs with a high cost enter the market.

The role of the PE specialist is to create a formulary—or list of eligible drugs—for a health plan, by delisting drugs that fail to meet the economic value criteria or by limiting the use of certain drugs to specific stages of the disease or after failure of an alternative treatment.

Sponsors that opt for a formulary must inform insureds of their intention to make changes to their plan coverage. Among other things, they should consider the addition of a grandparenting clause to allow insureds to continue taking a drug no longer included on the list. Insureds should also be aware of drugs included on the formulary when consulting with their doctor so the latter knows which drugs are covered and, as such, can be prescribed.

Many health insurance carriers have created such formularies and can apply them to health plans. Sponsors that opt for the carrier's proposed drug list may obtain substantial savings. However, if the sponsor switches insurance carriers, the new carrier may not be able to administer the same formulary. Therefore, sponsors may want to consider contracting the services of a PE specialist to create their own formularies based on their unique objectives and budgetary constraints.

Conclusion

Plan sponsors should keep informed of new trends if they wish to avoid rapid cost increases. One option to limit and control rising costs is to implement a drug formulary. But such a list necessarily requires the expertise and know-how of a PE specialist. Interested sponsors simply need to seek out and make use of such invaluable services.

Manitoba: More solvency funding relief

On December 19, 2016, Manitoba amended its regulations to permit Manitoba-registered pension plans with a defined benefit (DB) component to extend the regular solvency amortization period from 5 to 10 years. The Manitoba Pension Commission has published *Update 16-01* to summarize the 2016 version of solvency funding relief.

The extension applies to the first valuation date between December 30, 2016 and January 2, 2019, and can be applied only if fewer than 1/3 of members not receiving a pension and fewer than 1/3 of retired members and beneficiaries object. Prescribed notices must be given to members, beneficiaries and bargaining agents prior to the election being filed.

In order to take advantage of temporary solvency funding relief, employer contributions cannot be in arrears. Furthermore, a letter of credit cannot be applied in respect of special payments where the amortization period has been extended. Existing solvency deficiencies can be consolidated with the new 10-year funding schedule, with the exception of solvency deficiencies amortized under previous versions of temporary solvency funding relief.

Any benefit improvements during the first five years must be fully funded, and employee contributions may not be reduced during that time frame.

Manitoba's Finance Minister has asked the Pension Commission to conduct a review of the *Pension Benefits Act*, as it is required to do every five years, and a report is expected to be completed sometime in mid-2017. This will include a review of solvency funding requirements in light of developments in other provinces such as Ontario and Quebec.

Alberta: Dental fee guide reintroduced

The Alberta government has completed a review of dental fees charged in the province and announced that it will create a dental fee guide. An analysis of the dental fees currently charged in each province for commonly used procedure codes found that in Alberta, a sample basket of procedures costs up to 25% more than in Ontario and 44% more than in British Columbia.

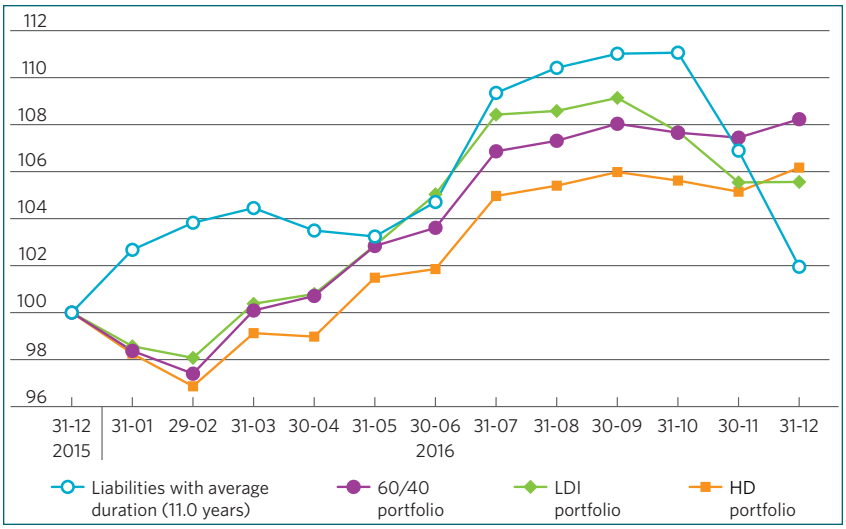
The Alberta Minister of Health announced that the government will partner with the Alberta Dental Association and College to publish a public fee guide as is the case in every other province in Canada. The Alberta Dental Association discontinued publishing a provincial dental fee guide in 1997. At the time, the fee guide was criticized as 'price fixing' and it was suggested that it limited competition amongst dental providers. Since then, insurers processing claims have created their own fee guides for Alberta to use as the basis for reimbursement. For example, Manulife's dental reimbursement values are based on its block of Alberta claims data and are designed so that approximately 70% of submitted claims are eligible for full reimbursement.

Though it would be expected that insurers would base reimbursements on the Alberta fee guide once it has been released, a specific date for completion of the fee guide is not known at this time. It also remains to be seen how the Alberta guide will compare to costs currently charged in the province and in other provinces.

Tracking the funded status of pension plans as at December 31, 2016

This graph shows the changes in the financial position of a typical defined benefit plan with an average duration since December 31, 2015. For this illustration, assets and liabilities of the plan were each arbitrarily set at $100 million as at December 31, 2015. The estimate of the solvency liabilities reflects the new CIA guidance published in November 2016 for valuations effective September 30, 2016 or later. The following graph shows the impact of three typical portfolios on plan assets and the effect of interest rate changes on solvency liabilities of medium duration.

The evolution of the financial situation of pension plans since December 31, 2015



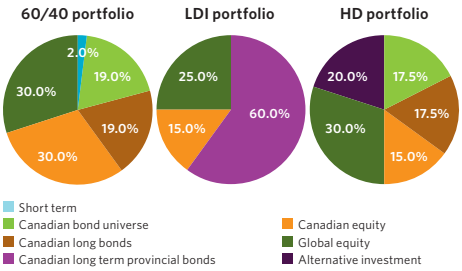
During the month of December, Canadian universe bonds, Canadian long term bonds and Canadian long-term provincial bonds obtained negative returns, while alternative investments, Canadian and global equity markets showed positive returns. With a return of 1.0%, the highly diversified portfolio (HD) outperformed the 60/40 portfolio (0.7%) and the low volatility portfolio (LDI[1]) (0.0%). The underperformance of the low volatility portfolio (LDI) is explained by higher allocation in Canadian bonds. The prescribed CIA rates used in the calculation of solvency liabilities increased during the month, decreasing the solvency liabilities by 4.6% for a medium duration plan. For this type of plan, an investment in either of the 60/40, the LDI or the HD portfolio resulted in a solvency ratio increase.

The table below shows the impact of past returns on plan assets and the effect of interest rate changes on solvency liabilities of a medium duration plan, based on the plan's initial solvency ratio as at December 31, 2015 as well as the asset allocation of the three typical portfolios.

Initial solvency ratio as at December 31, 2015	Evolution of the solvency ratio as at December 31, 2016 for three different portfolios		
	60/40 portfolio	Low volatility portfolio (LDI)	Highly diversified portfolio
100%	106.2%	103.5%	104.1%
90%	95.5%	93.2%	93.7%
80%	84.9%	82.8%	83.3%
70%	74.3%	72.5%	72.9%
60%	63.7%	62.1%	62.5%

Comments

1. No consideration has been made for contributions paid to the plan or for benefits paid out of the plan.
2. Solvency liabilities are projected using the rates prescribed by the Canadian Institute of Actuaries (CIA) for the purpose of determining pension commuted values.
3. The underlying typical defined benefit plan is a final average plan with no pension indexing, including active and inactive participants representing 60% and 40% of liabilities, respectively.
4. Assets are shown at full market value. Returns on assets are based on three typical benchmark portfolios.



Since the beginning of the year, driven by strong returns in the Canadian equity market, the 60/40 portfolio, the LDI portfolio and the HD portfolio returned 8.2%, 5.6% and 6.2% respectively. The solvency liabilities increased over that same period between 1.7% and 2.0% depending on the duration of the group of retirees. The variation in the plan's solvency ratio as at December 31, 2016 stands between 2.1% and 6.2%.

Please contact your Morneau Shepell consultant for a customized analysis of your pension plan.

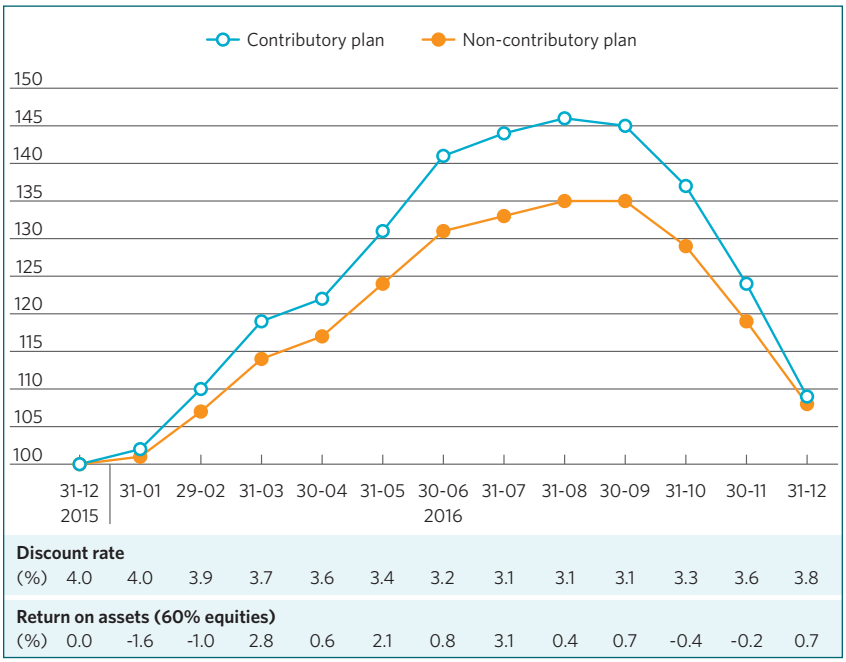
[1] Liability driven investment

Impact on pension expense under international accounting as at December 31, 2016

Every year, companies must establish an expense for their defined benefit pension plans.

The graph shows the expense impact for a typical pension plan that starts the year at an arbitrary value of 100 (expense index). The expense is influenced by changes in the discount rate based on high quality corporate and provincial (adjusted) bonds and the median return of pension fund assets.

Expense Index from December 31, 2015



The table below shows the discount rates for varying durations and the change since the beginning of the year. A plan's duration generally varies between 10 (mature plan) and 20 (young plan).

Discount rate

Duration	December 2015	December 2016[1]	Change in 2016[2]
11	3.71%	3.66%	-5 bps
14	3.91%	3.81%	-10 bps
17	4.04%	3.90%	-14 bps
20	4.12%	3.96%	-16 bps

[1] Based on the updated Morneau Shepell methodology.

[2] The change observed in 2016 under the Fiera Capital approach is -9 bps, -13 bps, -17 bps and -19 bps for the durations 11, 14, 17 and 20 respectively.

Since the beginning of the year, the pension expense has increased by 9% (for a contributory plan) due to the decrease in the discount rate. However, the pension expense has decreased since the last few months due to the increase in the discount rate.

Comments

1. The expense is established as at December 31, 2015, based on the average financial position of the pension plans used in our *2015 Survey of Economic Assumptions in Accounting for Pensions and Other Post-Retirement Benefits* report (i.e. a ratio of assets to obligation value of 91% as at December 31, 2014).
2. The return on assets corresponds to the return on the Morneau Shepell benchmark portfolio (60% equities and 40% fixed income).
3. The actuarial obligation is that of a final average earnings plan, without indexing (two scenarios: with and without employee contributions).

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