

February 14, 2012

PRIVILEGED & CONFIDENTIAL

Judicial Compensation and Benefits Commission

99 Metcalfe Street, Suite 812

Ottawa, Ontario

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Attn: Mrs. Suzanne Labbé, Executive Director

Dear Members of the Commission:

Re: Valuation of the Judicial Annuity

As requested, we have prepared this letter to provide an opinion on the methods and assumptions used by Mr. Harripaul Pannu in his December 13, 2011 report and by Mr. Brian FitzGerald in his January 27, 2012 letter on the valuation of the judicial annuity. In particular, the Commission wishes to review the economic assumptions underlying these valuations, considering the progression of interest rates since the first quadrennial commission, and the valuation of ancillary benefits including the disability and death benefits. Our observations and comments are as follows.

Methodology

Both Messrs Pannu and FitzGerald estimated the compensation value of the judicial annuity as a level percentage of pay over a judge's career in the judiciary. The compensation value is the employer paid portion of the judicial annuity. That is the total value of the annuity reduced by the value of the judges' own contributions. This actuarial method is appropriate for compensation benchmarking purposes and for purposes of comparing the value of different pension plans.

It should be noted, however, that the results of such an analysis are not comparable to the results prepared for funding or accounting purposes as a different actuarial method is generally used for these purposes. For funding or accounting purposes, the current service cost is determined as the value of the projected pension allocated to the one year period immediately following the valuation date. Technically with this method, the pension cost for one individual, expressed in dollars or as a percentage of salary, increases each year as the individual gets older. However, the average pension cost for a group of individuals will tend to remain stable over time to the extent that the average age of the group remains constant, as older participants retire and are replaced by younger ones.

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Valuation Results

The compensation value of the judicial annuity varies significantly with the age at appointment as illustrated in the graphic on page 4 of Mr. FitzGerald letter dated January 27, 2012. The compensation value, excluding any disability or pre-retirement death benefit, increases from approximately 15% of salary for judges appointed at the age of 40 to more than 55% of salary for judges appointed at the age of 65.

For a judge appointed at the age of 52 which is the average age at which judges were appointed in the period from January 1, 1997 to March 31, 2011, we have estimated the compensation value of the judicial annuity to be 23.5% of salary using the actuarial assumptions described in Mr. Pannu's report dated December 13, 2011.

Given the geometric progression of the compensation value by age at appointment, the average compensation value of the judicial annuity for the 745 judges appointed between January 1, 1997 and March 31, 2011 may be greater than the value calculated for a single judge appointed at the average age of 52 (23.5% of salary). In order to estimate the average value of the judicial annuity, Mr. Pannu grouped the 745 judges in seven age groups. The compensation value was then estimated for each age group. Finally, a weighted average compensation value was determined taking into account the weight of each age group determined on the basis of the number of judges in that group. Using the same methodology, we have estimated the weighted average compensation value to be 24.7% of salary determined as follows.

Age at Appointment	Distribution of Appointments	Value of the Judicial Annuity (Our Estimate)	Weighted Average Value
Under 44	5.2 %	16.2%	0.8%
44 - 47	20.7 %	18.7%	3.9%
48 - 51	24.0 %	22.0%	5.3%
52 - 55	25.0 %	25.0%	6.2%
56 - 59	16.9 %	29.3%	5.0%
60 - 63	6.7 %	40.5%	2.7%
64 and older	1.5 %	55.3%	.8%
	100%		24.7%

This estimated weighted average compensation value (24.7% of salary) compares to the 23.8% of salary calculated by Mr. FitzGerald and the 27.2% of salary calculated by Mr. Pannu.

The differences among these three results is greater than would normally be expected given that they were all produced using the same actuarial methods and assumptions, the same age groups and the same

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distribution of appointments. Part of the differences could be attributable to the approach used to estimate the value of the judicial annuity within each age group.

For instance, we understand that Mr. FitzGerald assumed that judicial appointments at any given age were made at the exact age whereas we assumed that the appointments at any given age were distributed uniformly over the year, thus increasing the average age at appointment by 0.5 year. Except for that difference, our results are fairly consistent with those of Mr. FitzGerald.

Disability Benefits

Mr. Pannu estimated the value of the disability benefit under the Pension Plan for the Federally Appointed Judges to be 9.7% of salary. No mention was made of an offsetting reduction in the value of the retirement benefits which looks like an omission.

On the other hand, Mr. FitzGerald estimated the value of the same benefits as 3% of salary partially offset by a reduction of 1.1% of salary in the value of the retirement benefit for a net increase of 1.9% of salary. His estimate was made using disability rates equal to 50% of the rates established by OSFI and used by Mr. Pannu on the basis of the better than expected experience of judges over the last several years. Further, Mr. FitzGerald argued that since the disability benefits can be provided either inside or outside of a pension plan possibly through insured arrangements, its valuation should be made as part of a broader benchmarking exercise including group insurance benefits.

Using the disability rates established by OSFI with no adjustment, we estimated the value of the disability benefits to be 7.5% of salary partially offset by a reduction of 4.9% of salary in the value of the retirement benefit for a net increase of 2.6 % of salary. Given the better than expected disability experience of judges some discount does seem appropriate. However, it is difficult to give full credibility to a few years of experience of the relatively small number of judges. Nevertheless, it is safe to conclude that the net additional value of the disability benefits is between 2.0% and 2.5% of salary.

Finally, we agree with the comment made by Mr. FitzGerald to the effect that the valuation of the disability benefits should be made as part of a broader benchmarking exercise including group insurance benefits.

From anecdotal evidence obtained through informal discussions, we understand that insured long term insurance benefits at several of the larger law firms are paid by the individual partners to ensure that the disability benefits are received on a tax free basis. If that is the case, the employer paid portion of these benefits and the resulting compensation value are nil.

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Pre and Post Retirement Death Benefits

For the sake of simplicity, Mr. Pannu assumed no mortality before retirement. Using the same assumptions as Mr. Pannu, Mr. FitzGerald also assumed no mortality before retirement. This is a common assumption made when the pre-retirement death benefit is the commuted value of the deceased member's pension.

However, the pre-retirement death benefits under the Pension Plan for the Federally Appointed Judges are more generous than that of a typical pension plan. An eligible surviving spouse is entitled to a survivor pension equal to one-third of the judge's annual salary plus a lump sum amount equal to one-sixth of the annual salary. In addition, eligible surviving children may also receive survivor pensions while they qualify.

On the other hand, Mr. Pannu assumed that 100% of judges will be married at retirement. Eligible surviving spouses are entitled to a survivor pension of one-half of the pensioner's annuity. However, if there is no eligible surviving spouse, the death benefits is a return of the judge's own contributions with interest in excess of the benefits paid.

Using a more realistic assumption that, say, 90% of judges will have an eligible surviving spouse, instead of 100%, would more than offset the value of the pre-retirement death benefits, thus resulting in a minor reduction in the estimated compensation value of the judicial annuity.

Economic Assumptions

Generally, the economic assumptions adopted by an actuary must be independently reasonable and appropriate in the aggregate.

Although there is always a range of acceptable assumptions, I agree with Mr. FitzGerald that an actuary should, for compensation benchmarking purposes, use best estimate assumptions. For instance, provisions for adverse deviations which may be appropriate for funding purposes would not be appropriate for compensation benchmarking purposes.

The economic assumptions used by Mr. Pannu in 2003, 2007 and 2011 for his actuarial valuations of the judicial annuity are as follows.

	Inflation	Salary Increases	Interest Rate	Real Interest Rate
2003 & 2007	2.0%	3.0%	6.00%	4.00%
2011	2.0%	3.0%	5.75%	3.75%

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Considering the fact that the judicial annuity is based on final salary and the judicial annuity is fully indexed to the increases in the Consumer Price Index, the determining economic assumptions are the real interest rate (the interest rate in excess of inflation) and the expected salary increases in excess of inflation. The expected salary increases in excess of inflation should reflect expected national productivity gains and are generally assumed to be around 1% per year. However, the real interest rate assumption can vary more widely and has a very significant impact on the valuation results.

For example, the economic assumptions adopted by The Office of the Chief Actuary of Canada for the valuation of the Pension Plan for the Federally Appointed Judges are summarized in the following table with the initial and ultimate assumptions shown separately. The initial rates are generally applied in the first year following the valuation date and are gradually increased or reduced to reach the ultimate rates after a certain number of years varying from 5 to 15 years.

Valuation Date	Inflation	Salary Increase	Interest Rate	Real Interest Rate
March 31, 2001	2.6% / 3.0%	3.3% / 4.0%	7.25% / 7.25%	4.65% / 4.25%
March 31, 2004	2.0% / 2.7%	1.7% / 3.9%	6.30% / 7.00%	4.30% / 4.30%
March 31, 2007	2.0% / 2.5%	2.4% / 3.8%	4.47% / 5.35%	2.47% / 2.85%
March 31, 2010	2.0% / 2.4%	2.7% / 3.6%	4.40% / 5.20%	2.40% / 2.80%

The Pension Plan for the Federally Appointed Judges is not a registered pension plan and is not funded. The interest rate assumption adopted by OSFI is based on the expected interest earned on a notional portfolio of long term Canada bonds built over an extended period of time. The interest rate on this notional portfolio has been declining gradually over the last several years and should continue to decline over the next few years considering the current level of interest rates. In contrast, the interest rate assumption adopted by Mr. Pannu is more consistent with the expected long term annual investment return on a diversified tax sheltered portfolio.

The following table shows the average inflation rate and the average yield to maturity on long term Canada bonds, compounded semi-annually, for the 12 month periods preceding each of the last four quadrennial commissions in nominal terms and in real terms, net of inflation.

Year	Average Inflation Rate	Average YTM on Long Term Canada Bonds (CANSIM V122544)	Average YTM on Long Term Canada Bonds Net of Inflation	Average YTM on Long Term Real Return Canada Bonds (CANSIM V122553)
1999	1.8%	5.7%	3.9%	4.1%
2003	2.8%	5.3%	2.5%	3.1%
2007	2.2%	4.3%	2.1%	2.0%
2011	2.9%	3.3%	0.4%	1.0%

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Interest rates on long term Canada bonds and on real return bonds have been declining gradually for more than 20 years. The yield to maturity on long term Canada bonds is now reaching levels not seen since the 1940s.

Current interest rates on long term Canada bonds are used, with certain adjustments, for purposes of calculating the solvency liabilities of registered pension plans and the transfer value of termination benefits. Current interest rates on quality corporate bonds are also used in the private sector for the valuation of registered pension plans for accounting purposes.

However, in establishing a level of compensation taking into account the value of the judicial annuity, there is considerable merit in using best estimate long term assumptions taking into account current interest rates and expected future changes. Section 1720 of the Canadian Institute of Actuaries' Standards of Practice contains the following statements.

“.03.4 - A reasonable assumption would reflect current conditions as of the calculation date but would not necessarily have to continue to reflect current conditions persisting into the future. For example, if current interest rates are extremely high or low in relation to past rates or future expectation, it would not be unreasonable to assume that interest rates change over time.”

“.03.5 - The actuary's use of independently reasonable assumptions may result in the assumptions not being reasonable in the aggregate. In such event, the requirement for assumptions to be appropriate in the aggregate would be more important than the requirement for independently reasonable assumptions. Certain assumptions may then be modified and may not be independently reasonable. However, when an assumption is prescribed, it would not be appropriate to compensate for this prescription by modifying other assumptions.”

Nevertheless, there is considerable merit in making stakeholders aware of the *market value* of the judicial annuity based on current interest rates even if we know that such value could fluctuate widely over time.

Impact of Alternate Valuation Interest Rates

In order to illustrate the impact of alternate valuation interest rate assumptions, we have estimated the value of the judicial annuity under the following scenarios.

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	Inflation	Salary Increases	Interest Rate	Real Interest Rate
Initial Scenario	2.0%	3.0%	5.75%	3.75%
OSFI Inspired Scenario	2.0%	3.0%	4.75%	2.75%
Market Value Scenario	2.0%	3.0%	3.00%	1.00%

The estimated value of the judicial annuity under each of these three valuation interest rate scenarios, excluding disability benefits, is as follows. All other assumptions are identical to the assumptions described in Mr. Pannu's report assuming no mortality or disability before retirement.

	Estimated Value of the Judicial Annuity as a percentage of salary
Initial Scenario	24.7%
OSFI Inspired Scenario	30.7%
Market Value Scenario	44.4%

These scenarios can be viewed as constituting a range of acceptable assumptions for the valuation of the judicial annuity. Considering the current interest rates and anticipated future changes, the Commission could adopt an intermediate scenario as its best estimate.

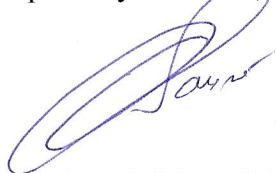
In my opinion,

- the data on which our analysis is based are sufficient and reliable for purposes of this valuation;
- the actuarial methods and assumptions used in our analysis are appropriate, in aggregate, for purposes of this valuation.

This report has been prepared, and my opinions given, in accordance with generally accepted actuarial practices in Canada.

The undersigned remains available to answer any questions that you may have on this report.

Respectfully submitted,



Andr  Sauv , F.S.A., F.C.I.A.