This is the 6th Affidavit
of Richard Border in this case
and was made on 31/March/2016

Court File No. 98-CV-141369 CP00

ONTARIO
SUPERIOR COURT OF JUSTICE

B E T W E E N:

DIANNA LOUISE PARSONS, MICHAEL HERBERT CRUICKSHANKS, DAVID TULL, MARTIN HENRY GRIFFEN, ANNA KARDISH, ELSIE KOTYK, Executrix of the Estate of Harry Kotyk, deceased and ELSIE KOTYK, personally

Plaintiffs

and

THE CANADIAN RED CROSS SOCIETY, HER MAJESTY THE QUEEN IN RIGHT OF ONTARIO and THE ATTORNEY GENERAL OF CANADA

Defendants

and

HER MAJESTY THE QUEEN IN THE RIGHT OF THE PROVINCE OF ALBERTA
HER MAJESTY THE QUEEN IN THE RIGHT OF THE PROVINCE OF SASKATCHEWAN,
HER MAJESTY THE QUEEN IN THE RIGHT OF THE PROVINCE OF MANITOBA,
HER MAJESTY THE QUEEN IN THE RIGHT OF THE PROVINCE OF NEW BRUNSWICK
HER MAJESTY THE QUEEN IN THE RIGHT OF THE PROVINCE OF PRINCE EDWARD ISLAND,
HER MAJESTY THE QUEEN IN THE RIGHT OF THE PROVINCE OF NOVA SCOTIA
HER MAJESTY THE QUEEN IN THE RIGHT OF THE PROVINCE OF NEWFOUNDLAND,
THE GOVERNMENT OF THE NORTHWEST TERRITORIES,
THE GOVERNMENT OF NUNAVUT and THE GOVERNMENT OF THE YUKON TERRITORY

Intervenors

Proceeding under the *Class Proceedings Act, 1992*

Court File No. 98-CV-146405

B E T W E E N:

JAMES KREPPNER, BARRY ISAAC, NORMAN LANDRY, as Executor of the Estate of the late SERGE LANDRY, PETER FELSING, DONALD MILLIGAN, ALLAN GRUHLKE, JIM LOVE and PAULINE FOURNIER as Executrix of the Estate of the late PIERRE FOURNIER

Plaintiffs

and

THE CANADIAN RED CROSS SOCIETY, THE ATTORNEY GENERAL OF CANADA and HER MAJESTY THE QUEEN IN RIGHT OF ONTARIO

Defendants

and

HER MAJESTY THE QUEEN IN THE RIGHT OF THE PROVINCE OF ALBERTA,
HER MAJESTY THE QUEEN IN THE RIGHT OF THE PROVINCE OF SASKATCHEWAN,
HER MAJESTY THE QUEEN IN THE RIGHT OF THE PROVINCE OF MANITOBA,
HER MAJESTY THE QUEEN IN THE RIGHT OF THE PROVINCE OF NEW BRUNSWICK,
HER MAJESTY THE QUEEN IN THE RIGHT OF THE PROVINCE OF PRINCE EDWARD ISLAND
HER MAJESTY THE QUEEN IN THE RIGHT OF THE PROVINCE OF NOVA SCOTIA
HER MAJESTY THE QUEEN IN THE RIGHT OF THE PROVINCE OF NEWFOUNDLAND,
THE GOVERNMENT OF THE NORTHWEST TERRITORIES,
THE GOVERNMENT OF NUNAVUT AND THE GOVERNMENT OF THE YUKON TERRITORY

Intervenors

Proceeding under the *Class Proceedings Act, 1992*

No. C965349
Vancouver Registry

In the Supreme Court of British Columbia

Between:

Anita Endean, as representative plaintiff

Plaintiff

and:

**The Canadian Red Cross Society
Her Majesty the Queen in Right of the Province of
British Columbia, and The Attorney General of Canada**

Defendants

and:

**Prince George Regional Hospital, Dr. William Galliford,
Dr. Robert Hart Dykes, Dr. Peter Houghton, Dr. John Doe,
Her Majesty the Queen in Right of Canada, and
Her Majesty the Queen in Right of the Province of
British Columbia**

Third Parties

Proceeding under the *Class Proceedings Act*, R.S.B.C. 1996, C. 50

CANADA
PROVINCE OF QUÉBEC
DISTRICT OF MONTRÉAL

NO : 500-06-000016-960

SUPERIOR COURT

Class action

DOMINIQUE HONHON

Plaintiff

-vs-

THE ATTORNEY GENERAL OF CANADA
THE ATTORNEY GENERAL OF QUÉBEC
THE CANADIAN RED CROSS SOCIETY

Defendants

-and-

MICHEL SAVONITTO, in the capacity of the Joint Committee member for the province of Québec

PETITIONER

-and-

FONDS D'AIDE AUX RECOURS COLLECTIFS

-and-

LE CURATEUR PUBLIC DU QUÉBEC

Mis-en-cause

CANADA
PROVINCE OF QUÉBEC
DISTRICT OF MONTRÉAL

NO : 500-06-000068-987

SUPERIOR COURT

Class action

DAVID PAGE

Plaintiff

-vs-

THE ATTORNEY GENERAL OF CANADA
THE ATTORNEY GENERAL OF QUÉBEC
THE CANADIAN RED CROSS SOCIETY

Defendants

-and-

FONDS D'AIDE AUX RECOURS COLLECTIFS

-and-

LE CURATEUR PUBLIC DU QUÉBEC

Mis-en-cause

AFFIDAVIT

I, RICHARD BORDER, of 980-475 West Georgia Street, Vancouver, British Columbia SWEAR (OR AFFIRM) THAT:

1. I am a Principal and Shareholder of Eckler Ltd. ("Eckler").

2. Attached hereto and marked as **Exhibit "A"** is Eckler's Actuarial Report to the Joint Committee, *"Response to the Morneau Shepell 2013 Allocation Report".*

3. The Eckler actuarial personnel involved in the review of the data and the actuarial work in preparation of the report are myself, Wendy Harrison, Dong Chen and Kevin Chen. The opinions are those of Wendy Harrison and me and we are the authors of the report.

4. There have been no material changes to the curriculum vitae appended to my fourth affidavit sworn on March 11, 2015.

SWORN (OR AFFIRMED) BEFORE ME)
at Vancouver, British Columbia, on)
31/March/2016.)
)
)
)
)
)
A Commissioner for taking)
Affidavits for British Columbia)

RICHARD BORDER

SHARON D. MATTHEWS, QC
BARRISTER & SOLICITOR
856 Homer Street, 4th Floor
Vancouver, BC V6B 2W5
Tel: 604-689-7555 Fax: 604-689-7554

This is Exhibit" A "referred to in the
affidavit of Richard Border
sworn before me at Vancouver, BC
this 31 day of March 2016

A Commissioner for taking Affidavits
for British Columbia

Eckler

Actuarial Report to the Joint Committee

Response to the Morneau Shepell 2013 Allocation Report

1986-1990 Hepatitis C Trust

Prepared by:

Richard Border, FIA, FCIA Wendy Harrison, FSA, FCIA

Vancouver, B.C.

March 31, 2016

Eckler

CONTENTS

1 INTRODUCTION

1. Our assessment of the financial sufficiency of the 1986-1990 Hepatitis C Trust as at December 31, 2013 was documented in our report ("Eckler 2013 Sufficiency Report") dated March 11, 2015.

2. Our 2013 Sufficiency Report concluded that, after allowing for an appropriate level of Required Capital, there was Excess Capital, or actuarially unallocated assets, of $236,341,000. As set out in our subsequent report (Proposed Allocation of the 2013 Sufficiency Assessment Actuarially Unallocated Assets or "2013 Allocation Report") dated October 14, 2015, we were instructed by the Joint Committee to calculate an additional sufficiency liability in respect of level 2 class members who are reclassified as level 3 class members. That amount is equal to $29,421,000. This amount would reduce the Excess Capital to $206,920,000.

3. The Settlement Approval Orders give the Courts discretion to allocate the actuarially unallocated assets "for the benefit of class members and family class members", referred to in our 2013 Allocation Report as "Allocation Benefits". Our 2013 Allocation Report provided analysis of the potential Allocation Benefits identified by the Joint Committee to be funded by the Excess Capital, or actuarially unallocated assets. Our 2013 Allocation Report was included in the set of documents filed by the Joint Committee in their Motion of October 16, 2015 regarding the allocation of the actuarially unallocated assets.

4. Subsequently, the Attorney General of Canada ("Canada") filed several documents in response to the Joint Committee's Motion, including the Actuarial Report on Proposed Allocation of the Actuarially Unallocated Funds as of 31 December 2013 ("Morneau Shepell 2013 Allocation Report") and the Affidavit of Samuel S. Lee ("Lee Affidavit"), both sworn January 29, 2016.

5. We were asked by the Joint Committee to respond to certain statements made in the Morneau Shepell 2013 Allocation Report and the Lee Affidavit, and have set out our reply in this report. We have not commented on other less significant issues that we noted in these documents.

2 TREATMENT IMPLICATION FOR CLAIMANTS

6. Section C of the Morneau Shepell 2013 Allocation Report discusses treatment implications for claimants, starting with the Medical Model Working Group ("MMWG") assumptions (used in both the Eckler 2013 Sufficiency Report and the 2013 Morneau Shepell Sufficiency Report), and notes that "the MMWG assumptions about treatment result in about 85% of the claimants at levels 2 to 5 being cured of the disease by 2019"[1] and "applying the MMWG assumptions will leave about 11% of the claimants at levels 2 to 5 untreated".[2]

7. Section C of the Morneau Shepell 2013 Allocation Report references the Lee Affidavit, in particular, paragraph 25, which states "On January 16, 2016, Health Canada granted regulatory approval for another all-oral DAA combination drug, Zepatier, for treatment of patients with HCV genotypes 1 and 4. I expect to see regulatory approval granted later in 2016 for yet another generation of DAA medications that will offer even greater advantages for patient care, including those few patients who have had the misfortune to be infected with one of the less prevalent HCV genotypes that have proven to be more treatment resistant to earlier regimens. With the arrival of the next generation of DAA medications, very few cases will be seen where the virus cannot be eradicated".

8. The statement that Dr. Lee makes in paragraph 25 of the Lee Affidavit may follow from his paragraph 18 where he opines that "within a very short time, new drug therapies will be available to eradicate HCV from almost 99% of all infected patients…". However, the basis for the "99%" figure is not clear from the Lee Affidavit. He does make the statement in paragraph 22 that "Current DAA treatment consists of… a cure rate exceeding 90%".

9. The Morneau Shepell 2013 Allocation Report states "Our understanding (Lee Affidavit paragraph 25) is that those claimants will likely be eligible medically for treatment when the new drugs are approved within a very short time. While the liabilities set aside in 2013 did not contemplate these claimants being treated, the reduction in future claims is expected to be more than enough to pay for their treatment without having to touch any of the surplus".[3]

10. In our opinion, there are two key issues to assess regarding this conclusion:

    (a) Is the statement "very few cases will be seen where the virus cannot be eradicated" substantiated and appropriate to form the basis for an actuarial assumption? and

    (b) Is it necessary or appropriate to restate the 2013 Sufficiency Assessment to account for medical developments that are still unfolding?

11. We discuss these questions below.

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[1] Morneau Shepell 2013 Allocation Report paragraph 21

[2] Morneau Shepell 2013 Allocation Report paragraph 26

[3] Morneau Shepell 2013 Allocation Report paragraph 26

2.1 Evidence for New DAAs

12. Actuarial practice involves the setting of assumptions regarding future events, which may or may not happen, and for which the timing may be unknown. Actuaries generally look to evidence, often in the form of historical experience, to set the best estimate assumptions, and then incorporate a Provision for Adverse Deviation ("PfAD") as an additional liability to address uncertainty. Specifically, one purpose of the PfAD is to provide for the risk of mis-estimation of the best estimate assumption. The more uncertainty there is about an estimate or assumption of future experience, the larger the PfAD should be.

13. Eckler's 2013 Sufficiency Report and 2013 Allocation Report, and the 2013 Morneau Shepell Sufficiency Report, all utilized the MMWG assumptions regarding probability of treatment with several different HCV drugs and treatment efficacy of each drug, based on whether the class member was previously treated and whether the class member is coinfected with HIV. The MMWG based these assumptions on a range of published medical studies.[1] The MMWG report reflected the expected utilization of two new DAA drugs: "sofosbuvir-based doublets" (trade name Harvoni) and "3D regimen plus RBV" (trade name Holkira Pak). These are the two drug regimens referenced by Dr. Lee as already in use in Canada.[2]

14. The treatment efficacy assumptions developed by the MMWG for these two DAA options are set out in the following table, and range from 80.2% to 96.3%. These treatment efficacy rates were adopted by Eckler and Morneau Shepell as best estimates for the purpose of the 2013 Sufficiency Assessment.[3]

Treatment Efficacy – Best Estimate	Treatment Naïve without HIV	Treatment Naïve with HIV	Previously Treated without HIV	Previously Treated with HIV
Sofosbuvir-based doublet (Harvoni)	94.6%	80.2%	95.4%	80.9%
3D regimen plus RBV (Holkira Pak)	96.2%	81.6%	96.3%	81.7%

15. The distribution of known alive class members in levels 2 to 5 (levels where treatment is anticipated to be provided to a high proportion of class members) as at December 31, 2013 was as follows:

	Treatment Naïve without HIV	Treatment Naïve with HIV	Previously Treated without HIV	Previously Treated with HIV
# known alive class members in levels 2 to 5	1,691	76	1,058	51

16. The weighted average efficacy rates[1] for this group of class members are 94.5% for Harvoni and 95.4% for Holkira Pak. These weighted averages are close to the high end of the range because there are relatively few class members who, due to HIV co-infection, are expected to have lower cure rates.

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[1] Section 2.2.2 of the Fifth Revision of Hepatitis C Prognostic Model Based on the Post-Transfusion Hepatitis C Compensation Claim Cohort page 21

[2] Lee Affidavit paragraph 23

[3] An explicit PfAD was calculated by multiplying the best estimate treatment efficacy rates by 80%; in other words, the sufficiency liability reflected an assumption that 20% fewer class members would be cured, than would be the case based on the best estimate assumptions.

17. While these weighted average efficacy rates are very high, they are still less than the 99% figure cited by Dr. Lee in his paragraph 18. Dr. Lee did not cite specific evidence, such as the results of clinical trials, to substantiate this belief.

18. From an actuarial perspective, an assumption that is based on past experience, such as published clinical trials, has greater credibility than an assumption based on an event that is anticipated to occur in the future or which is speculative in nature. Customary actuarial practice would be to base model assumptions on historical evidence when it is available, and on more speculative views of future experience only when other evidence is not available. The evidence in Lee's Affidavit is insufficiently detailed to build into a practical actuarial model, and does not provide a basis for measuring the financial impact of emerging DAA therapies.

2.2 Subsequent Events

19. The DAA therapy Harvoni was approved for use in Canada on October 14, 2014 and Holkira Pak was approved on December 22, 2014.

20. According to the Lee Affidavit, another DAA combination drug, Zepatier, was approved for use in Canada on January 19, 2016.[2]

21. While the Eckler 2013 Sufficiency Report sets out the financial position of the Trust as at December 31, 2013 (the calculation date), the report was issued March 11, 2015 (the report date).

22. Thus the two drugs Harvoni and Holkira Pak were approved between the calculation date and the report date, while Zepatier was approved after the report date.

2.3 Actuarial Practice Regarding a "Subsequent Event"

23. Subsection 1110 of the Canadian Institute of Actuaries' Standards of Practice defines a subsequent event as "an event of which an actuary first becomes aware after a calculation date but before the corresponding report date." The calculation date is defined as the "effective date of a calculation; e.g., the balance sheet date in the case of a valuation for financial statements. It usually differs from the report date." The report date is defined as the "date on which the actuary completes the report on his or her work. It usually differs from the calculation date."

24. Subsection 1520 of the Standards of Practice provides guidance regarding the possible effect of subsequent events on the work of actuaries. Paragraph 1520.02 states that. . . the actuary should take a subsequent event into account (other than in a pro forma calculation) if the subsequent event

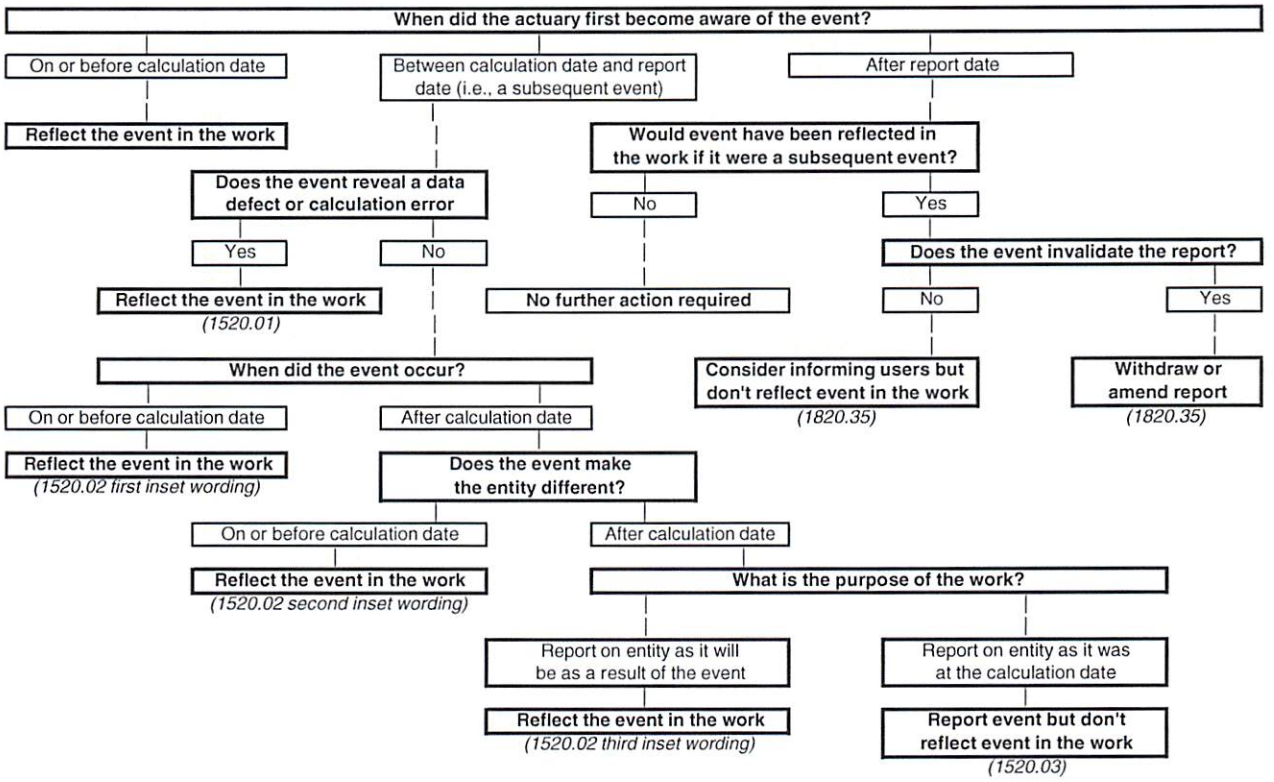
    - provides information about the entity as it was at the calculation date,

[1] Weighted by the number of class members assumed to receive the treatment in question
[2] Lee Affidavit Paragraph 25

- retroactively makes the entity different at the calculation date, or
- makes the entity different after the calculation date and a purpose of the work is to report on the entity as it will be as a result of the event.

25. The following decision tree is provided to assist an actuary in deciding how to reflect an event in the work:

EVENT DECISION TREE



2.4 Recognition of new DAA therapies in 2013 Sufficiency Assessment and Allocation Report

26. It is our understanding that the sufficiency of the Trust was confirmed to the courts based on the Eckler 2013 Sufficiency Report and the Morneau Shepell 2013 Sufficiency Report, and that the discussion regarding the actuarially unallocated assets should follow directly from the methods, assumptions, analysis and results set out in those reports.

27. Such an approach is entirely consistent with the CIA's Standards of Practice as they relate to a Subsequent Event in that while the approval of the use in Canada of Harvoni and Holkira Pak occurred between the calculation date and the report date (and as such could be considered a Subsequent Event), these DAA therapies were reflected in the MMWG model, and the assumptions regarding the efficacy of these drugs was based on published clinical trials cited by the MMWG.

28. Under the CIA's Standards of Practice, the emergence of the new DAA therapies after the issuance of our 2013 Sufficiency Report does not qualify as a subsequent event that needs to be taken into account in the

2013 Sufficiency or Allocation Benefit Reports, nor is it an event that invalidates the report, as there is not yet a basis for measuring their financial impact.

29. In the context of an entity which undergoes an actuarial assessment at periodic intervals (for example, a pension plan that is valued every three years), events often occur between assessments that give rise to gains or losses, or which change the expectations regarding the future experience of the entity. There may be instances where emerging adverse experience is so detrimental to the entity that it is appropriate to trigger a new assessment. It would be highly unusual for emerging positive experience to do so. Customary actuarial practice is to wait until the next scheduled valuation, and at that time, update the assumptions and methodology as appropriate to reflect the experience or information then available.

30. In our opinion, the impact of new DAA therapies, and any additional information about those approved in 2014, should be incorporated into the medical model used for the December 31, 2016 Sufficiency Assessment, rather than reflected in an ad hoc adjustment to the previously agreed-to Sufficiency Assessment as of December 31, 2013.

3 INCREASE LUMP SUM PAYMENTS BY 10% AND FAMILY MEMBER PAYMENTS BY $5,000

31. The Joint Committee had asked us to calculate the cost of increasing the lump sums payable by 10%. With respect to retroactive payments, for the purpose of our 2013 Allocation Report, we were instructed to do this on a "non-indexed" basis, i.e. payments were to be 10% of the actual amount received.

32. As pointed out by in the Morneau Shepell 2013 Allocation Report,[1] this approach has the effect that the top up amount to be paid to a member for a specific lump sum depends on the year in which the original lump sum was paid (lump sum payments are indexed to increases in the CPI, and hence increase each year) and therefore different top up amounts will be paid to different class members for nominally the same benefit.

33. An alternative approach is to calculate the 10% top up based on the associated lump sum in the year of the top-up payment is made, i.e. indexed to the year of payment, as suggested by Morneau Shepell. In our 2013 Sufficiency Report, retroactive payments are payments related to amounts paid prior to the December 31, 2013 valuation date. In that report, the lump-sum payments indexed to January 1, 2014 were taken into account. The retroactive payments are therefore based on the lumpsums payable from January 1, 2014.

34. The Joint Committee has instructed us to calculate how the costs would increase if top-up payments are similarly indexed to January 1, 2014. This approach increases the previously reported retroactive cost of $40.701 million by $9.112 million to $49.813 million.

35. The Joint Committee also asked us to calculate the increase in the lump sums that would have the same cost as the originally calculated $51.266 million (comprising $40.701 million for retroactive payments and $10.565 million for future payments) if the retroactive payments were indexed to January 1, 2014. We have calculated this percentage as 8.5%.

36. A similar issue arises with the increase in payments to family members of $5,000 (in 1999 dollars). The Joint Committee has instructed us to calculate how the costs would increase if the additional $5,000 payments to family members are similarly indexed to January 1, 2014. This approach increases the previously reported retroactive cost of $11.197 million by $1.938 million to $13.135 million

37. The Joint Committee also asked us to calculate the increase in the payments to family members that would have the same cost as the originally calculated $22.162 million (comprising $11.197 million for retroactive payments and $10.965 million for future payments) if the retroactive payments were indexed to January 1, 2014. We have calculated this to be $4,600.

[1] Morneau Shepell 2013 Allocation Report paragraph 20 a. and b.

4 CALCULATIONS WITH SIGNIFICANTLY DIFFERENT RESULTS

38. We were asked to comment on three items where the Eckler and the Morneau Shepell calculations as to the cost were significantly different. These are discussed below.

4.1 Do not deduct other sources of income in calculating loss of income and loss of support

39. Eckler calculates the cost of not deducting other sources of income in calculating loss of income and loss of support to be $27.539 million while Morneau Shepell calculates the cost to be $36.094 million.

40. We have identified two significant differences in the calculations between Eckler and Morneau Shepell, set out below.

41. To calculate the cost of retroactive loss of income payments, Eckler reviewed the actual class member data for the three years 2011 to 2013, and assumed that these years would be representative of prior years, a methodology that we believe will produce a reasonable estimate of the cost of these retroactive payments. Morneau Shepell made a specific adjustment in respect of one factor, HIV payments to deceased co-infected haemophiliacs. This resulted in an increase in the Morneau Shepell figures of about $3.9 million for Loss of Income[1] and $2.5 million for Loss of Support,[2] for a total of $6.4 million relative to the Eckler figures. We are not convinced that it is appropriate to adjust our method for one factor, without considering whether there are other offsetting factors that should be taken into account.

42. In calculating the loss of support adjustment percentage (the percentage increase in loss of support payments if the identified deductions were no longer deducted), Morneau Shepell added back 100% of the underlying income deductions. However loss of support is calculated as 70% of the income loss, therefore only 70% of the underlying income deductions should have been taken into account. We calculate that this caused the Morneau Shepell result to be overstated by approximately $3.8 million.

4.2 Increase Cost of Care limit from $50,000 to $60,000 (1999 dollars)

43. Eckler calculated the cost of lifting this limit to be $0.627 million, while Morneau Shepell calculated the cost to be $2.684 million.

44. Both calculations agreed that the retroactive cost will be $121,000, so the difference arises on the future costs of lifting this limit.

45. In our calculation, we took into account actual claimed amounts that exceeded the current limit (both the proportion that exceeded the current limit and the amount of the excess) and we assumed that a similar pattern would apply in the future. On this basis, we calculated that average future cost of care would increase by 1% relative to that assumed in our 2013 sufficiency review.

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[1] Morneau Shepell Allocation Report table 148

[2] Morneau Shepell Allocation Report table 149

46. Morneau Shepell assumed that anyone who was within 6%[1] of the current limit had deliberately curtailed their cost of care costs to ensure they were less than the limit and that these claims would therefore all increase by $10,000 (1999 dollars) in the future. As result they assumed that future cost of care would increase by 5.1%[2] as a result of increasing the limit.

47. While it is possible that some class members limited their cost of care to avoid exceeding the $50,000 limit, the historic data shows only the actual claims submitted. It is not possible to know with any certainty how class members have managed their costs of care. There is no evidence to support the assertion that everyone who was close to the limit in the past will automatically increase their claim amounts by the full $10,000 (1999 dollars) increase. In our opinion, such an assumption is not reasonably supported by the data for actuarial purposes.

4.3 Provide $200 (2014 Dollars) Per Diem to Family Members for Out of Pocket Expenses

48. Currently out of pocket expenses are covered only for class members, not for the family of class members. We were asked to calculate the impact of an additional $200 (2014 dollars) per diem being provided to cover losses associated with family members accompanying claimants to medical appointments on a prospective basis. We have interpreted the per diem to be applied per visit, rather than per day per visit (some visits may take more than a day if a claimant is traveling from a remote area).

49. Based on out of pocket claims data, we estimated that on average there have been 1.8 medical appointments per year per class member.

50. We calculated the cost of the proposed $200 payment to family members to be $1.957 million, while Morneau Shepell calculated the cost to $8.370 million.

51. In our calculation, we assumed the number of medical appointments for which out of pocket expenses would be claimed would not increase as a result of this additional payment amount.

52. Morneau Shepell report that the 7,412 claims paid for out-of-pocket expenses from 1999 to 2013, and that of these claims 187 (2.5%) were for less than $20 and 73 (1%) were for less than $10.[3] They speculate that many class members do not currently bother to claim for out of pocket expenses, as the expenses are too small to justify the effort. This is not the only logical explanation for the relative infrequency of small amounts claimed; another plausible explanation is that when individuals incur out-of-pocket claims, they are for larger amounts.

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[1] They assumed anyone over $47,000 in 1999 dollars would be affected by the $50,000 limit. The 6% figure is calculated as 1 minus (47 divided by 50).

[2] Morneau Shepell 2013 Allocation Report paragraph 178 b

[3] Morneau Shepell 2013 Allocation Report paragraph 187

53. Further in their view, claiming out of pocket expenses will now be worthwhile as a result of the $200 per visit payable to a family member.[1] Morneau Shepell assumed that there would be a significant increase in the number of visits for which out of pocket expenses would be claimed.

54. As we understand it, Morneau Shepell is not suggesting that the number of doctor visits will increase as a result of the additional $200 per family member, but rather the number of visits for which an out of pocket expense will be claimed will increase significantly. This may be plausible, but the data to date is inconclusive. There is no evidence to support Morneau Shepell's position that people have not been claiming out of pocket expenses as the current amounts are not worth the effort. In our opinion, such an assumption is not reasonably supported by the data for actuarial purposes.

[1] Morneau Shepell 2013 Allocation Report paragraph 186

5 EXCESS ASSETS AROSE BECAUSE OF CANADA PREFUNDING

5.1 Impact of Investment Strategy

55. Paragraph 87 of the Morneau Shepell 2013 Allocation Report states "In our opinion, the excess assets are entirely due to the agreement by Canada to pre-fund the federal contribution obligation."

56. While there have been significant gains and losses affecting the liability, these gains and losses impact both the Federal and the Provinces/Territories ("P/T") portion of the liability proportionally to their share (discussed further below). Thus the only difference in the funded position of the Federal versus the P/T portion arises from the asset side of the balance sheet.

57. Therefore at first glance Morneau Shepell's comment would appear to be true, but in fact it is incorrect. Prefunding was a necessary precursor to the achievement of excess assets, but it is not the prefunding that caused the surplus, rather it was the investment strategy that was employed with those prefunded assets that caused the excess assets.

58. The Morneau Shepell 2013 Allocation Report proves this point when it considers in paragraph 83 what would have happened if the Federal share of the settlement had been funded in the same way as the P/T share was funded. The P/T share of the settlement is funded on a "pay as you go" basis, but the maximum amount that the P/Ts are liable for is limited by a notional fund invested entirely in 3-month treasury bills. The rate of return on 3-month treasury bills has been insufficient for the notional fund to keep pace with the P/T's 3/11ths share of the liabilities (despite a much smaller than expected claim cohort and significantly better than originally expected health outcomes). As a result, as shown by the Morneau Shepell 2013 Allocation Report, if the Federal prefunded assets had also been invested in 3-month treasury bills, the fund as a whole would have been insufficient. Thus, the reason that there are excess of assets is that the prefunding permitted a different investment strategy on behalf of the class members and that investment strategy has paid off.

59. Had the investment strategy been to invest the money paid by the Federal government in 3- month treasury bills, Morneau Shepell estimates that there would have be a $348 million shortfall in the fund, with no obligation on the part of the Federal government to fund any part of that shortfall.

5.2 Sources of Gains and Losses

60. As discussed above, the estimate of the financial position of the fund has changed over time as a result of a number of different factors. For ease of reference, we have summarised the gains and losses at each sufficiency review in the table below.

Sources of Gains and Losses ($ millions)					
	2001	2004	2007	2010	2013
Investment gains	0	132	24	62	22
Discount rate change	-18	-99	-12	-92	0
Cohort update	222	329	148	-42	17
Medical model update	-84[1]	5[1]	-44	-62	305
Experience gains / losses			-34	15	14
Other assumption and method changes	-78	-127	19	-38	2
New Drug Cost					-146
Remove aggregate model simplifying assumptions/implicit margins				64	
Initial stage distribution changes			-89	75	
Excess HCV mortality below level 6 recognised				-92	
Increase Loss of Income cap			-27		
Lift holdbacks and caps		-145			
Remove opt-outs	10				
Delay in unknowns coming forward	46	4			

[1] For the 2001 and 2004 sufficiency reviews, the medical model update and other experience gains or losses were aggregated. Experience gains or losses include items such as actual loss of income being different to that assumed, actual deaths different to that assumed, etc.

6 COMPARISON OF 1999 COHORT AND 2013 COHORT

61. Morneau Shepell discusses the differences between the 1999 cohort estimates and the 2013 cohort in section E of the Morneau Shepell 2013 Allocation Report.

62. The two unknown aspects of the 1999 cohort that are very significant from an actuarial perspective were the total number of class members and the disease distribution of these class members. Given that there was no claimant data of any sort when the settlement was agreed, the estimates of the total number of class members, and their disease distribution, was necessarily based on the then current medical knowledge, which incorporated estimates of the total number of people who could have been exposed to HCV by blood transfusion between 1986 and 1990, together with estimates of disease progression available at the time.

63. With the benefit of hindsight, it is clear that the original 1999 estimate of the number of class members is much higher than the actual number of approved class members as at December 31, 2013. It is an interesting question as to whether this is due to fewer people being infected than originally estimated, or whether this is due to fewer people coming forward to claim despite being infected. As discussed in the Lee Affidavit, chronically infected HCV sufferers can remain asymptomatic for many years,[1] so it is quite possible that the cohort is smaller than expected as a result of people still not knowing that they are carrying the virus. In this regard, we note that the difference between the Morneau Shepell projection to 2013 and the actual 2013 cohort with regard to those who are deceased due to HCV is quite small (Morneau Shepell projects 338 HCV deceased, plus 450 Excess HCV Mortality for a total of 788, compared to the actual 2013 cohort of 715), while the differences between the Morneau Shepell projection to 2013 and the actual 2013 for those alive is very much larger.

64. Morneau Shepell made a number of assumptions in order to produce a projected cohort as at December 31, 2013, including the assumption "that the transition rates developed by the MMWG in their 2013 Report applied in each year from 1986 to 2013"[2] and states that this assumption "reflects the various transition rates from slow to fast as well as the various comorbidity factors that are present in some claimants".[2] This simplifying assumption would appear to apply transition rates that are developed as averages over time and over different morbidity profiles of class members to the overall group. In our opinion, additional analysis would be useful in understanding the appropriateness of this approach. Similarly, the projected 2013 distribution "allowed for treatment based on the assumptions from the 2007 MMWG Report".[3] Again, this approach assumes that a treatment protocol from a specific point in time is representative of the average treatment protocols over many years. Without additional analysis, it is not possible to determine the appropriateness of this simplifying assumption. At this time, given the magnitude of work required to investigate this approach, we have not been instructed to carry out this additional analysis.

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[1] Dr Lee's affidavit paragraphs 39 and 42

[2] Morneau Shepell 2013 Allocation Report paragraph 61

[3] Morneau Shepell 2013 Allocation Report paragraph 66

65. Morneau Shepell notes in paragraph 68 that the Cohort distribution assumed in 1999 was more advanced in the disease than would be predicted by the 2013 estimates of the disease transition rates applied to the original estimates of those infected in 1986 to 1990. Morneau Shepell then goes on to conclude that this "overstatement would serve to add a significant provision for adverse deviations to the initial liabilities of the Agreement". We do not agree with this characterization. The 1999 cohort and its distribution was a best estimate of the number of class members and their disease distribution made on the basis of the information that was available at that time. The fact that the current cohort is smaller than expected does not mean that there was a deliberate overstatement in 1999.

66. As the claimant data has accumulated over the years, both the medical model and the actuarial liability has been adjusted to reflect this. The reduction in the cohort has resulted in actuarial gains as shown in section 5.2 above. We note that despite these gains, the P/T has a shortfall relative to their notional fund, and that Morneau Shepell calculates that the invested fund would also be insufficient if it had been invested in 3-month treasury bills. It thus appears that these gains have been insufficient to offset other non-investment losses.

7 CERTIFICATION

67. This report has been prepared, and our opinions given, in accordance with accepted actuarial practice in Canada.

68. To the best of our knowledge, there are no material subsequent events that would affect the results and recommendations of this report.

69. On behalf of the Eckler actuarial personnel who worked on this report, we certify that we are aware that our duties are:

    (c) to provide opinion evidence that is fair, objective and non-partisan and related only to matters within our area of expertise; and

    (d) to assist the Courts and provide such additional assistance as the Courts may reasonably require to determine a matter in issue.

70. We are aware that the foregoing duties prevail over any obligation we may owe to any party on whose behalf we are engaged and we are aware that we are not to be an advocate for any party. We confirm that the report conforms with the above-noted duties. We further confirm that if called upon to give oral or written testimony, we will give such testimony in conformity with these duties.

Richard A. Border
Fellow of the Canadian Institute of Actuaries[1]
Fellow of the Institute and Faculty of Actuaries

Wendy F. Harrison
Fellow of the Canadian Institute of Actuaries
Fellow of the Society of Actuaries

[1] Canadian Institute of Actuaries is the Primary Regulator