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In The London Court Of International Arbitration

THE UNITED STATES OF AMERICA,

Claimant,

v.

CANADA

Respondent.

COMMENTS OF RESPONDENT CANADA TO THE JOINT REPORT OF
PROFESSORS KALT AND TOPEL

PUBLIC VERSION

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TABLE OF CONTENTS

	Page
INTRODUCTION.....	1
PART I. TRIBUNAL DECISION POINTS – COMMON ISSUES.....	2
A. SINCE THE EXPORT MEASURES WILL NOT EXIST POST-SLA, POST-SLA ECONOMIC EFFECTS CANNOT REDUCE OR OFFSET THE EXPORT MEASURES	2
B. PROFESSOR TOPEL’S INTEREST RATE METHODOLOGY FAILS TO MAKE A FAIR COMPARISON.....	8
1. Based on the Record, Professor Kalt’s Methodology Is a Reasonable Approach to the Valuation of Secured Loans	10
2. Professor Topel’s Methodology Fails to Provide a Fair Comparison to Secured Lending.....	12
a. Professor Topel’s Methodology Does Not Recognize that Loans Supported by Ontario LGP and Québec PSIF Are Secured Loans	12
b. Professor Topel’s Yield to Maturity Index – Dominated by Speculative Yields on Unsecured Debt – Greatly Exaggerates His Benefit Estimates for the Secured Loans Supported by Ontario LGP and Québec PSIF.....	14
c. Professor Topel’s Arguments That He Can Compare Yields on Unsecured Bonds to Secured Loans Are Unpersuasive.....	17
C. EXPORT DUTY CALCULATION.....	27
PART II. TRIBUNAL DECISION POINTS – QUÉBEC PROGRAMS.....	34
A. THE MEASURE OF ANY BENEFIT AMOUNT ATTRIBUTED TO THE QUÉBEC CAPITAL TAX CREDIT PROGRAM IS THE AMOUNT UTILIZED, NOT THE AMOUNT POTENTIALLY AVAILABLE.....	34
1. Professor Kalt Properly Estimates the Actual Benefit Provided Under the Capital Tax Credit Program While Professor Topel’s Higher Estimate Ignores the Actual Use of the Credits	35
2. Professor Topel Ignores the Record Evidence Concerning Capital Tax Credit Utilization and the Tribunal’s Direction to Estimate Yearly Benefits of the Program	36
3. Contrary to the Impression Created by Professor Topel’s Statement, Very Little Unused Capital Tax Credit Could Be Redeemed by Softwood Lumber Companies.....	39

TABLE OF CONTENTS

(continued)

	Page
4. Professor Kalt's Calculation of the Benefit of Capital Tax Credit Program Is Based on Tax Returns Collected Per the Tribunal's Order, and Initially Selected by U.S. Expert Mr. Beck	41
B. PROFESSOR TOPEL INTERPOLATES AROUND THE RECORD EVIDENCE TO GROSSLY OVERESTIMATE BENEFITS PROVIDED BY THE ROAD TAX CREDIT	43
1. Professor Kalt's Consistent Use of the Available Evidence Is a Better Estimate of the Benefit Provided by the Road Tax Credit Program Than Professor Topel's Selective Interpolation Approach.....	43
C. THE QUÉBEC PSIF PROGRAMS	48
1. PSIF Loans.....	49
a. Neither Economist Has Followed the Standard Methodology for Measuring Benefits to Recipients of the PSIF Loans at Issue	49
(1) A Company Specific Analysis Is Required Under the Standard Methodology for Loan Benefit Analysis and as a Matter of International Law to Support a Remedy Award.....	50
(2) Under the Standard Loan Benefit Methodology, the Use of Junk Bond Rates Requires a Demonstration that the Specific Companies Were Not Creditworthy at the Time of Loan Authorization.....	53
2. PSIF Loan Guarantees	54
a. Canada Does Not Believe that Procedural Order No. 6 Instructed the Economists to Perform a Benefit Analysis of PSIF Loan Guarantees.....	54
b. Even if Procedural Order No. 6 Had Instructed a Benefit Analysis of the PSIF Loan Guarantees, Professor Topel Did Not Apply the Standard Methodology	56
c. Contrary to His Assertion, Professor Topel's Novel Methodology Does Not Measure Alleged Benefits from PSIF Loan Guarantees	57
3. Article X Companies	63

TABLE OF CONTENTS

(continued)

	Page
D. MODEL PARAMETER – THE ROAD TAX CREDIT AFFECTS DELIVERED LOG COSTS, NOT MILL EFFICIENCY	66
1. Any Benefits Provided for Roads Construction and Maintenance Lower Delivered Log Costs to the Mill, but They Do Not Enhance a Mill's Ability to Transform Logs into Lumber	67
a. Building Roads and Investing in Milling Equipment are not Alternate Outcomes of Purely Private Sector, Efficient Investment Decisions	68
b. The Record in this Proceeding and the History of Disputes Involving Softwood Lumber Confirm that Roads Are an Element of Wood Cost, Not of Milling Capital.....	73
PART III. TRIBUNAL DECISION POINTS – ADDITIONAL ISSUES	76
A. ONTARIO BENEFIT CALCULATION	77
1. The Benefit Assumptions Made by the Economists Do Not Reflect the Actual Experience Under the Ontario Programs and Are Not Supported by the Record	77
2. There Is No Evidence Suggesting the Grant and Loan Guarantee Levels Assumed by the Economists Will Actually Occur, and Considerable Evidence Shows that They Will Not	81
3. Professor Kalt's Alternative Ontario Benefit Calculation Is Based on the Record, and Should Be Used by the Tribunal for Ontario Export Tax Calculations	82
B. PROFESSOR TOPEL'S NEW ASSUMPTION REGARDING THE TIMING OF ONTARIO BENEFITS IS PREJUDICIAL AND NOT SUPPORTED BY THE RECORD.....	85
1. The Record Demonstrates that the Time From Ontario Announcement to In-Service Date Is on the Order of Two Years.....	87
2. Use of the Correct In-Service Time Is Significant.....	88
3. Proposed Tribunal Action	89
ANNEX 1	91
PROFESSOR TOPEL'S CRITICISM OF PROFESSOR KALT AND DEFENSE OF HIS OWN METHODOLOGY ARE RIFE WITH ERRORS AND REVEAL A FUNDAMENTAL MISUNDERSTANDING OF FINANCIAL CONCEPTS.....	91

TABLE OF CONTENTS

(continued)

	Page
A. Professor Topel Fails in His Attempts to Discredit Professor Kalt's Specific Examples of Secured Lending	92
B. Professor Topel Apparently Misunderstands Professor Kalt's Use of the BB Corporate Bond Index.....	96
C. Professor Topel Fails Equally in His Efforts to Impugn Mr. Reilly's Analysis of Lending Conditions in 2006 and 2007	98
D. Professor Topel Misrepresents the Record on the Administrative Modifications to the Ontario Loan Guarantee Program.....	104
E. Professor Topel Fails to Confront the Errors in His Assumptions About the Riskiness of Small Companies and the Riskiness of Loans Guaranteed by the Ontario LGP	107

INTRODUCTION

1. In accordance with Procedural Order No. 6 ("PO No. 6"), the Government of Canada respectfully submits these Comments to the Joint Experts Report of Professors Kalt and Topel ("Comments"). The Comments will address each of the decision points identified by the experts in the Interactive Spreadsheet in Attachment A to their Joint Report and will discuss two additional issues that arise out of the calculations performed by the experts. In Part I, Canada provides comments on those decision points that are applicable to two or more Ontario and Québec programs: post-SLA effects, interest rates for Ontario LGP and Québec PSIF, and the calculation of export duty (i.e., compensatory adjustments). In Part II, Canada addresses the decision points that are specific to Québec's Capital Tax Credit, Road Tax Credit and PSIF programs. In Part III, Canada addresses the two additional decision points that arise out of the experts' calculations: the level of benefits assumed by the experts for Ontario's FSPF and the LGP programs, and the overstatement of the Ontario benefits caused by a change made by Professor Topel to the Model Parameter. Neither issue is presented as a decision point in the Joint Report or in the Interactive Spreadsheet that accompanied that Report. At Canada's request, Professor Kalt has prepared a new, more detailed version of that Interactive Spreadsheet to present these additional decision points clearly to the Tribunal. That new, more detailed Interactive Spreadsheet is appended to these Comments.

2. Canada's comments regarding the appropriate measure of benefits and compensatory adjustments are without prejudice to Canada's position that none of the challenged programs breach Canada's obligations under the SLA for reasons that Canada has explained in its submissions and at the hearing.

PART I. TRIBUNAL DECISION POINTS – COMMON ISSUES

A. SINCE THE EXPORT MEASURES WILL NOT EXIST POST-SLA, POST-SLA ECONOMIC EFFECTS CANNOT REDUCE OR OFFSET THE EXPORT MEASURES

3. As directed by the Tribunal in its Letter of April 15, 2010, the experts calculated compensatory adjustments based on two alternative assumptions:

Scenario 1: Compensatory adjustments (to be applied from January 1, 2011 to October 12, 2013) to neutralize the offset or reduction of the Export Measures caused by the programs up to October 12, 2013 (i.e., while the SLA is in effect).

Scenario 2: The amount calculated in Scenario 1, plus an additional amount to neutralize estimated post-SLA effects on U.S. producers caused by benefits provided before the expiration of the SLA.

4. The experts made the calculations for both scenarios in their Joint Report and provided separate comments on the two scenarios from their respective economic perspectives. It is now for the Tribunal to decide which scenario is proper as a matter of law under the SLA. Canada will show why the express terms of the SLA, read in their context, require that any compensatory adjustments must be calculated in accordance with Scenario 1.

5. The express terms of Article XIV and Article XVII indicate that the compensatory adjustments, if any, must address the offset or reduction to the Export Measures caused by Canada's alleged breach. As Canada has discussed in prior submissions,¹ Article XIV of the SLA provides a detailed regime for the determination of remedy in the event that the Tribunal finds that Canada has breached the Agreement.

¹ Stmt. of Defence ¶¶ 35-52, ¶¶ 350-365 and ¶¶ 376-383; Canada Rejoinder ¶¶ 37-38, ¶¶ 45-46 and 408-426; and Canada Post-Hearing Brief ¶¶ 188-191.

Paragraph 22 directs that "if the Tribunal finds that a Party has *breached an obligation* under the SLA, the Tribunal shall ... (b) "determine appropriate adjustments *to the Export Measures* to compensate for *the breach*" if Canada does not "cure *the breach*" within the reasonable period of time determined by the Tribunal (emphasis added). According to paragraph 23, these adjustments "shall be in an amount that remedies *the breach*" (emphasis added).

6. The only obligation that Canada is alleged to have breached in this dispute is that of Article XVII(1), which prohibits taking "action to circumvent or offset the commitments under the SLA 2006, including any action having *the effect of reducing or offsetting the Export Measures.*" (emphasis added). Paragraph 2 of Article XVII does not create any additional obligation independent of paragraph 1. Rather, the first sentence of paragraph 2 establishes that provision of such benefits to Softwood Lumber Producers shall be "considered" to reduce or offset Export Measures, subject to an expressly non-exclusive list of measures that, according to the second sentence of paragraph 2, are not to be considered to reduce or offset Export Measures.

7. The SLA thus does not prohibit the provision of benefits to softwood lumber producers *per se*, but rather prohibits actions having the circumventing effect of reducing or offsetting the Export Measures. When what is prohibited is the reducing or offsetting the Export Measures, the measure of a breach is the degree of reduction or offset caused by the benefits provided to softwood lumber producers. In other words, the adjustments to compensate for a breach are to neutralize or counterbalance the extent to which the Export Measures are offset or reduced.

8. During the life of the Agreement, while the Export Measures are in place, they are susceptible to reduction or offset. Such offset or reduction can be calculated

(as has been done by the experts under Scenario 1) and appropriate compensatory adjustments to neutralize this offset or reduction can be determined (which the experts have also done). The Export Measures are a creation of the SLA (Article VI), and by the treaty's express terms, exist only so long as the SLA is in force. When the Export Measures lapse on expiration of the SLA, there is no offset or reduction to neutralize or counterbalance. It follows that there can be no offset or reduction of non-existent Export Measures. Simply put, it is impossible to offset or reduce something that does not exist.

9. The compensatory adjustments the experts have calculated under Scenario 1 fully conform to this reading of the treaty text. The experts calculated the reduction or offset to the Export Measures for the duration of the SLA caused by Canada's alleged breaches, and determined the adjustments to those Export Measures necessary to fully neutralize such reduction or offset while the Export Measures are in effect over the remaining life of the SLA.

10. Scenario 2, in contrast, does not comport with the treaty's express terms. Scenario 2 inflates the authorized level of compensatory adjustments to neutralize "estimated-post SLA effects on U.S. producers caused by benefits provided before the expiration of the SLA." By its terms, Article XVII provides that the measure of the breach is the degree of reduction or offset to the Export Measures caused by the provision of the benefits, and nothing more. Article XIV, paragraphs 22 and 23, in turn, expressly limit the scope of authorized compensatory adjustments to the amount necessary to neutralize the extent to which the Export Measures have been offset or reduced by the circumventing benefits. Scenario 2, which would compensate as well for the post-SLA effects of benefits, cannot be reconciled with these express textual limitations.

11. Canada's interpretation of the treaty's terms is the only plausible one in light of the context of the SLA as a whole and the fundamental bargain that was struck between the Parties under the SLA. Under Article V of the SLA, the United States agreed not to initiate investigations or actions under its trade laws against imports of Canadian Softwood Lumber Products, including under the countervailing duty law. In return, Canada agreed to impose Export Measures on its products during periods of low prices. As provided in Article XVII, both Parties agreed to refrain from taking actions during the term of the Agreement that would circumvent their commitments, including any action having the effect of offsetting or reducing the Export Measures or that would undermine the U.S. commitment not to initiate or pursue actions under U.S. trade law.

12. The Parties' commitments apply only during the life of the Agreement. Canada agreed to impose Export Measures and refrain from action that would reduce or offset the Export Measures for the duration of the Agreement. Similarly, the United States agreed to refrain from using its trade laws against Canadian lumber during the life of the Agreement and, under most conditions, for one year after its expiration.² After that one-year period the SLA will no longer prevent the United States from imposing countervailing duties on Canadian imports of softwood lumber, including in regard to subsidies provided during the life of the SLA, if the United States determines, consistent with its own law and with the requirements of the WTO, that a subsidy is being provided and that the imports are causing or threatening to cause material injury to the U.S. industry.

² Article XVIII provides that, upon expiration of the Agreement, the United States is obligated to refrain from initiating an investigation against Canadian softwood lumber for 1 year from the date of expiration. If, prior to its expiration, the United States terminates the Agreement under Article XX, it is similarly obligated to refrain from initiating an investigation for a 1 year period from the date of termination.

13. Thus, contrary to Professor Topel's charge that failure to impose adjustments during the life of the SLA to address post SLA economic effects on U.S. producers would render the SLA "toothless,"³ a decision to include post-SLA economic effects in any compensatory adjustments that may be awarded would potentially expose Canadian producers and exporters to paying twice for the same effects. Canadian producers would be required to pay export duties during the remaining term of the SLA, inflated to address supposed post-SLA economic effects on U.S. producers (the Export Measures having lapsed), and after the SLA expired would face the risk of countervailing duties on the claim that the same benefits constitute countervailable subsidies causing injurious effects on U.S. producers in the post-SLA world. Scenario 1, far from being ineffective, fully compensates for the breach alleged to have occurred in this case – the reduction or offset to the Export Measures – and avoids the undisputed potential to expose Canadian producers and exporters to paying twice for effects of the same benefits.

14. In PO No. 6, the Tribunal instructed the experts to assume that "Benefits that occur or accrue after the expiration of the SLA shall not be included in the estimate."⁴ The logic for that instruction was surely that government actions taken after the expiration of the SLA cannot reduce or offset the Export Measures – since such Export Measures would no longer exist. This same logic equally supports excluding from any possible compensatory adjustment effects that arise after expiration of the SLA when the Export Measures will no longer exist.

³ Kalt/Topel Revised & Final Report ¶ 173.

⁴ Procedural Order No. 6, Art. 1.2(b).

15. Leaving aside logic and the plain language of the SLA, the practical difficulties and uncertainties associated with estimating compensatory adjustments for economic effects that may occur after the SLA expires, as outlined by Professor Kalt,⁵ provide additional insight into why the drafters of the SLA did not structure Article XIV to provide a remedy for effects that manifest themselves only after the SLA – and its Export Measures – has expired.

16. The unreliability of the calculations, and the inherent uncertainty regarding the U.S. lumber market, increase the further out in time the model is asked to calculate compensatory adjustments to address future harm or lost producer surplus. As Professor Kalt explains, the projections into the post-SLA time period, and the compensatory adjustments calculated to compensate for effects that occur after the SLA expires, are far more speculative than for the remaining period of the SLA.⁶ Indeed, the values chosen by the experts for use in their calculations are in no sense a forecast and in no sense constitute even “best guesses” or mid-point estimates. More important, those guesses and estimates aim at future economic harm to U.S. producers, a legally invalid target. Under the plain language of the SLA the legally valid target is the SLA’s Export Measures and they are “hit,” if at all, only while they are in existence. Scenario 1 sets the legally valid framework for analyzing the relevant effects of any benefits conferred on softwood lumber producers.

17. For these reasons, the Post-SLA decision point should be answered “Not Included” on the Interactive Spreadsheet.

⁵ Kalt/Topel Revised & Final Report ¶¶ 180-196.

⁶ Kalt/Topel Revised & Final Report ¶¶ 184-197.

B. PROFESSOR TOPEL'S INTEREST RATE METHODOLOGY FAILS TO MAKE A FAIR COMPARISON

18. In PO No. 6, the Tribunal directed the two economists to calculate the benefits of government loans and loan guarantees by the "standard practice," which both economists interpreted to mean the difference between the loan rate that the borrower obtained from the government or with a government guarantee, and the rate that borrower would have been charged for a loan on the same terms from a commercial lender and without a government guarantee.

19. Both economists recognize that a proper estimate of that difference requires an "apples-to-apples" comparison between the government or government-guaranteed loan and the commercial loan used as a comparator.⁷ However, the economists came to very different determinations of benefit amount, primarily because they disagreed about the appropriate measure of the terms that the borrowers could have received commercially.⁸ To the degree the record permitted, Professor Kalt compared the rate of the secured loans at issue in this arbitration with the rate that he believed the borrowers could have obtained for such secured loans. Professor Topel did not.

⁷ Kalt/Topel Revised & Final Report ¶¶ 21-22, 64.

⁸ In the case of Québec, another significant difference is that Professor Topel claimed to be able to estimate benefits for PSIF loan guarantees despite not knowing either the terms of the guarantees or the terms of the underlying loan to which they applied. His novel approach, much like that of Mr. Beck in estimating PSIF benefits, directly contradicts the instructions from the Tribunal in Procedural Order No. 6 that required the economists to apply the standard loan and loan guarantee benefit analyses (i.e., a comparison of the known interest rates). By contrast, Professor Kalt concluded that not knowing the terms of the instruments to be compared prohibited application of the standard methodology and could only result in a wholly speculative benefit estimate.

20. A fair comparison between actual rates and commercial rates requires two steps. The first step is to identify the specific loans that are made by the government or with government support – and in particular, to understand the characteristics of the borrower and the material terms of those loans, such as the existence, nature and amount of security. The second step is to identify market interest rates that would apply to loans with the same terms for that borrower. Interest rates for the same borrower can vary widely depending on the terms of the loans, so accuracy can be achieved only if both steps can be and are properly undertaken based on the relevant facts, and not speculation. A reasonable comparison requires careful examination of the terms of government-supported loans, and the comparison of the interest rates on those loans to rates on commercial loans that offer the same terms. To the extent the record allowed, Professor Kalt made a good faith effort to provide the Tribunal with this type of careful, fact-based examination.⁹

21. Professor Topel's methodology does not make a fair comparison. He contends that the yields to maturity demanded by bond market speculators to purchase the unsecured debt of corporations, many of which are near insolvency, should be compared to the interest rates charged by lenders for secured term loans. His yields are not actual interest rates paid for debt; they are highly inflated by the impending insolvency of many issuers, and they bear a dramatically different risk profile than

⁹ As Professor Kalt himself acknowledged in the Kalt/Topel Revised & Final Report, the very limited record concerning PSIF loans meant that his assessment of the rates that those companies would have received from a commercial source was far more speculative. The scarcity of the record evidence on PSIF loans provided the economists with far less than they normally would expect to have in order to make reliable assessments. Kalt/Topel Revised & Final Report ¶ 22 (assessing a market interest rate applicable to any loan under a government program "requires specific information on, for example, loan terms and conditions, as well as borrower characteristics as they relate to collateralization, credit history, and the like. Such information is scarce here.").

secured term loans. Professor Topel does not compare apples to apples; he compares apples to watermelons.

22. The two experts' sections on interest rates are very long, but most of the material deals with one central issue: the refusal of Professor Topel to recognize that his methodology is inapplicable to Ontario and Québec support, which involves *secured loans*. This section focuses on that issue, because it is fatal to Professor Topel's methodology. Canada also has included, in an Annex, a rebuttal of Professor Topel's more detailed arguments. If the Tribunal is inclined to accept Professor Kalt's interest rate analysis, based on the arguments set forth in the main part of this brief, then the Annex may safely be ignored. Canada strongly urges the Tribunal, however, to consider the number and magnitude of the errors exposed in the Annex before entertaining any inclination to agree with Professor Topel.

1. Based on the Record, Professor Kalt's Methodology Is a Reasonable Approach to the Valuation of Secured Loans

23. Professor Kalt started his analysis where it should begin: with a needed examination of the substantive record information for several of the actual loan guarantees and underlying loans at issue - Mr. Reilly's extensive earlier analysis of specific Ontario loan guarantee transactions. He noted that Mr. Reilly found that secured loans, comparable to the loans Ontario companies obtained with government support, were available in the marketplace. Professor Kalt also noted that the interest rates on those loans tended to be less than 2% above the prime rate of interest, and so his assumption that secured loans were available at 2% above prime, during the time period of Mr. Reilly's analysis, was a conservative assumption.¹⁰

¹⁰ Kalt/Topel Revised & Final Report ¶¶ 23(a)-23(b).

24. Professor Kalt then examined the question whether the market continued to offer secured lending to forestry companies in the time period subsequent to Mr. Reilly's analysis, which featured a serious credit crisis. Professor Kalt found a number of examples that confirmed that the market continued to make secured loans available to forestry companies.¹¹

25. That conclusion left the task of identifying market interest rates for secured loans in the time period subsequent to Mr. Reilly's analysis, and the task of projecting future interest rates on secured lending for the period extending through the end of the SLA. There is no market index that tracks interest rates on secured loans. There are market indices for bonds, however, so Professor Kalt analyzed these indices to determine whether any of them bore a consistent relationship to observed rates in secured lending. He found the Canadian BB bond index bore such a consistent relationship.¹² This index is quite conservative as a standard for secured lending, for two reasons. First, BB bonds are considered to be below investment grade, and so reflect a significant amount of lending risk.¹³ Second, Professor Kalt found that the interest rates on his examples of secured lending were universally lower than the rate on the BB bond index.¹⁴ (This fact is demonstrated graphically at Figure 6 of the Joint Report.)

26. Professor Topel offers several criticisms of Professor Kalt's methodology. These are refuted in Canada's Annex, and do not stand. In fact, Professor Kalt did what Professor Topel did not. He recognized that the loans actually being offered with

¹¹ Kalt/Topel Revised & Final Report ¶¶ 31-33. Professor Topel's assessment of this analysis is dealt with in the Appendix.

¹² Kalt/Topel Revised & Final Report ¶ 38.

¹³ Kalt/Topel Revised & Final Report ¶ 23(b).

¹⁴ Kalt/Topel Revised & Final Report ¶ 38.

government support are secured loans, and developed a methodology to approximate the market rate of interest on comparable loans. In contrast, as noted, Professor Topel's failure to engage with the terms of loans actually being extended is the central flaw of his methodology. The remainder of this section explains the flaws in Professor Topel's approach.

2. Professor Topel's Methodology Fails to Provide a Fair Comparison to Secured Lending

a. Professor Topel's Methodology Does Not Recognize that Loans Supported by Ontario LGP and Québec PSIF Are Secured Loans

27. Professor Topel's methodology relies on market yields to maturity on unsecured debt. This approach is of little utility when one is looking for a comparator to evaluate secured loans. Secured lenders take a privileged position in insolvency, and are far more likely to recover their principal should insolvency occur. This is especially important in an industry like forestry, which has experienced financial distress in recent years. Unsecured lenders have no such protection. In times of financial distress they take much higher risks, and they accordingly demand extremely high interest rates from borrowers who appear likely to default.

28. The divergence in interest rates between secured and unsecured lending becomes widest at times when there is a serious risk of insolvency. Thus, as Domtar encountered financial challenges in 2009, credit analysts estimated that in the event of insolvency secured lenders would recover 100% of their principal, while unsecured lenders would recover only 25%.¹⁵ Not surprisingly, speculators in unsecured Domtar bonds demanded extremely high yields to maturity to buy those bonds in 2009, and

¹⁵ Kalt/Topel Revised & Final Report ¶ 44.

Professor Topel used those extremely high yields in his analysis.¹⁶ The same analysis predicted that secured lenders to Cascades also would recover 100% of their principal, but unsecured lenders would recover only 44%.¹⁷

29. Moody's Investor Service calculated that from 1982 through 2008 secured bank lenders whose borrowers entered insolvency recovered about 70% of their principal, on average. Unsecured bondholders, by comparison, recovered less than 37% of their principal.¹⁸ It is simply wrong for Professor Topel to assume that the yields demanded by unsecured bondholders can serve as a proxy for secured lending, *especially* in a time of rising insolvency. Secured lenders take far less risk, and are willing to accept far lower interest rates.

30. The record shows that every single loan that received an Ontario loan guarantee was secured, and the evaluation of security is a central feature of Ontario's review of a potential transaction.¹⁹ The same is true of PSIF funding regardless of the nature of the project at issue. As expressly stated in the PSIF program description under "Terms and Conditions," all loans require security interest in the assets of the company.²⁰

¹⁶ Kalt/Topel Revised & Final Report, Figure 15A.

¹⁷ Kalt/Topel Revised & Final Report ¶ 44.

¹⁸ Moody's Investors Service, "Corporate Default and Recovery Rates, 1920-2008" (February 2009) at 7 (Ex. R-151). The methodology used by Moody's provided calculated corporate debt recovery rates measured by post-default trading prices. These patterns are consistent with recovery rates measured by ultimate recoveries over a comparable time period (see page 9 of the same document).

¹⁹ ON-CONF-07311-R to -07312-R (Ex. R-23).

²⁰ Investissement Québec, PSIF – "Working Capital" (stating under "Terms and Conditions" that "[s]ecurities are required based on the financing granted.") (Ex. R-152), <http://www.investquebec.com/en/index.aspx?page=2128&prt=1>, PSIF – "Investment," (stating

b. Professor Topel's Yield to Maturity Index – Dominated by Speculative Yields on Unsecured Debt – Greatly Exaggerates His Benefit Estimates for the Secured Loans Supported by Ontario LGP and Québec PSIF

31. As explained above, Professor Kalt sought to construct a benchmark that conservatively approximates the market interest rates of the actual secured lending that takes place under the Ontario and Québec programs. Professor Topel, in contrast, refused to do so. Topel instead constructed, to serve as a benchmark, an index that consists almost exclusively of *unsecured* bonds,²¹ and this index is dominated by yields on the debt of a number of large companies that were seen by the market as headed toward insolvency. If a party wanted to propose a benchmark intentionally to misrepresent the market cost of secured lending, and intentionally to exaggerate the supposed interest rate savings of government action, that party could not devise a better tool.

32. Professor Topel's refusal to recognize the importance of secured lending is made clear by his own analysis. His index, while being composed almost entirely of unsecured bonds,²² ignored the secured debt of many of *the very same companies*, all of which enjoyed interest rates far lower than the yields Topel used. For example, in fiscal year 2008, Domtar's secured credit facility carried a Standard and Poor's rating of BBB-

under "Terms and Conditions" that "[s]ecurities are required based on the financing granted." <http://www.investquebec.com/en/index.aspx?page=2129&prt=1>, accessed June 7, 2010 (Ex. R-153).

²¹ See "Collateral for Topel Bonds," (Ex. R-154) (showing that only one of the bonds used in Professor Topel's index was secured).

²² Kalt/Topel Revised & Final Report ¶¶ 72-80, Figure 14.

which is investment grade debt. In contrast, the company's contemporaneous unsecured debt obligations were rated BB-, which is below investment grade.²³

33. The following chart contrasts the yields to maturity that Professor Topel's analysis assigns to several corporations, on the one hand, with the interest rate that those same corporations obtained at the same time under secured credit arrangements. Thus, for Abitibi, Professor Topel calculated that in April 2008 the yield to maturity of Abitibi bonds was 27.03%. Yet that same month Abitibi negotiated a secured term loan at only LIBOR + 8%, or 10.79%.

Corporation	Time Period in Which Secured Lending Obtained	Topel Yield to Maturity for that Time Period ²⁴	Credit Rating of Corporate Senior Unsecured Debt for that Time Period	Secured Borrowing Rate Obtained	Credit Rating of Secured Lending
Abitibi	April 2008	27.03%	CCC ²⁵	10.79% ²⁶ (LIBOR + 8%)	B+ ²⁷
Ainsworth	June 2007	13.83%	B ²⁸	8.32% ²⁹	BB- ³⁰

²³ Annual Report of 2008 for Domtar Corporation, Att. PPP to Reilly Surrebuttal Report (Ex. R-149). The annual report further notes that "[a]ccording to S&P, ratings of BBB have adequate protection parameters and ratings of BB have significant speculative characteristics." Reilly Surrebuttal Report, Att. PPP, at 56.

²⁴ Kalt/Topel Revised & Final Report, Figure 15A; and Professor Topel's Interest Rate Calculation Spreadsheet (Ex. R-155).

²⁵ "Rating Action: Moody's Assigns Abitibi-Consolidated's new secured term loan a B1 rating," Moody's Investor Service (Mar. 25, 2008) (Ex. R-156).

²⁶ Kalt/Topel Revised & Final Report, Figure 9.

²⁷ Ex. R-156.

²⁸ "Rating Action: Moody's Rates Ainsworth's Sr Sec Term Loan Ba3," Moody's Investor Service (June 15, 2007) (Ex. R-157).

²⁹ Kalt/Topel Revised & Final Report, Figure 9.

				(LIBOR + 3%)	
Bowater	November 2007	14.14%	N/A	7.72% ³¹	N/A
Bowater	November 2008	93.11%	N/A	6.46% ³²	N/A
Cascades	December 2009	7.51%	BB- ³³	3.39% ³⁴	BBB- ³⁵
Catalyst Paper	August 2008	2008 average YTM: 21.8% 2009 Average YTM: 41.7%	B ³⁶	2008 average rate: 5.8% 2009 average rate: 3.4% ³⁷	BB+ ³⁸
Tembec	September 2006	29.40%	N/A	8.25% ³⁹ (Prime + 2.25%)	N/A

³⁰ Ex. R-157.

³¹ Kalt/Topel Revised & Final Report, Figure 9.

³² Kalt/Topel Revised & Final Report, Figure 9. This is a raw comparison of the rate on the secured lending received by Bowater compared to Professor Topel's calculation of the company's YTM in November 2008. While Professor Topel limited his actual analysis to YTM's that were equal to or below 44.2%. A 44% rate also is wildly inaccurate, as evidenced by this comparison.

³³ "Rating Action: Moody's Assigns Ba3 Rating to Cascades' Proposed New Notes," Moody's Investor Service (Dec. 9, 2009) (Ex. R-158).

³⁴ Kalt/Topel Revised & Final Report ¶¶ 32(c).

³⁵ Ex. R-158.

³⁶ "Rating Action: Moody's Rates Catalyst's New Senior Unsec'd Notes B2," Moody's Investor Service (June 21, 2007) (Ex. R-159).

³⁷ Kalt/Topel Revised & Final Report ¶¶ 32(d). The 2008 average rate is based on the rates of the new asset-based loan facility entered into on August 2008 as well as the rates of the old facility held by the company.

³⁸ Ex. R-159.

³⁹ Kalt/Topel Revised & Final Report ¶¶ 32(a).

34. The chart shows that actual interest rates on secured loans to the very same companies that Topel analyzed were much cheaper than the yields to maturity he calculates.⁴⁰ Professor Topel's failure to recognize the difference between secured and unsecured lending greatly inflates his interest rates.

c. Professor Topel's Arguments That He Can Compare Yields on Unsecured Bonds to Secured Loans Are Unpersuasive

35. Professor Topel offers a number of different arguments to justify his refusal to recognize that loans supported by the Ontario LGP and Québec PSIF are secured. In particular, Professor Topel dismisses the security taken for loans supported by Ontario and Québec.⁴¹ He asserts that the loans are not meaningfully secured,⁴² and that the provincial governments supported high risk lending.⁴³ He concludes from these assertions that it is acceptable to compare these supposedly high-risk loans to yields determined mostly by unsecured debt. (Professor Topel also attempts to criticize Mr. Reilly's analysis. These matters are dealt with in the Annex.)

36. As the Tribunal considers Professor Topel's arguments, it should bear in mind the burden he carries: he has asked the Tribunal to ignore the difference between

⁴⁰ The only secured bond in Topel's analysis, a 13.75% note maturing April 1, 2011 issued by Abitibi-Consolidated Co. of Canada, had a 22.85% yield to maturity (YTM) in March 2009, right before AbitibiBowater filed for bankruptcy protection in the United States. The YTM's for other bonds issued Abitibi-Consolidated Co. of Canada that were included in Professor Topel's index, all of which were unsecured, ranged from 99.45% to 275%. Professor Topel's Interest Rate Calculation Spreadsheet (Ex. R-155).

⁴¹ As to Québec, this is an extraordinary contention as the United States and its experts has never even addressed the terms of the PSIF loans, let alone the nature of the securities interests set forth in them. See Canada Rejoinder at ¶ 316 ("The United States and its expert have made no attempt to demonstrate that IQ took on greater risk and less reward than a typical lender would have. Nor does the theory make sense unless the terms of the loan and the terms on which other lenders were involved are examined and compared.").

⁴² See e.g., Kalt/Topel Revised & Final Report ¶ 66.

⁴³ See e.g., Kalt/Topel Revised & Final Report ¶ 67.

unsecured bonds and secured loans. Recall the statistics cited above: secured lenders recover about 70% of their principal in an insolvency, while unsecured lenders recover only 37%.⁴⁴ It is not enough for Professor Topel to establish that the secured loans are risky, or that the industry sector faced a deep recession, or that lumber mill assets would lose value upon liquidation. Unsecured lenders to the same companies would face all of those same risks, without any protection of a security interest. Professor Topel must show that the protection available to a secured lender to lumber mills is completely worthless – that a secured lender’s interest offers no greater protection than an unsecured bond. This section shows that Professor Topel cannot even approach making such a demonstration.

37. Professor Topel supports his allegation principally by discussing three examples from the Ontario LGP, and contending that the transactions did not offer the lender sufficient security.⁴⁵ His arguments regarding each of the Ontario examples misstate the facts and demonstrate the ignorance of Ontario's program.

38. With respect to Québec, Professor Topel has offered no examples at all. This is apparently because the United States counsel, its forestry expert, and its economists, have never bothered to review the PSIF loan files in this arbitration and examine the security interests taken by Investissement Québec on the assets of each company. Instead, Professor Topel simply assumes that any security interest taken by Investissement Québec for any PSIF loan was worthless or irrelevant to the economists’ analysis of an appropriate benchmark. Such an assumption is neither evidence nor is it truly *expert* opinion; it is self-serving “assuming what one is trying to prove.”

⁴⁴ Para. 29, *supra*.

⁴⁵ Kalt/Topel Revised & Final Report ¶¶ 69-71.

39. There is a record with regard to the three Ontario examples, however, and the following paragraphs demonstrate Professor Topel's errors and misrepresentations of the facts with respect to each of the three Ontario examples.

40. [] Professor Topel claims that the []
[] But he bases his analysis on a transaction that never took place. Professor Topel states that []

[]⁴⁶ That transaction was never consummated. Instead, the lender was []

[]⁴⁷ This actual transaction is described in the record by a loan agreement that Professor Topel evidently failed to review.⁴⁸

41. Second, Professor Topel makes much of the point that []

[]⁵⁰ But Professor Topel very conveniently says nothing about

[]⁵¹ nor

⁴⁶ Kalt/Topel Revised & Final Report ¶ 69.

⁴⁷ It appears that Professor Topel based his "analysis" of the [] only on the due diligence report for the project, and that he did not even take the time to review, or he ignored, the final loan guarantee agreement between [] which clearly states the terms of the loan and related guarantee.

⁴⁸ See []

⁴⁹ Kalt/Topel Revised & Final Report ¶ 68.

⁵⁰ ON-CONF-04437, Listed in Kalt Report, Appendix B, Item 16 (Ex. R-2).

⁵¹ Reilly Report ¶ 44 (Ex. R-6); ON-CONF-04875 (Ex. R-6N).

does he bother to mention [

].⁵²

42. Third, Professor Topel betrays a fundamental misunderstanding of the manner in which the security interest protects both lender and guarantor. Under Professor Topel's interpretation of the facts, [

]. Of course, as

noted, the [] transaction did not proceed at all; but it is instructive nonetheless to examine the flaws in Professor Topel's analysis. Professor Topel states that [] took first interest in the security.⁵³ He appears to believe that this security therefore would be [

]. This is simply false. Every Ontario

loan guarantee provides that [

].⁵⁴ Under Professor Topel's hypothetical

facts, the security thus would have covered the [

]. In the actual transaction, the [

].

⁵² Reilly Report ¶ 44 (Ex. R-6); ON-CONF-04403 (Ex. R-60).

⁵³ Kalt/Topel Revised & Final Report ¶ 69.

⁵⁴ [

].

43. Fourth, Professor Topel fails to analyze the value of the security. He states that [

].⁵⁵ He seems to believe that the lender can only take a security interest in assets purchased with the proceeds of the loan, and that those assets would be worth far less upon resale. This misimpression would have been quickly corrected had Professor Topel read the loan guarantee agreement on the record. [

].⁵⁶ Ontario's due diligence provider noted that among these assets the [

58

44. Equally important is an estimate of the likely realized value of the security upon execution. Professor Topel notes that Ontario's due diligence provider described

⁵⁵ Kalt/Topel Revised & Final Report ¶ 68, n.77.

⁵⁶ [].

⁵⁷ ON-CONF-04440, Listed in Kalt Report, Appendix B, Item 16 (Ex. R-2).

⁵⁸ The security was to protect [

].

the [

].⁶⁰ Does that mean that

Ontario took a risk in extending its guarantee? Yes, it does. But it does not at all mean that Ontario's risk can be equated with that of an unsecured bond-holder in a world where unsecured bondholders recover less than 37% of their principal in insolvency.

45. The facts thus contradict Professor Topel's portrayal of the transaction. The security interest in this transaction significantly reduced the risks taken by [] and by Ontario. And this protection makes the interest rate on the loan simply not comparable to Professor Topel's unsecured bond yields to maturity.

46. []. In the case of [], Professor Topel makes an astonishing misstatement. He describes [

] This statement is false. The most charitable view is that Professor Topel did not bother to review the record on the value of the [].⁶¹

47. The record on [] is clear. The loan amount was []. The collateral included [

⁵⁹ Kalt/Topel Revised & Final Report ¶ 68.

⁶⁰ ON-CONF-04440, Listed in Kalt Report, Appendix B, Item 16 (Ex. R-2).

⁶¹ Professor Topel states that [

].

].⁶³

48. All in all, the due diligence provider concluded that [

]. This

collateral certainly did involve risk. The due diligence provider estimated the [

].⁶⁴ And in valuing the security

[

].⁶⁵

49. The fallacy in Professor Topel's conclusion is clear. He bases his view that the security was inadequate on a finding of [

]. A [] is very close to the average loss incurred

by secured lenders when the borrower enters in insolvency. It is high, but it stands in

⁶² [

].

⁶³ [

].

⁶⁴ [

].

⁶⁵ *Id.*

contrast to the loss of unsecured bondholders in insolvency, which as shown above averages more than 63%.

50. The risk faced by Ontario in this transaction was real, but that is not the question. Of course, lending is risky. The question is whether Ontario's risk in guaranteeing the subject secured loans is fairly comparable to the risks faced by holders of unsecured corporate bonds. The answer to that question is no, it is not.

51. []. Professor Topel makes much of the Ontario guarantee to support a loan to the []. He argues that Ontario received warnings that its security interest would be threatened by a possible [] insolvency, but issued a loan guarantee anyway. Professor Topel conceded, as he must, that [

[]. But Professor Topel nonetheless insists on attempting to make this transaction an emblem for Ontario's overall program. Canada accordingly here explains the errors and misrepresentations in Professor Topel's analysis.

52. At the time the [] transaction was under review, Ontario was well aware of the risk posed by the potential insolvency of []. Ontario's due diligence provider, [], described the risk in its due diligence report, and expressed concern that a [] would make it difficult for Ontario to recover its security interest in the []. Topel describes the []

⁶⁶ Kalt/Topel Revised & Final Report ¶ 71.

report at length, and then simply states that: [

] ⁶⁷

53. But Professor Topel omitted the critical facts. The [] report was the beginning of the consideration of security in that transaction, not the end. After receiving the report, [

].

54. The actual loan guarantee transaction then was structured to create the [

55. In evaluating security for its guarantee, Ontario did what any secured lender would do. It evaluated the risk, and structured the transaction to ensure strong security. Secured lenders do this all the time. And because they do it, in times of financial distress they can and do lend at much, much lower rates than unsecured lenders (as revealed in Professor Kalt's data and the chart provided above).

56. Refusal to face the distinction between secured and unsecured lending apparently emboldened Professor Topel to suggest that the interest rate on the [] loan should be compared to an interest rate of [], the yield to maturity he

⁶⁷ Kalt/Topel Revised & Final Report ¶ 71.

calculated for [] bonds in September 2006, or [], his calculation of the yield on [] bonds in August 2007.⁶⁸ But the fatal fallacy in this is clear: Ontario did not buy [] bonds. [] bonds – the unsecured obligations of a corporation with a likelihood of entering insolvency proceedings – were purchased by speculators who were willing to accept a very high risk that they would not collect their principal, in order to earn a very high return.⁶⁹ Ontario did not take comparable risks; nor would a secured lender have taken comparable risks. Ontario issued its guarantees in carefully structured secured transactions that reduced its risk to acceptable levels. Such secured transactions with commercial lenders were demonstrably available at the time of the [] (and other) transactions and provide the proper “apples” against which to compare Ontario’s guaranteed loan activity.

57. All three of these examples expose the false premises of Professor Topel’s allegations regarding the [

] Lenders, rating

agencies and others are well aware of the financial condition of the borrower, know that

⁶⁸ Kalt/Topel Revised & Final Report ¶ 83.

⁶⁹ In this course of his argument, Professor Topel attempts to calculate a “embedded” probability of default for [] by deducting a “risk free” interest rate from the yield-to-maturity on [] unsecured bonds. Kalt/Topel Revised & Final Report ¶ 83. As demonstrated by basic financial textbooks, many factors enter the formation of market interest rates. Professor Topel’s calculation, in contrast, simply assumes that unsecured bondholders necessarily expect a zero recovery of principal in insolvency, which is an outrageously simplistic assumption. A list of the risks other than credit risk that bond speculators consider in evaluating interest rates, but which Professor Topel ignored, would be too long to detail in this note, but some major ones include (1) risk that market interest rates will change after a security is acquired; (2) risk that the shape of the yield curve will change; (3) reinvestment risk, especially in issues of short maturity; and (4) inflation risk. See Fabozzi, Fixed Income Analysis, Chapter 2 (2007) (Attachment 27 to Kalt/Topel Revised & Final Report).

⁷⁰ Kalt/Topel Revised & Final Report ¶ 72.

⁷¹ Kalt/Topel Revised & Final Report ¶ 83.

insolvency frequently does not lead to liquidation, and have a full box of tools with which to reduce their risks. Professor Topel's unfounded assumptions about "bankruptcy" stands in sharp contrast to the hard-nosed, careful scrutiny that lies behind the secured loans at issue in this proceeding.

58. The errors contained in Professor Topel's analysis of secured lending, combined with many more errors detailed in the Annex, demonstrate that while Professor Topel agreed in principle with the need to make an apples-to-apples comparison,⁷² he did not do so. The Tribunal should use the interest rate analysis prepared by Professor Kalt.

59. Therefore, the under the decision points for "Ontario LGP" and "Quebec PSIF," the answer "Interest Rate – Kalt" should be selected on the Interactive Spreadsheet.

C. EXPORT DUTY CALCULATION

60. Another point of difference between the experts that emerged for the first time in the June 22 Joint Report was Professor Topel's decision to change the method the experts had used in all calculations up to that point for adjusting a province-wide production tax into an export tax. In the June 22 Joint Report, Professor Kalt has continued to use the standard adjustment, which is a well understood mathematical relationship between a production tax and an export tax. Professor Topel's new non-standard approach results in an export tax rate that is approximately 9 percent higher than the export tax rate that Professor Topel had calculated in the June 15 Joint Report.

⁷² Kalt/Topel Revised & Final Report ¶ 64.

61. In order to determine the export tax adjustment that would compensate for the offset or reduction in Export Measures, both the experts, separately and jointly, developed models that first determine the provincial production or output tax that would achieve that objective. Their underlying models operate by asking what tax on all Ontario and Québec lumber production (i.e., not just provincial exports of lumber) would have the effect of compensating for the subject programs effects on the SLA's Export Measures, and then converting each province's respective production tax into a corresponding export tax rate. At least until June 22, they converted this production tax rate into an export duty rate (or adjustment) applying the economists' standard formula for such conversion to Québec and to Ontario. Professor Topel now skips this last step – a step required for consistency with supply-demand principles.

62. Both experts agree that the required export tax rate will always be less than the production tax rate. As Professor Topel stated in the Joint Report, "because an export duty is targeted on reducing supply to the market at issue (the United States), it can have the desired effect if it is somewhat smaller than production tax."⁷³ As Professor Kalt explains, the calculation used by both he and Professor Topel to convert the Ontario and Québec lumber production tax into an export tax is derived from standard results used by all economists. Indeed, Professor Topel presented the standard formula in his first report.⁷⁴ The formula indicates that the export tax will always be somewhat smaller than the production tax rate that would be required to achieve the same compensatory effect on the Export Measures (or on U.S. producers).

⁷³ Kalt/Topel Revised & Final Report ¶ 168.

⁷⁴ Topel Report ¶ 56 (Ex. C-2).

63. Under any scenario, the compensatory export duty must reduce exports by a specific targeted amount (or percentage) that results to the corresponding offset in the Export Measures. An output tax and an export tax can both induce a reduction in exports to meet any specific target, but as the two different taxes apply to different activities, the tax rates required to meet that target are different. An export tax, by being focused on exports only, is more effective in limiting exports than a tax on all production. Thus, for any given system of supply and demand relationships, the export tax rate which hits a given target of marketplace price adjustment (i.e., compensation for offsets or reductions in the SLA's Export Measures) is lower than the corresponding production tax rate which hits that target.

64. The economic reason for a lower export tax than production tax to achieve the same result is clear. Export taxes and production taxes both reduce the net price that producers receive for their marginal sales. The effect of a production tax and an export tax on domestic consumers, however, is quite different. Under a production tax, domestic consumers will pay the same price as the producers charge in the export market. If they did not, then producers could shift to the market in which they charge more and obtain greater profits. Under an export tax, the situation is quite different. Producers can charge customers in the domestic market the price they charge in the export market less the amount of the export tax. Under the export tax, therefore, domestic consumers will face a lower price than in the export market. With lower prices than under the production tax, domestic consumers will purchase more of the output of the domestic producers.

65. For a given targeted price change in U.S. softwood lumber prices (caused by a reduction in exports from Québec and Ontario) consumers in Québec and Ontario will have a higher demand for lumber with an export tax than with an output tax, and will

therefore consume some of the lumber that would otherwise be exported under an equivalent production tax of the same rate. Expressed differently, "an export tax on good 1 is equivalent to a consumption subsidy and a production tax of the same rate on good 1."⁷⁵ Thus, for the same tax rates, exports will be less under an export tax than under a production tax. As a result, in order to hit the same target for a reduction in exports (and increase in U.S. price) the export tax must be set at a lower rate than the production tax, to account for the difference in the effects on domestic (Quebec and Ontario) consumers.

66. The formula presented by Professor Topel in his first report and used in all his reports until June 22 properly reflects these standard relationships.⁷⁶ The export tax is equal to the ratio of the effect of the tax on Québec and Ontario production alone to the effect of a price change on both production and domestic demand. The export tax and the production tax would be the same only if domestic demand is unaffected by price changes, which simply cannot be the case. Professor Topel, as well as Professor Kalt, consistently performed this standard translation conversion in each of the reports and in the Joint Report filed by Professors Kalt and Topel on June 15, 2010.⁷⁷

67. Professor Topel abandoned this method in the June 22 Joint Report and decided to use the unadjusted production tax as his recommended export tax. Rather than applying any conversion formula, he now recommends that the Tribunal use the

⁷⁵ Wong, Kar-yiu. *International Trade in Goods and Factor Mobility*. Cambridge, Mass.: MIT, 1995, 445 (Ex. R-160).

⁷⁶ The formula states: Export tax rate = Production tax rate times the ratio of: (Production times supply elasticity) divided by (Production times supply elasticity *plus* Domestic consumption times demand elasticity.) In this formula, the demand elasticity is expressed as a positive number.

⁷⁷ Topel Expert Report, Nov. 21, 2008 (Ex. C-2); Topel Expert Response Report, Mar. 23, 2009 (Ex. C-44); Topel Rejoinder Report, June 19, 2009 (Ex. C-62); and Kalt/Topel June 15 Report.

model's production tax rate as the Topel export tax rate. In the strictest sense, Professor Topel has not calculated an export tax rate for the Tribunal; he has recommended that the Tribunal impose the model's calculated province-wide production tax rate as a substitute for the export tax rate yielded by standard economic analysis. As a result, the export tax rates recommended by Professor Topel in the June 22 Report are roughly 9 percent higher for this reason alone than the rates calculated by Professor Topel in the Joint Experts' Report filed seven days before.⁷⁸

68. Professor Topel's last minute conversion to the view that a production tax should be applied to exports (instead of applying an export tax to exports) is premised on his opinion that the export tax calculated, applying the standard methodology that both experts had been using up to that point, would result in an export tax that was "too low to offset the harm caused to U.S. producers."⁷⁹

69. Professor Kalt has explained the lack of empirical or theoretical basis for Professor Topel's new view in the Joint Report. He notes that the severe drop in softwood lumber exports from Ontario and Québec in response to the mid-April 2009 imposition of a 10% import duty by the United States (pursuant to the decision in LCIA 7941/91312) is consistent with the conclusion that the model of the experts here, with the conversion of production tax rates into export tax rates, actually underestimates the restrictive effect that a given level of export tax adjustment would achieve.⁸⁰ Professor

⁷⁸ The rate varies slightly between Québec and Ontario.

⁷⁹ Kalt/Topel Revised & Final Report ¶ 169. In ¶ 169, Professor Topel explains that despite this normal relationship of a somewhat smaller export tax, the higher production tax should be applied to make sure that harm to U.S. producers is addressed as fully as possible. In this sequence professor Topel reaffirms the consistency with which his approach addresses the U.S. producer surplus rather than the Export Measures, the legally valid target.

⁸⁰ Kalt/Topel Revised & Final Report ¶¶ 199 and 201.

Kalt notes that the sharp decline in exports in response to that duty establishes “that export duties are particularly effective in discouraging provincial export supply.”⁸¹ This empirical confirmation, specific to the product and regions at issue here, establishes that instead of being conservative, the estimated compensatory adjustments have the potential for an even more dramatic impact on trade.

70. For the foreseeable future, softwood lumber exports from Ontario and Québec will be subject to both the normative 5% Export Charge under SLA Article VII and the additional 10% charge coming from LCIA 7941/91312. Any compensatory adjustment emerging from this proceeding will be cumulative. That is, it will come on top of these existing charges. That reality increases the prospective effectiveness of the estimated compensatory adjustments rendering them a more, not less, potent remedy. Professor Topel’s assertion “that the export remedies that Professor Kalt and I calculated are conservative, perhaps very conservative”⁸² is refuted by the very evidence he cites, which proves how very effective even small export charges can be.⁸³

71. Professor Topel attempted to justify his abrupt abandonment of the standard adjustment on the basis of his assertion that Canadian producers would be able to “substitute around” the export duty in two ways.⁸⁴ First he argues that although Ontario and Québec may reduce their exports in response to an export tax, that unexported production could go to other provinces and other provinces might then

⁸¹ *Id.* ¶ 201.

⁸² *Id.* ¶ 177.

⁸³ In this regard it is worth noting that the Parties themselves considered an export fee that would never exceed 5%, coupled with the existing quota levels sufficient to suppress Canadian exports to justify the United States in surrendering resort to its trade laws for the duration of the SLA plus one year.

⁸⁴ Kalt/Topel Revised & Final Report ¶ 169.

increase their exports to the United States. Second, he argues that Ontario and Québec producers might defer harvest of trees while the increased taxes are in effect, and then, following expiration of the SLA, increase their harvest and their exports of lumber to the United States. Professor Topel has no empirical evidence to support either one of “substitutions.” He is asking the Tribunal to reject standard practice – and his own practice up until June 22 – on the basis of speculations, not evidence or analysis.

72. Furthermore, as explained by Professor Kalt, additional exports from the rest of Canada are anticipated and already built into the model and the calculation of the production tax on Ontario and Quebec. Like the United States, the rest of Canada will see higher prices as the result of the imposition of the compensatory adjustment. This will cause production in the rest of Canada to increase, local consumption to decrease, and the export of lumber to increase. All of these effects are incorporated in the model and cause the standard approach to calculate a higher production tax (and therefore a higher export tax even after the standard adjustment).

73. Professor Topel’s concern that timber and logs will be diverted until the SLA expires is also without support. As Professor Kalt has indicated, to the extent that logs are not being used to make lumber, there are alternative uses for the wood fibre for making paper, chips, and pellets.⁸⁵ As has been demonstrated in this proceeding, logs can be readily diverted between lumber and non-lumber uses in response to economic forces.

74. Finally, Professor Topel provides no evidence that the export tax is ineffective in reducing exports to the United States. Instead, he shows that an export tax

⁸⁵ Kalt/Topel Revised & Final Report ¶¶ 202 and Att. 41 and 42.

on (primarily) Québec and Ontario caused a large reduction in exports from those regions relative to the rest of Canada. Rather than supporting a view that the export taxes are “toothless,” the evidence shows just the opposite; export taxes have a large effect on reducing exports from Québec and Ontario and from Canada as a whole. Consequently, they are effective in reducing the competition from Canada that is seen by U.S. producers and, hence, in bolstering prices received by U.S. producers.

75. In sum, Professor Topel has presented no valid rationale or evidence for his last minute abandonment of the standard conversion formula that he himself had previously applied for more than two years in this proceeding. The Tribunal must reject this arbitrary and unjustified attempt to inflate any compensatory adjustments imposed on Canada. For these reasons, the “Export Duty Calculation” decision point should be answered “Derived Export Duty – Kalt” on the Interactive Spreadsheet.

PART II. TRIBUNAL DECISION POINTS – QUÉBEC PROGRAMS

A. THE MEASURE OF ANY BENEFIT AMOUNT ATTRIBUTED TO THE QUÉBEC CAPITAL TAX CREDIT PROGRAM IS THE AMOUNT UTILIZED, NOT THE AMOUNT POTENTIALLY AVAILABLE

76. Canada believes that it would be a serious error to include the Capital Tax Credit program as a part of any remedy. As Canada explained in its prior briefs, the Capital Tax Program is safe harboured under Article XVII(2)(b). It is a quintessential example of the type of program that paragraph 2(b) was intended to safe harbour: the program existed since 2005 and the increase in the credit rate for forest sector companies was publicly announced and put into immediate implementation in March

2006.⁸⁶ But if the Tribunal finds that benefits provided in the limited past period were not exempt under safe harbour 2(b), the Tribunal should adopt Professor Kalt's approach to the valuation of benefit rather than Professor Topel's.

77. Professor Kalt estimated actual benefits received by softwood lumber companies from the Capital Tax Credit based on an analysis of the record evidence, including the evidence that limitations on the use of the credit meant that every year Québec taxpayers were able to use only a portion of the potentially available credit. Professor Topel acknowledges that the credits were not fully used, but still considers that all the credits that, in theory, might have been used should be considered a benefit because of his belief that Québec taxpayers might have invested as if they were going to be able to use the full credit, despite the limitations on its use and their past inability to use the full amount of their credits.

1. Professor Kalt Properly Estimates the Actual Benefit Provided Under the Capital Tax Credit Program While Professor Topel's Higher Estimate Ignores the Actual Use of the Credits

78. Professor Topel argues that the benefit of the Capital Tax Credit should be based on the total amount of credits theoretically available to softwood lumber producers, rather than on the amount of credit actually used by softwood lumber producers. Specifically, he (1) speculates, without supporting evidence, that forest companies would have believed that they were going to be able to use the full amount of the incremental credit to offset future taxes, even if they had not been able to do so in the past and despite limitations on use or any guarantee on future utility; (2) speculates that the limitation on use of incremental credits were not significant; and (3) speculates

⁸⁶ See Stmt. of Defence ¶¶ 281-296, Rejoinder in Rebuttal ¶¶ 208-227, Canada Post-Hearing Brief ¶¶ 146-156. The same March 2006 Budget Speech established the original 40% Road Tax Credit, which also took immediate effect.

that Professor Kalt's analysis of actual benefits received based on review of tax returns for all 24 reporting firms would understate overall utilization because those 24 firms might not be representative of the industry. In short, Professor Topel's approach is based on speculation rather than evidence. Professor Kalt, on the other hand, analyzed the record to determine how much of the earned capital tax credit softwood lumber companies actually used to offset tax liabilities and thereby obtain benefits. His approach is a far more accurate way of complying with the Tribunal's instruction to determine the yearly benefits provided by the Capital Tax Credit program in that it relies on the evidence presented to the Tribunal.

2. Professor Topel Ignores the Record Evidence Concerning Capital Tax Credit Utilization and the Tribunal's Direction to Estimate Yearly Benefits of the Program

79. In essence, Professor Topel argues that the measure of benefit provided by the incremental tax credit in Québec should be the level of benefits that would have been provided if the limitations in the program and changes in the tax law had not prevented utilization of a substantial part of the credit, rather than the actual level of utilization calculated by Professor Kalt.⁶⁷ Professor Topel theorizes that what matters is what benefit taxpayers might have expected, not what they received. But the Tribunal, in PO No. 6, invited Professors Kalt and Topel to estimate the yearly *benefits* provided by the listed programs. Professor Kalt did this by estimating the value of credits actually used by softwood lumber companies based on the totality of the record evidence. Professor Topel rejects this evidence-based approach, choosing instead to estimate a remedy based on the nominal amount of available credits despite proof that all such credits were not used.

⁶⁷ See Kalt/Topel Revised & Final Report ¶¶ 123, 125.

80. Even if taxpayer expectations were the relevant test, Professor Topel offers no evidence for the optimism he attributes to taxpayers that they could count on full eventual utilization of the credit. The record shows that there was no such guarantee in the law, changes in the law itself provided no justification for faith in eventual full use of the credit, and that year after year the taxpayers had not been able to fully utilize the credit. Moreover, at the time the preference to forest companies was granted, the already low rate of the underlying tax was scheduled to decline further; meaning it would become even more difficult to utilize this non-refundable credit. The March 2008 Budget Speech (during the middle of the short-lived period in which forest sector companies received an incremental credit) announced that 2010 would be the last year the capital tax would be imposed.⁸⁸ And, of course, the March 2008 Budget Speech accelerated that announced decline by immediately eliminating the capital tax applicable to manufacturers, including lumber producers.⁸⁹ From inception to repeal, evidence establishes that the trajectory of the Capital Tax Credit was towards greater inutility. Yet Professor Topel assumes a sudden surge of taxpayer confidence in the utility of the credit. That assumption is without foundation.

81. Leaving aside that Professor Topel has no factual foundation for his assumption; the focus of analysis in international trade law is on the actual "benefit to the recipient."⁹⁰ As the WTO Appellate Body explained in interpreting SCM Agreement Article 1.1, "[l]ogically, a 'benefit' can be said to arise only if a person, natural or legal, or

⁸⁸ Stmt. of Defence ¶ 281; Canada Rejoinder ¶ 203; Canada Post-Hearing Brief ¶ 215.

⁸⁹ *Id.*

⁹⁰ Appellate Body Report, *Canada – Measures Affecting the Export of Civilian Aircraft*, ¶ 155, WT/DS70/AB/R (Aug. 2, 1999) (RA-103).

a group of persons, *has in fact received something*.⁹¹ Accordingly, tribunals deciding disputes about allegedly improper subsidies have never recognized a benefit where its alleged recipient did not in fact receive something of tangible value. Professor Topel's theoretical "incentives to investment" do not satisfy this standard.

82. A credit against future taxes is like a rebate coupon for future purchases; it has value only to the extent it can be used. Even if the prospect of claiming a credit (or a rebate) induces a purchase, the buyer experiences a pure financial expense at the full price of the purchase if the credit (or rebate) in fact is not or cannot be taken or claimed. In the case of the Capital Tax Credit, the credit can be used only to the extent of actual capital tax liability. If there is insufficient capital tax liability against which to apply the credit, the credit cannot be used. When, as here, the tax itself is repealed while credits remain outstanding and unused, those credits are rendered useless, just like expired rebate coupons. Even if sawmills purchased capital assets in anticipation of claiming the credit in the future, those mills receive no benefit from the credit if in fact they are unable to use the credits in the future because they have insufficient future capital tax liability, including as a result of the repeal of the tax. Instead, they have an item of capital purchased at full price.

83. Professor Kalt correctly recognizes the economic reality of the Capital Tax Credit by estimating benefits on the basis of the actual use of the credits as developed on the record from examination of actual claims. Professor Topel ignores the economic and legal reality and instead treats the Capital Tax Credit as if it were a refundable tax credit – able to be redeemed for cash without any limitation on use. But the Capital Tax

⁹¹ *Id.*, ¶ 154 (emphasis added).

Credit is not refundable, has a single limited application, and on the record, was chronically under-utilized.

84. National laws of WTO Member States parallel the provision of SCM Agreement Article 1.1. All require that a benefit be conferred in fact in order for a subsidy to be found.⁹² Where a government program does not confer tangible benefits on specific persons, there is no basis for imagining a benefit based on actions that may have been taken in the hope that a benefit would be realized in the future. Under law, benefits are measured in reality, not in aspiration.

3. Contrary to the Impression Created by Professor Topel's Statement, Very Little Unused Capital Tax Credit Could Be Redeemed by Softwood Lumber Companies

85. Professor Topel's statement "although subsidized credits for forest-sector firms could be accumulated only through November 2007, any credits that the company had already earned could be used to offset future tax liabilities"⁹³ creates the misimpression that softwood lumber companies would have expected to be able to use the vast majority of unused capital tax credit against future tax liabilities.

86. The 2008-2009 Budget released in March 2008 immediately eliminated the capital tax liability for manufacturing companies. Repeal of the tax also eliminated the capital tax credit for manufacturing companies, as of the day of the Budget Speech, because there was no longer liability against which unused credit could be offset.⁹⁴

⁹² See 19 U.S.C. § 1677(5)(B) (U.S. trade law) (RA-102); *Special Import Measures Act*, 1984, c.25, s. 2 ("subsidy") (Canadian law) (RA-150).

⁹³ Kalt/Topel Revised & Final Report ¶ 123.

⁹⁴ *2008-2009 Budget: Additional Information on the Budgetary Measures*, Mar. 13, 2008 Att. 36 to Kalt/Topel Revised & Final Report, at A.78: "[S]ince the use of the capital tax credit is conditional on a tax on capital being otherwise payable, the elimination of the tax on capital for

While any unused balance of capital tax credit could be applied against the tax on capital otherwise payable, only a small category of firms still had capital tax otherwise payable: those that had taxes due for financial year 2007, whose returns were filed late in 2008,⁹⁵ and those that accrued capital tax liability in the 2½ months between January 1, 2008 and the March 13, 2008 Budget Speech.⁹⁶ Tellingly, Revenue Québec recognized this reality projecting that a relatively small amount of capital tax credit would be claimed in 2008 (\$60 million versus \$183 million in 2007), with no capital tax credit claims projected after that year.⁹⁷ In other words, Revenue Québec projected what logic dictates: minimal use of the Capital Tax Credit in the first fiscal period following repeal of the tax and none at all thereafter.

87. Professor Topel also claims that the ability to use accrued incremental capital tax credit was unlikely to be seriously limited by the level of current and future tax liability because the investments that qualified for the capital tax credit would constitute only a small part of the total taxable capital stock.⁹⁸ According to Professor Topel, the total capital tax payable by a softwood lumber company in any given year would

manufacturing corporations will result in the withdrawal of the capital tax credit as of the day of this Budget Speech.”

⁹⁵ Québec taxpayers may file tax returns within six months of the end of their fiscal year without penalties. See RQ Witness Statement, Testimony of Gaëten Lépine, ¶¶ 5-6; Testimony of René Martineau ¶¶ 6-7; Testimony of Danielle Hudon ¶ 7 (Ex. R-124).

⁹⁶ Under 2008-2009 Budget, some capital tax would still accrue for manufacturing corporations whose proportion of manufacturing and processing activities was between 20%-50%, and for non-manufacturing corporations (whose proportion of manufacturing and processing activities was below 20%). Clearly, the proportion of manufacturing and processing activities of softwood lumber companies would be well over 50%, so they would not accrue capital tax liability.

⁹⁷ See *Québec Tax Expenditures 2009 Edition*, Att. 38 to Kalt/Topel Revised & Final Report, at A.57. Note that this projected amount is for capital tax credit claims of all corporations other than financial institutions, not just forest companies.

⁹⁸ See Kalt/Topel Revised & Final Report ¶ 124.

significantly exceed the capital tax credit earned on qualifying investment during this year and carried over from previous years. But this claim is not based on any evidence nor a demonstrated understanding of the workings of the capital tax itself. Professor Kalt's examination of the actual capital tax returns data refutes Professor Topel's unsupported belief. By analyzing the tax documents of companies that reported earned and used capital tax credits in 2006 and 2007, Professor Kalt determined that over 97 percent of the available incremental credits were not used in 2006, and over 70 percent were not used in 2007. Thus, analysis of the tax as applied demonstrates that softwood lumber companies were severely constrained in their ability to take advantage of the capital tax credit in each of 2006 and 2007 while the tax and the credit were in full force. Professor Topel's speculation that in the short window between December 2007 and repeal of the Capital Tax in March 2008 softwood lumber producers could have foreseen the coming repeal of the tax and developed the ability to fully utilize credits that went unused in prior years is unsupported speculation that cannot be credited.

4. Professor Kalt's Calculation of the Benefit of Capital Tax Credit Program Is Based on Tax Returns Collected Per the Tribunal's Order, and Initially Selected by U.S. Expert Mr. Beck

88. Professor Topel criticizes Professor Kalt's calculation of the amount of capital tax credit actually used based on the tax returns of 24 firms that authorized the release of their tax information, asserting that these returns are unrepresentative because of flawed "selection criterion."⁹⁹ He is wrong. There was no "selection criterion." The documents upon which Professor Kalt relied are properly produced records of capital tax credit earned and claimed in 2006 and 2007, before the end of the increased credit rate for softwood lumber companies and the elimination of the tax for

⁹⁹ See Kalt/Topel Revised & Final Report ¶ 125.

manufacturing companies. All returns of those who waived the confidentiality provisions of Québec law were examined, and there is no evidence whatsoever that companies decided whether or not to waive because of their greater or lesser tendency to utilize tax credits. The Tribunal has already reviewed this issue in detail and expressly sanctioned the completeness and propriety of Canada's document production.¹⁰⁰ Canada has produced all responsive tax documents on the Capital Tax Credit as directed by the Tribunal and permitted by its domestic law. With respect to tax documents of large forest companies that could not be produced, Professor Kalt's personal investigation (which constitutes the only evidence on the record), indicates that [

] did not receive any benefit from the incremental capital tax credit for forest companies.¹⁰¹ This finding comports with the documented reality that large amounts of available Capital Tax Credits went unused in 2006 and 2007, just before the tax was repealed (on manufacturing companies, including softwood lumber producers).

89. In addition, it should be noted that the tax return documents on which Professor Kalt relies were originally identified by the United States' own expert

¹⁰⁰ In fact, the Parties have already litigated this issue thoroughly. In May 2008, Canada explained in detail, and with accompanying citation, that confidentiality provisions of Québec's *Act Respecting the Ministère du Revenu* (R.S.Q., C. M-31) prohibited unauthorized disclosure of tax records, and that there was no provision for redaction and release of non-confidential summaries. See Canada Letter to United States, May, 1 2008; Canada Letter to the Tribunal, May 22, 2008. Then, in its letter of Mar. 6, 2009, the United States claimed that Canada violated Procedural Order No. 4 by refusing to produce redacted summaries of tax records for which it was not able to obtain taxpayers' consent to release. See U.S. Letter to the Tribunal, Mar. 6, 2009. After Canada reminded the Tribunal of the requirements of Québec's domestic law and the of background of Procedural Order No. 4 (Canada Letter to the Tribunal, Mar. 16, 2009), the Tribunal clarified that disclosure of tax records related to Capital Tax Credit "was subject to the Respondent's obtaining the required consents" and that the Tribunal did not order Canada to provide redacted versions in case consent could not be obtained. See Tribunal Letter to the Parties, Mar 30, 2009, ¶ 2(b).

¹⁰¹ See Kalt Rebuttal Report ¶ 92 (Ex. R-101).

Mr. Beck.¹⁰² Hence, the United States did not always consider the data Professor Kalt used to be as unrepresentative of the industry as to give it no weight, as Professor Topel does now.

90. For all the above reasons, the "Québec Capital Tax" decision point should be answered "Total Credit Amount Used" on the Interactive Spreadsheet.

B. PROFESSOR TOPEL INTERPOLATES AROUND THE RECORD EVIDENCE TO GROSSLY OVERESTIMATE BENEFITS PROVIDED BY THE ROAD TAX CREDIT

91. Professor Topel estimates the annual benefits provided by Québec's Road Tax Credit by substituting selective interpolations in place of projections and estimates prepared and published by Revenu Québec (the administrator of the credit) and the Gouvernement du Québec, where doing so produces a higher annual benefit amount. In contrast, Professor Kalt uses all available evidence – all the estimates and projections prepared and published by Québec – to arrive at his estimate of the benefits provided by the Road Tax Credit program. The Tribunal's decision point should follow Professor Kalt's analysis and reflect the totality of the evidence, not selective and inconsistent bits of the evidence.

1. Professor Kalt's Consistent Use of the Available Evidence Is a Better Estimate of the Benefit Provided by the Road Tax Credit Program Than Professor Topel's Selective Interpolation Approach

92. In accordance with the Tribunal's guidance that the experts could use evidence on the record and evidence that was publicly available, where necessary, to assist the Tribunal in reaching a final determination, Professors Kalt and Topel refer to

¹⁰² Compare Beck Report, Nov. 21, 2008, Table 13 (Ex. C-1) (citing Attachment AS at QC-C-098644-099141; QC-C0100655-100763) with Kalt Rebuttal Report, Appendix Figure A-4A (Ex. R-101) (citing Beck Attachment AS at QC-C-098644-099141; QC-C0100655-100763)

the publicly available 2009 edition of Québec's Tax Expenditures report, which is included as an attachment to their Joint Report and to the most recent (2010-2011) Québec Budget.¹⁰³ The Tax Expenditures report is an annual publication prepared by Revenu Québec in accordance with OECD's established methodologies for determining tax expenditures and reports the most informed estimates and projections of the revenue effect for the many different elements of the tax system in Québec, including the Road Tax Credit. The 2009 edition of the Tax Expenditures report is the most current version and it includes estimates of tax expenditures on the Road Tax Credit for the years 2006 and 2007, and projections for the years 2008, 2009, and 2010. In addition to the Tax Expenditures Report, the Gouvernement du Québec also publishes annual budget plans each March. The most recent such budget was issued in March 2010 and includes projected budget effects for the Road Tax Credit for fiscal years 2011-2012 and 2012-2013.¹⁰⁴

93. Professor Kalt's estimate of the benefits associated with the Road Tax Credit is based on the data and information included in the 2009 Tax Expenditures report and the 2010 Budget as the best available evidence of the likely future use of the Road Tax Credit and the implied level of road building. Both published sources reflect the most current and best informed assessment of the likely future use of the Road Tax Credit by the agency responsible for its administration and, unlike projections made at the start of that program, is informed by several years experience with that credit.¹⁰⁵ Professor Topel, on the other hand, rejects the 2009 Tax Expenditures report's projected

¹⁰³ See Kalt/Topel Revised & Final Report, Att. 38 (Tax Expenditures), Att. 37 (Budget).

¹⁰⁴ Kalt/Topel Revised & Final Report ¶¶ 130-131.

¹⁰⁵ *Id.* ¶¶ 135-141.

expenditures for years 2008, 2009, and 2010 based on his sense that because projections made at the start of the program were later found to be too low, the most recent projections should be assumed to be as conservative as those made at the outset of the program. In place of projections made by the administering agency, Professor Topel developed an interpolation for the years 2008, 2009, and 2010 based on projections out to fiscal 2012-2013 and reported in Québec's most recent budget.¹⁰⁶ In other words, Professor Topel accepts as useable the Budget projections for 2011-2012 and 2012-2013, but rejects as understated Revenu Québec's projections for 2008, 2009, and 2010.

94. Professor Topel's interpolation approach is based on speculation. Speculation that Revenu Québec learned nothing about the actual use of the program during its first few years administering the Road Tax Credit. Speculation that the most recent projections by Revenu Québec will have precisely the same relationship to actual use as projections made when the program was first announced. And speculation that projections for fiscal 2011-2012 and 2012-2013 are reliable while those for 2008, 2009, and 2010 are not. Awards should not be based on unfounded speculation.¹⁰⁷ Indeed "[t]ribunals have been reluctant to provide compensation for claims with inherently speculative elements."¹⁰⁸ Professor Topel's speculations ignore that the most recent tax

¹⁰⁶ *Id.* ¶ 134.

¹⁰⁷ For example, tribunals routinely reject claims for future lost profit where the estimate of future includes speculative elements. *Compañía de Aguas del Aconquija SA and Vivendi Universal SA v. Argentina*, Award, ¶ 8.3.3 (RA-151). Another arbitration tribunal has stated that "[d]ecisions issued by ICSID [International Centre for Settlement of Investment Disputes] tribunals and by the Iran-US Claims Tribunal have often dismissed claims for lost profits in cases of breach of contract on the ground that they were speculative and that the claimant had not proven with sufficient degree of certainty that the project would have resulted in a profit." *Autopista Concesionada de Venezuela CA (Aucoven) v Venezuela*, Award, ¶ 351 (RA-152).

¹⁰⁸ International Law Commission's Draft Articles on Responsibility of States for Internationally Wrongful Acts, Commentary 27 to Art. 36(2) (CA-20). For example, the Eritrea Ethiopia Claims

credit expense projections have the benefit of Québec's most recent experience with the Road Tax Credit, in addition to being produced in accordance with OECD standards, points expressly recognized by Professor Kalt.¹⁰⁹ Professor Topel's criticism also fails for implying a systemic bias on the basis of a single line in Tax Expenditure reports.¹¹⁰ A bias that does not exist.

95. As Professor Kalt notes, Revenu Québec's forecasts are built applying long-established OECD guidelines and include trends observed in recent years and relevant economic data.¹¹¹ Against this, Professor Topel posits systemic underestimation of tax credit usage. Testing this suspicion against the wide swath of tax credit projections made by Revenu Québec confirms that there is no systemic bias towards underestimating credit usage. In many cases, tax expenditure projections are consistent with or even overestimate actual spending. For example, the projection of tax expenditure on the credit for "Québec film and television production" for 2007 was \$98 million, and the estimate of actual spending in 2007 was also \$98 million.¹¹² Other tax credits for which tax expenditures projections equaled or overestimated actual spending

Commission denied a claim for lost profits because it "was speculative and insufficiently supported by evidence. The evidence regarding the alleged losses on loans claimed to be uncollectible was also quite limited... The Commission regards such losses as too remote from Eritrea's *jus ad bellum* violation, and as not compensable." *Ethiopia's Damages Claims between The Federal Democratic Republic of Ethiopia and The State of Eritrea*, Eritrea Ethiopia Claims Commission, Final Award, ¶ 402 (Aug. 17, 2009) (RA-153).

¹⁰⁹ Kalt/Topel Revised & Final Report ¶¶ 138-141.

¹¹⁰ The comparison is summarized in Figure 26 in the Kalt/Topel Revised & Final Report. Note that Figure 26 uses implied spending figures derived from the tax expenditure figures as shown in Figure 27. Since the implied spending figures are slightly higher than tax expenditure figures, the difference between estimates and projections is also slightly higher.

¹¹¹ Kalt/Topel Revised & Final Report ¶¶ 138-139.

¹¹² *Compare* Tax Expenditures 2009 Ed., A.54 (Att. 38 to Kalt/Topel Revised & Final Report) with Tax Expenditures 2008 Ed., A.56 (Ex. R-161).

include new economy credits for "CDTI," and "E-business activates carried out in certain designated sites," overall category of "Promoting culture" credits, credit for "Book publishing," and tax credits related to "On-the-job training periods," and "Declaration of tips." In the category of "Promoting investment" credits (where the Road Tax Credit is classified), the tax expenditure projection matches the estimate of actual spending for the "Gaspésie and certain maritime regions of Québec" credit.

96. The over- and under-projections of actual expenditures on tax credits reflect the inherent uncertainty in projecting expenditures that depend on the confluence of multiple economic, behavioral, and other phenomena. Professor Topel's assertion of unreliability falsely draws a conclusion from a single data element, ignoring contrary data points from the same source showing that Québec's fiscal projections are objective statements prepared in strict conformity with OECD guidelines and published for public scrutiny, and with no evidence of systemic bias towards underestimation.

97. The Revenu Québec projection of 2007 expenditures that Professor Topel criticizes dates to the original adoption of the Road Tax Credit in 2006, before Revenu Québec had any actual experience administering the credit. The newer projections by Revenu Québec, included in the 2009 Expenditures Report that Professor Topel asks the Tribunal to ignore, were made with the benefit of several years experience with the credit. Boiled down therefore, Professor Topel's assertion is that Revenu Québec learned nothing from its actual administration of the Road tax Credit to inform projections for the years 2009, 2010, and 2011 and so ignore projections for those years. At the same time, of course he proposes to use the projections for 2012 and 2013. There is no explanation for this inconsistency other than that this selective approach produces a greater remedy for the United States.

98. If the Tribunal determines that the incremental Road Tax Credit (the amount above the initial 40%) confers a benefit and does not fall within the applicable safe harbours, the analysis performed by Professor Kalt applying the totality of the evidence provides the legally, factually, and economically sound method for setting the compensatory adjustment. By contrast, Professor Topel's interpolation, which expressly rejects the best informed evidence of the level of benefit for the years 2008-2010, should be rejected. For these reasons, the "Québec Roads Tax Credit" decision point should be answered "Revenu Québec Projections and Estimates, All years – Kalt" on the Interactive Spreadsheet.

C. THE QUÉBEC PSIF PROGRAMS

99. The United States has failed to present objective evidence demonstrating that the PSIF program provided funding to a single softwood lumber producer on terms more favorable than the market. Even though it requested and received the complete working files for each PSIF loan, the United States never provided the Tribunal with evidence from those files to support its claims and never provided a company-specific analysis applying the standard loan benefit methodology. Instead, the United States built a record based on the benefit theories of "total loan value" and "total project value" articulated by its forestry expert. Procedural Order No. 6 rejected those novel approaches and instructed the Parties' economists to apply the standard methodology to loan benefit analysis. Yet, as a direct result of the U.S. litigation strategy on PSIF and the record developed, both the preparation of the Joint Report currently before the Tribunal and the ability of the economists to perform the analysis instructed by the Tribunal were compromised significantly.

100. For the reasons explained below, Professor Kalt's estimate of PSIF loan benefits is less unreasonable than that of Professor Topel. However, while consistent with a best-efforts attempt to satisfy the Tribunal's request, even Professor Kalt's estimate is based on conjecture that is neither consistent with the standard approach to determining loan benefits nor with international law standards for establishing liability or remedy. The proper outcome, therefore, should be for the Tribunal to dismiss the U.S. claims regarding PSIF as completely unproven.

1. PSIF Loans

a. Neither Economist Has Followed the Standard Methodology for Measuring Benefits to Recipients of the PSIF Loans at Issue

101. Because of the record built by Mr. Beck on PSIF, the Joint Report presents the economists' substitute or alternative approaches instead of the standard loan benefit methodology. Neither should be accepted by the Tribunal. Through no fault of their own, both economists have had to present a loan benefit analyses based on assumptions and guesswork.¹¹³

102. The first shortcoming in the economists' approaches is the failure of either expert to examine the loans and projects on a company-specific level to assess proper risk and, thereby, select the appropriate commercial benchmark for *each* company.¹¹⁴

The second flaw is the economists' use of junk bond rates as the benchmark for all of

¹¹³ At the outset of the Joint Report, Professor Kalt acknowledges this very issue noting the tension faced by the economists in trying to honor the Tribunal's request in Procedural Order No. 6. Kalt/Topel Revised & Final Report ¶ 22 (acknowledging that calculating benefit measures in the standard way is "problematic due to incomplete information" and stating that assessing a market interest rate applicable to any loan under a government program "requires specific information on, for example, loan terms and conditions, as well as borrower characteristics as they relate to collateralization, credit history, and the like. Such information is scarce here."). *Id.*

¹¹⁴ Canada Post-Hearing Brief ¶¶ 112-117.

the companies without a demonstration that *any* of those companies was not creditworthy. These unavoidable yet significant errors make the Joint Report's discussion and analyses of the PSIF loans largely an academic undertaking based on the economists' best guesses as to what might have occurred and what might have been provided to softwood lumber producers through the PSIF. And while this type of an academic approach might be suitable in other contexts, it is not suitable for purposes of international arbitration between sovereign nations in a forum like the LCIA. The Tribunal still does not have a sufficient evidentiary or legal basis for issuing an award on PSIF loans.

(1) A Company Specific Analysis Is Required Under the Standard Methodology for Loan Benefit Analysis and as a Matter of International Law to Support a Remedy Award

103. As explained by Canada as early as the Statement of Defence, the universally accepted standard for determining whether a government loan provided a benefit is a comparison of the terms of the government loan to a commercial benchmark.¹¹⁵ The commercial benchmark is intended to represent the rate at which the company would have obtained the funding on the commercial market for a similar loan.¹¹⁶

104. Inherent in, and necessary for, the proper application of the standard loan benefit analysis is a close examination of the characteristics of each company and

¹¹⁵ Stmt. of Defence ¶¶ 305-306 and 317.

¹¹⁶ Indeed, with the exception of interest-free loans, the Tribunal will recall that Mr. Beck originally reached the conclusion that PSIF loans had been made on commercial terms. Beck Rebuttal Report at 49 (Ex. C-43) ("**Commercial Rates** refers to IQ PSIF loans offered at commercial interest rates (the average interest rate of six chartered Canadian banks plus 0.5%") (emphasis in original). Such a judgment would, necessarily, mean that no benefit in the form of below-market borrowing costs was conferred. See also Canada Post-Hearing Brief ¶ 176.

project that received a government loan.¹¹⁷ Without an examination of each company and the project funded, there is no objective basis on which to determine the appropriate commercial benchmark to which the government loan should be compared. A financially sound company with a history of profitability, strong management, and established supply and purchase agreements faces a much different lending environment than a start-up, an insolvent company, a company that has experienced losses over an extended period of time, or a company that is seeking financing for a particularly risky project. Accordingly, understanding the specific companies and projects that received government funding must be the first step in selecting the appropriate commercial benchmarks for those companies. This is why all domestic trade laws (including those of the United States and Canada) as well as the WTO SCM Agreement and WTO practice require loan benefit assessments, such as loans, to be conducted at a company-specific level.¹¹⁸

105. Neither of the economists performed such an analysis in the Joint Report. Instead, they assumed that all companies receiving a PSIF loan and their projects were identical. There has been no showing to this Tribunal that the economists' assumptions reflect reality. Two and half years into this arbitration and the Tribunal still knows nothing

¹¹⁷ Canada Post-Hearing Brief ¶ 172 ("Since the Request for Arbitration was filed, Canada has been waiting for the United States – and more particularly its expert Mr. Beck – to identify and explain the attributes of the specific loans and the specific projects that led him to conclude they confer a benefit. Canada is still waiting.")

¹¹⁸ See Canada Post-Hearing Brief ¶¶ 115-117, nn.94, 95, 97, and 98; see also *United States – Subsidies on Upland Cotton*, WT/DS267/ARB/1, Recourse to Arbitration by the United States under Article 22.6 of the DSU and Article 4.11 of the SCM Agreement, ¶¶ 4.232, 4.233 (Aug. 31, 2009) (Upholding interest rate subsidy calculation because it differentiated between individual companies and the risks that each represented before determining which commercial benchmarks to apply to the specific companies) (RA-154); and *Korea – Measures Affecting Trade in Commercial Vessels*, WT/DS273, Report of the Panel, ¶¶ 7.330 and 8.697 (Mar. 7, 2005) (subsidy determination made on a company-specific basis and on the specific terms of the pre-shipment loans for each company) (RA-155).

about these companies, nothing about their financial condition at the time the loans were authorized, nothing about the products they make, nothing about their size, nothing about their profitability or lack thereof, nothing about their accounts receivables, their debt to equity ratios, or their cash flows. All of this information was contained in the pages of the PSIF company loan files including detailed company and project risk assessments from both the portfolio managers at Investissement Québec and the forestry experts at the Ministère des Ressources naturelles.¹¹⁹ None of it has been examined by the United States or its experts in this proceeding and none of the direct information on the specific companies and projects has been provided in a coherent, substantive manner for the Tribunal to evaluate.

106. Moreover, because they were limited to the record before the Tribunal and public sources, neither expert could perform a company-specific analysis, as required by international law on the issues of remedy and damages. The PSIF loans made to softwood lumber projects including their amounts and the benefit provided by these loans – if any – constitute the government funding that the United States claims circumvents the SLA.¹²⁰ The United States therefore must establish that a benefit was provided under each of those loans and not as to the larger forest sector or the program generally.

¹¹⁹ Canada Rejoinder ¶¶ 358-361.

¹²⁰ International Law Commission Draft Articles on Responsibility of States for Internationally Wrongful Acts, Commentary 27 to Art. 36(2) (CA-20) (“Tribunals have been reluctant to provide compensation for claims with inherently speculative elements.”); see *Ethiopia’s Damages Claims between The Federal Democratic Republic of Ethiopia and The State of Eritrea*, Eritrea Ethiopia Claims Commission, Final Award, ¶ 402 (Aug. 17, 2009) (denying claims for lost profits because the claims were “speculative and insufficiently supported by evidence” and noting that “the Commission regard such losses as too remote ... and as not compensable.”) (RA-153).

(2) Under the Standard Loan Benefit Methodology, the Use of Junk Bond Rates Requires a Demonstration that the Specific Companies Were Not Creditworthy at the Time of Loan Authorization

107. Under the standard methodology for loan benefit analysis, an investment grade, commercial rate benchmark is uniformly used unless there is a demonstration that the company being examined is not creditworthy.¹²¹ If there is direct, objective evidence that a specific company is not creditworthy,¹²² only then will the benchmark be set to a rate below investment grade levels, such as a benchmark based on a junk bond rate.¹²³

108. Neither economist followed that standard approach in examining PSIF loans in the Joint Report. Instead, each of the companies receiving a PSIF loan was deemed implicitly not to be creditworthy. And although they selected different rates, both economists adopted junk bond rates that are below investment grade and applied them

¹²¹ Canada Post-Hearing Reply Brief ¶¶ 190-193 (explaining the application of the standard methodology for determining loan benefits by the U.S. Department of Commerce and selection of appropriate benchmarks when allegations are made that companies were not creditworthy); see also Canada Rejoinder ¶¶ 362-365.

¹²² Under the United State' application of the standard loan benefit analysis, the examination of creditworthiness is made at the company and project levels. See 19 C.F.R. § 351.505(a)(4) (The Secretary will determine uncreditworthiness *on a case-by-case basis*, and may, in appropriate circumstances, focus its creditworthiness analysis on the project being financed rather than the company as a whole." (emphasis added).

¹²³ *Coated Free Sheet Paper from the People's Republic of China: Amended Preliminary Affirmative Countervailing Duty Determination*, 72 Fed. Reg. 17,484, 17489 and 17490 (Dep't of Commerce Apr. 9, 2007) (stating that uncreditworthiness of a firm is a valuation issue and indicating that company-specific information on creditworthiness must be examined by Commerce) (RA-156); *Lightweight Thermal Paper from the People's Republic of China: Final Determination of Sales at Less Than Fair Value*, 73 Fed. Reg. 57,323 (Dep't of Commerce Oct. 2, 2008) (Issues and Decision Memorandum) (constructing an uncreditworthy benchmark) (RA-157); *Coated Free Sheet Paper from the Republic of Korea: Notice of Final Affirmative Countervailing Duty Determination*, 72 Fed. Reg. 60,639 (Dep't of Commerce Oct. 25, 2007) (RA-158); Memorandum from S. J. Claeys to D. M. Spooner re: Issues and Decision Memorandum: Final Determination of the Countervailing Duty Investigation of Coated Free Sheet Paper from the Republic of Korea, Case No. C-580-857 (Oct. 17, 2007) (finding specific company to be creditworthy because it received loans on commercial terms) (RA-159).

in their respective benefit calculations. Professor Kalt at least acknowledged that the available record evidence is inconsistent with the assumption that the subject companies are not creditworthy¹²⁴ and, accordingly, presents his results as “conservative.”¹²⁵ By contrast, Professor Topel ignores the company-specific record evidence entirely and simply treats all PSIF loan recipients as unambiguously not creditworthy in arriving at his much higher interest rates¹²⁶

109. For all the reasons stated above, the Tribunal should decline to award a remedy based on alleged – but unproven – benefits conferred to softwood lumber producers through PSIF loans.

2. PSIF Loan Guarantees

a. Canada Does Not Believe that Procedural Order No. 6 Instructed the Economists to Perform a Benefit Analysis of PSIF Loan Guarantees

110. During the course of this arbitration, the only company-specific evidence and argument presented by the Parties regarding loan guarantees relates to the Ontario Forest Sector Loan Guarantee Program. Although the United States claimed in its Request for Arbitration that softwood lumber producers in Québec benefited from PSIF loan guarantees, the United States has never provided an examination of PSIF loan guarantees and did not assess the level of alleged benefits received by companies that

¹²⁴ Kalt/Topel Revised & Final Report ¶ 29.

¹²⁵ Kalt/Topel Revised & Final Report ¶ 38.

¹²⁶ Commercial grade lending is considered to begin at the BBB level. See Standard & Poor’s – Credit Ratings Definitions & FAQs at <http://www.standardandpoors.com/ratings/definitions-and-faqs/en/us> (Ex. R-162). In the Kalt/Topel Revised & Final Report, Professor Kalt used a BB bond rate, which is a junk bond rate. With no explanation for his selection and its applicability to the specific companies that received PSIF loans, Professor Topel goes further utilizing unsecured corporate bond rates that are even more removed from investment grade lending as the benchmarks for his benefit analysis.

may have received PSIF guarantees. Accordingly, Canada believes that the examination of loan guarantees called for by PO No. 6 was directed at those guarantees that were examined and substantively addressed by the Parties during this arbitration; namely, the loan guarantees offered under the Ontario Forest Sector Loan Guarantee Program.

111. The reason for the lack of examination and argument of PSIF loan guarantees by the Parties is a combination of the United States' failure to request any PSIF loan guarantee documents from Canada, the litigation strategy adopted by the United States, and the failure of the United States to produce relevant evidence of its own. Although the United States initially claimed it had requested documents related to loan guarantees, and even went so far as to assert that the Tribunal should impose an adverse inference against Canada for failing to produce those documents, it did not raise this line of argument again following Canada's Statement of Defence.¹²⁷ Thereafter, in response to the U.S. assertions that Canada's discovery responses were flawed, the Tribunal confirmed that Canada's production as to all of the Québec programs including the PSIF was both proper and complete.¹²⁸

112. As a result, before the Tribunal there currently are no PSIF loan guarantees and the terms of those loan guarantees are not known.¹²⁹ There is also little to no identification of who actually received the loan guarantees let alone for the

¹²⁷ Compare Stmt. of the Case ¶ 113 (U.S. initial demand for an adverse inference) with Stmt. of Defence ¶¶ 336-342 (Canada response to U.S. allegations and explanation of actual discovery requests made).

¹²⁸ Tribunal Letter to the Parties, Mar. 30, 2009 (confirming the sufficiency of Québec's document production).

¹²⁹ "[T]he record does not identify specific [PSIF] loan guarantees to softwood producers or others." Kalt/Topel Revised & Final Report ¶ 91.

amounts Professor Topel asserts went to Québec softwood lumber projects.¹³⁰ Most importantly, there is no information on the commercial loans underlying any PSIF loan guarantees that might have been issued. Therefore, no record evidence exists on which to perform the benefit analysis directed by the Tribunal in PO No. 6. An assessment of what a company would have had to pay for a loan without a PSIF loan guarantee literally cannot be done if the terms of both the loan guarantee and the underlying loan are not known.

b. Even if Procedural Order No. 6 Had Instructed a Benefit Analysis of the PSIF Loan Guarantees, Professor Topel Did Not Apply the Standard Methodology

113. Even if the Tribunal had intended for PSIF loan guarantees to be examined under PO No. 6, Professor Topel was not given license to create and apply his own methodology. Procedural Order No. 6 could not have been clearer in explaining the methodology to be followed by the economists to estimate the benefits conferred by government loans and loan guarantees. In both instances, the standard method required the comparison of interest rates to estimate benefits.

114. Despite these instructions from the Tribunal, Professor Topel developed his own subjective approach for valuing the alleged benefits provided by PSIF loan guarantees.¹³¹ Importantly, Professor Topel's new methodology does not include a

¹³⁰ For the first time in this arbitration, in the Kalt/Topel Revised & Final Report, the United States attempts to answer the question of who may have receives PSIF loan guarantees for softwood lumber projects. This new evidence is in the form of press release referenced by Professor Topel in note 102 to paragraph 95 of the Kalt/Topel Revised & Final Report. But this attempt is unavailing and, if anything, contradicts Professor Topel's attempt to assign 40% of the loan benefit amount to PSIF loan guarantees. As Professor Kalt explains none of the few examples cited by Professor Topel provides either the terms of the loan guarantee or the terms of the underlying loan. "Yet, these terms are needed to perform an analysis of its value compared to those offered at commercial rates." Kalt/Topel Revised & Final Report ¶ 108.

¹³¹ "Professor Topel has developed an approach for estimating benefits associated with PSIF loan guarantees." Kalt/Topel Revised & Final Report ¶ 93. "I believe that a reasonable and

comparison of interest rates as called for by PO No. 6 but rather consists of speculation on what may have been the benefit from PSIF loan guarantees that may have been received by Québec softwood lumber producers.

115. Professor Topel's failure to follow the direct instruction of the Tribunal should foreclose consideration of his arguments. The reason for requiring the economists to apply the standard approach to estimate benefits from loan and loan guarantees is readily apparent – it prevents the introduction of subjective and speculative assumptions and grounds any benefit result on objective, commercial facts applying a well-established methodology. Professor Topel's novel approach results in the same errors as the novel approach taken by the U.S. forestry expert, Mr. Beck, whose benefit analysis for PSIF loans was subjective and admittedly incapable of scrutiny or verification by the Tribunal.¹³² Professor Topel's current methodology may be presented in a more polished manner, but it is flawed for the very same reasons.

c. Contrary to His Assertion, Professor Topel's Novel Methodology Does Not Measure Alleged Benefits from PSIF Loan Guarantees

116. As Professor Kalt explains, the methodology proposed by Professor Topel is based on a succession of assumptions and guesswork none of which is supported by known facts and that, in its totality, is speculative.¹³³

conservative estimate of the value of loan guarantees for softwood lumber entities is available”
Id. ¶ 96.

¹³² Tr. Vol. 2, 469:1-2 (conceding upon questioning from the Chair that his methodology for determining PSIF loan benefits was “a subjective rather than a quantitative analysis.”).

¹³³ Kalt/Topel Revised & Final Report ¶¶ 105-107.

117. Professor Topel begins by extrapolating from data contained in Investissement Québec 2007-08 and 2008-09 annual reports related to funding made by IQ under all of its programs to the wood sector. Based on that aggregate data, Professor Topel concludes that “loan guarantees accounted for about 40 percent of IQ’s wood sector support prior to March 31, 2008.”¹³⁴ Because softwood lumber producers are part of the overall wood sector, Professor Topel then assumes that the same ratio of loans to loan guarantees must have been provided under the PSIF itself.¹³⁵

118. Having assumed that 40% of wood sector funding represents loan guarantees and having assumed that the same percentage is indicative of the level of loan guarantee activity under the PSIF, Professor Topel then asserts that a reasonable and conservative benefit amount attributable to PSIF loan guarantees received by Québec softwood lumber producers.¹³⁶ Thereafter, Professor Topel applies the 40% ratio to the overall amount calculated for the PSIF loan benefit. But although he provides his results in the narrative and accompanying figures, he never provides the actual calculations that operate within the model. Instead, he continues on in his narrative explaining how his approach and the amounts he assigns to PSIF loan guarantee benefits are consistent with his theories on loan guarantees being “ineffective in attracting private funding during the height of the financial crisis” and “the flight of private lenders from [softwood lumber] projects in 2008-09.”¹³⁷

¹³⁴ Kalt/Topel Revised & Final Report ¶ 97.

¹³⁵ Kalt/Topel Revised & Final Report ¶ 98.

¹³⁶ Kalt/Topel Revised & Final Report ¶¶ 98-101.

¹³⁷ Kalt/Topel Revised & Final Report ¶ 100.

119. There are many errors and unsupported speculation contained in the methodology advanced by Professor Topel for estimating benefits from PSIF loan guarantees. For example, there is no basis for Professor Topel's assertion that the ratio of loans and loan guarantees made to the wood sector pursuant to the many funding vehicles administered by Investissement Québec (of which PSIF is only one) should be deemed to be the same ratio of loans to loan guarantees made under the PSIF itself.¹³⁸

120. Moreover, although Professor Topel presents simple calculations working from the aggregate data in the Investissement Québec annual reports, his methodology does not actually measure benefits of loan guarantees. He presents no actual benefit calculation in the text of the Joint Report and he never conducts the comparison of interest rates expressly called for by PO No. 6. Instead, he simply repeats that he is confident he can estimate an appropriate amount of benefit that must have been conferred to Québec softwood lumber producers through PSIF loan guarantees working from aggregate data.¹³⁹

121. What Professor Topel did - without stating it explicitly and without the evidentiary foundation required to apply the standard methodology - was to assume that the benefit attributable to a PSIF loan guarantee is identical to the benefit calculated for a PSIF loan. That is, he took the benefit amount estimated for PSIF loans and simply multiplied it by his 40% ratio and claimed that the result is "reasonable and conservative" estimate of benefits received from PSIF guarantees by Québec softwood lumber

¹³⁸ During the existence of the PSIF, Investissement Québec administered approximately 20 programs many of which wood sector companies were eligible to participate in. See Investissement Québec – Financial Solutions <http://investquebec.com/en/index.aspx?section=3&prt=1> (Ex. R-163); see also Investissement Québec – Small and Medium Business Financial – <http://www.investquebec.com/en/index.aspx?page=925&prt=1> (Ex. R-164).

¹³⁹ Kalt/Topel Revised & Final Report ¶¶ 96-102.

producers. Professor Topel gives no indication of what he has done other than a cryptic conclusion stating that he applied “these [loan guarantee] shares to the flow of recorded PSIF loans in each year.”¹⁴⁰ Similarly, Figure 22 sets forth the results of Professor Topel’s work, but it does not show the actual benefit calculation performed or what is meant by the term “these shares.”

122. Professor Topel also misrepresents the data that he uses. For example, he asserts that as of March 31, 2008, Investissement Québec had made \$59.3 million in “existing loans” to wood-sector entities and \$39.6 million in guarantees.¹⁴¹ Although he does not cite where the data is taken from in the IQ annual reports, it is apparent that he is referencing data from a table at page 109 of the 2007-2008 Annual Report. Yet, an examination of the actual table clearly shows that what Professor Topel is calling the outstanding amount of existing loans includes many other things than just loans. The table’s headings expressly state that the data includes “Loans, shares, units and receivables, less accumulated provision for losses.”¹⁴² “Shares” represent equity taken by Investissement Québec in a company and is generally at a much higher rate of return than the rate of a loan. Similarly, “units” are Investissement Québec interests in non-profit organizations and co-operatives and “receivables” includes both guarantee fees receivables¹⁴³ and receivables related to financing operations.¹⁴⁴ Further, all of these different interests are “less accumulated provision for losses,” meaning they are adjusted for internal budgetary purposes and thus further removed from actual amounts. And the

¹⁴⁰ Kalt/Topel Revised & Final Report ¶ 102.

¹⁴¹ Kalt/Topel Revised & Final Report ¶ 97.

¹⁴² Investissement Québec Annual Report (2007-2008) at 109 (Ex. R-140).

¹⁴³ Guarantee fees are the fees the company receiving the loan guarantee agrees to pay Investissement Québec annually based on the outstanding balance of the loan at a given time.

¹⁴⁴ Investissement Québec Annual Report (2007-2008) at 109 (Ex. R-140).

same error is apparent in Professor Topel's Figure 21 where the terms "shares," "units," and "receivables" are simply omitted from the headings, as is the word "provision" in the term "accumulated provision for losses."

123. Professor Topel appears to suggest three reasons for the Tribunal to accept his methodology. First, unstated, is his assumption that a loan guarantee is no different than a loan (much in the same way that Mr. Beck and U.S. counsel previously argued that PSIF loans were the equivalent of grants) and always provides a benefit to the recipient. Whether loan guarantees confer a benefit is not a matter of assumption. Under PO No. 6, it is a matter of analysis that depends on the terms of the specific loan and loans guarantees at issue. But as noted, that necessary information is not on the record. Indeed, the only historical, objective evidence before this Tribunal indicates that when Investissement Québec has provided loans and loan guarantees in the past to softwood lumber producers, those loans and loan guarantees have never been found by the government of the United States to provide benefits under the standard approach called for in PO No. 6.¹⁴⁵

124. Second, Professor Topel suggests that Professor Kalt is trying to value the loan guarantees "at zero" and that ignoring PSIF loan guarantees would result in an injustice because "we know such guarantees were available and were provided."¹⁴⁶ After more than two years into this arbitration, this is a remarkable contention. The injustice is the United States' continued attempt to seek remedies for claims it alone has

¹⁴⁵ See Stmt. of Defence at ¶¶ 335-337 and Canada Rejoinder ¶¶ 362-365 (U.S. Department of Commerce Decisions finding Investissement Québec loans and loan guarantees to softwood lumber producers do not provide a benefit because they are made at or above commercial rates).

¹⁴⁶ Kalt/Topel Revised & Final Report ¶ 96.

failed to present in an intelligible manner or support objectively with record evidence.¹⁴⁷

And as stated in the Joint Report, Professor Kalt's intention is not to value PSIF loan guarantees at zero, his intention is to refrain from providing the Tribunal with a benefit result that he knows is, in its totality, "highly speculative and unreliable."¹⁴⁸

125. Third, Professor Topel incorrectly asserts that his methodology is "nearly identical" to the methodology followed by both economists to calculate PSIF loan benefits after May 2008.¹⁴⁹ This assertion is misleading as the methodology followed for PSIF loans started – at least to the extent the arbitration record allowed – with an actual calculation of benefits. The PSIF loan analyses started with the government loan rate and compared it to a commercial benchmark rate and at least Professor Kalt took into account the limited information on specific companies.¹⁵⁰ By contrast, Professor Topel's loan guarantee methodology does not actually measure benefits of any kind and his approach certainly does not follow the express instruction of the Tribunal to conduct a comparison of interest rates. Instead, Professor Topel simply assumes that the benefits for the guarantees are identical to the benefits for loans. Although not readily apparent in the text of the Joint Report, this assumption is evident through Professor Topel's assertion that PSIF loan guarantees constitute 40% of the overall PSIF funding and his attribution of 40% of the PSIF *loan benefit amount* to guarantees.

126. Canada does not believe that PO No. 6 instructed the economists to perform a benefit calculation of the PSIF loan guarantees. Even if it had, the

¹⁴⁷ Canada Rejoinder ¶¶ 371-373.

¹⁴⁸ Kalt/Topel Revised & Final Report ¶ 104.

¹⁴⁹ Kalt/Topel Revised & Final Report ¶ 96.

¹⁵⁰ Kalt/Topel Revised & Final Report ¶ 29.

methodology required by PO No. 6 for estimating loan guarantee benefits cannot be performed as to PSIF guarantees because necessary data is not available. Moreover, the new methodology proposed by Professor Topel does not even calculate a benefit for guarantees and it is based on inappropriate and flawed assumptions. Therefore, the Tribunal must reject Professor Topel's remedy assessment for PSIF loan guarantees.

127. For all the above reasons, under the decision point for "Québec PSIF," the "Loan Guarantees – Kalt" answer should be selected on the Interactive Spreadsheet.

3. Article X Companies

128. The economic experts have calculated two scenarios for PSIF with respect to the following:

"Whether benefits provided to those softwood lumber producers described in Article X 1(c) of the SLA should be included in our analysis. We refer to this as the question of the proper treatment of 'Article X' Canadian softwood lumber producers in our calculations."¹⁵¹

129. The Tribunal should determine that benefits provided to the Article X producers, or "excluded companies," should not be included in the calculation of the compensatory adjustments because the SLA specifically excludes softwood lumber produced by these companies from the application of the Export Measures. Benefits provided to companies whose products are excluded from the Export Measures cannot offset or reduce those Export Measures.¹⁵²

¹⁵¹ Kalt/Topel Revised & Final Report ¶ 3.

¹⁵² Canada has previously addressed this issue in its earlier submissions to the Tribunal. Canada Rejoinder ¶ 330; Canada Post-Hearing Brief, Annex I, ¶¶ 17-19.

130. As indicated in Article I(1), the SLA applies to "Softwood Lumber Products," a term defined by the Agreement to include the list of softwood lumber products identified in Annex 1A. Article VI provides that "Canada shall apply the Export Measures to exports of Softwood Lumber Products to the United States." However, the Parties explicitly agreed in Article X that the Softwood Lumber Products produced by certain companies would not be subject to the Export Measures.¹⁵³ Article X provides:

- "1. The Export Measures shall not apply to the following products:
 - (c) Softwood Lumber Products produced by the companies listed in Annex 10."

Annex 10, titled "Excluded Companies," lists 32 companies, five of which are alleged in this proceeding to have received benefits from PSIF:

[]

[]

[]

[]

[]

131. The exclusion of the Softwood Lumber Products produced by the companies listed in Annex 10 continues through the life of the SLA, provided that the companies adhere to the annual export limits set out in Article X(2). If a company exceeds its export limit in one year, its limit is reduced the following year, and if it continues to exceed its limit for 3 years running it will lose its status as an Excluded

¹⁵³ This was, in large part, because almost all of the wood processed by these companies is sourced from the United States.

Company.¹⁵⁴ This is the only reason a company will be disqualified from Excluded Company status.

132. The United States has alleged that PSIF loans to these Excluded Companies constitute benefits that reduce or offset the Export Measures, in breach of Article XVII. That is wrong as a matter of law. Benefits to companies whose products are not subject to the Export Measures cannot, as a legal matter, offset or reduce those Export Measures. The effect of considering benefits to Excluded Companies as a breach of Article XVII would be to punish producers and exporters of non-excluded softwood lumber products, who would bear the burden of higher adjustments to Export Measures from which the recipients of the alleged benefits would be exempt.

133. Finally, as an economic matter, the exportation of softwood lumber by Excluded Companies would not offset or reduce the Export Measures. As Professor Kalt explained in his Second Rebuttal Report, "to the extent the PSIF loans improved the competitive position of the SLA-exempt producers, the volume of exports subject to export measures under the SLA would likely be *reduced*."¹⁵⁵ (emphasis in original). Softwood lumber that could be exported freely (i.e., without a tariff or quota restriction) by the Excluded Companies would displace softwood lumber exports by non-excluded companies that were subject to the Export Measures.¹⁵⁶

134. Accordingly, the Tribunal should find that benefits provided to the companies listed in Annex 10, or "Excluded Companies," do not breach Article XVII and

¹⁵⁴ There is no allegation before the Tribunal that one of the five excluded companies has exceeded its annual export limit.

¹⁵⁵ Kalt Second Rebuttal Report, Addendum ¶¶ 14-15 (Ex. R-148).

¹⁵⁶ *Id.*

therefore cannot be included in the calculation of the compensatory adjustments. Under the decision point for “Québec PSIF,” the answer “Article X Producers – Excluded” should be selected on the Interactive Spreadsheet.

D. MODEL PARAMETER – THE ROAD TAX CREDIT AFFECTS DELIVERED LOG COSTS, NOT MILL EFFICIENCY

135. The economic model developed by the experts relies on a number of “simplifying assumptions and parameters intended to capture the most salient attributes of the real world.”¹⁵⁷ One of those parameters is the share (the proportion) of softwood lumber production costs accounted for by “wood” relative to other elements of the cost of softwood production.¹⁵⁸ The choice of this parameter reflects a conceptual difference in how the lumber production process is modeled. Professor Kalt models lumber production (and the resulting costs) as a two-stage process: in stage one, harvesters cut trees into logs and deliver those logs to sawmills; in stage two, sawmills use capital and other inputs (labor, energy, etc.) to transform logs delivered to the mill – the result of the first stage – into lumber. Professor Topel treats this as a one-stage process which does not distinguish between forestry activities that result in delivered logs and activities that occur at the sawmill.

136. The difference between the two approaches is reflected in the cost of “wood” in lumber production. Under Professor Kalt’s delivered log approach, wood accounts for 56% of overall production costs, slightly below but in line with published industry analyses previously cited by Professor Kalt (as well as those previously cited by

¹⁵⁷ Kalt/Topel Revised & Final Report ¶ 147.

¹⁵⁸ *Id.*

the Claimant's expert, Mr. Beck) for delivered wood costs.¹⁵⁹ Under Professor Topel's one-stage approach, wood is reduced to an implausible 16% of overall production costs.

1. Any Benefits Provided for Roads Construction and Maintenance Lower Delivered Log Costs to the Mill, but They Do Not Enhance a Mill's Ability to Transform Logs into Lumber

137. Both experts agree that roads are economic capital in the sense that they are used over a long time period and both have performed calculations that estimate the benefits of roads over an extended period. Professor Kalt treats the economic benefits associated with roads as entering the lumber production process by lowering the costs of delivering wood to sawmills. Professor Topel on the other hand wrongly treats a benefit expressly tied to road construction and maintenance in accordance with provincial requirements as having the same effect on sawmill productivity as an investment of the mill owner's choosing in capital equipment at the sawmill.

138. As detailed in the Joint Report, Professor Kalt recognizes that road building and maintenance lower the cost of delivering logs to a mill, thereby reducing the mill's so-called delivered log cost.¹⁶⁰ Professor Kalt therefore includes benefits tied to road construction and maintenance as reducing the delivered cost of logs to sawmills in the year of the benefit and out into the future. Reducing the delivered cost of logs does reduce the cost of lumber made from those logs, but not in the same way as improvements and investments in sawmill plant and equipment.

¹⁵⁹ See Kalt/Topel Revised & Final Report ¶ 154 and n.131. See also PWC/Beck cost benchmarking study.

¹⁶⁰ Kalt/Topel Revised & Final Report ¶ 151 ("Thus, for example, sawmill workers can reasonably be thought of as becoming more productive in producing lumber when they have additional capital equipment – head saws, planers, laser sensors, and the like – with which to work. On the other hand, investments in roads has its primary effect through its ability to reduce delivered log costs, making transportation cheaper, easier, faster, and/or safer. This does not fundamentally alter the technology of sawmill production or the productivity of sawmill workers.")

139. By contrast, Professor Topel treats the production of lumber as a single-stage process in which timber in the forest is converted into softwood lumber. He further treats a dollar of benefit for road construction as having the same effect on lumber production as a dollar of benefit provided for the purchase of new sawmill equipment. Under Professor Topel's treatment, roads are lumped with all of the capital equipment in the mill and make the mill more efficient at transforming logs into lumber.¹⁶¹

140. Professor Kalt's approach – treating road building as a reduction in delivered log costs – is consistent with the record in this proceeding, the long history of softwood lumber proceedings that were settled by the SLA, and the economics of the softwood lumber industry in Canada. In other words, it is grounded in the actual and historic record of this proceeding and the real world of lumber production in Canada that the model is supposed to capture. Professor Topel's approach – treating roads as if they were milling assets – conflicts with the record in this proceeding, the historic treatment of road building costs and the economics of softwood lumber production.

a. Building Roads and Investing in Milling Equipment are not Alternate Outcomes of Purely Private Sector, Efficient Investment Decisions

141. The economic analysis presented in the Joint Report sets out the point of disagreement and its effect very clearly. Professor Kalt describes how if road costs are treated in the model as equivalent to increases in the capital base of a mill (as Professor Topel proposes), the effect is to inflate the lumber yield (efficiency) of true milling assets

¹⁶¹ Kalt/Topel Revised & Final Report ¶ 160 (Professor Topel described his single-stage/lump of capital approach as follows: "[Roads] are part of the capital stock of the lumber industry – roads built today will impact the cost of producing lumber both now and into the future, and their impact on future markets is recognized today. As I did before, I treat the production of lumber from logs as an integrated process involving capital – roads, trucks, sawmills, and so on – together with other inputs such as labor, energy, and yes, logs cut in the forest.")

such as saws, planers, etc. This leads to an unrealistically low wood supply cost for mill (compared to the record published materials) and an inflated apparent benefit level.¹⁶²

142. Professor Kalt explains that in the real world more and better roads reduce transit times allowing wood to be delivered faster and cheaper to all its end users (including sawmills).¹⁶³ Cheaper logs at the mill do not make the mill more efficient at processing those logs into lumber. As raw materials, cheaper logs can certainly reduce the cost of lumber, but that is because logs (wood) are a high portion of the cost of producing lumber. Professor Kalt's approach duly acknowledges that benefits for roads can have this effect on lumber costs and prices, and on the Export Measures. But a dollar spent on road building does not affect lumber production in exactly the same manner as an investment in sawmill equipment. Yet this is what Professor Topel asserts.

143. Professor Topel does not look at the purpose or role roads play in forestry or in lumber production but focuses instead on "the fundamental economics of investment"¹⁶⁴ abstractly, stating "I treat investments in roads as just that, investments."¹⁶⁵ What he appears to mean by this is that spending on road construction and maintenance should be viewed through the same lens as investing in (buying) sawmilling equipment. Professor Topel offers no empirical or evidentiary basis for his view that roads are nothing but an investment choice and the record shows that his theory is groundless.

¹⁶² Kalt/Topel Revised & Final Report ¶ 154.

¹⁶³ Although the focus is on softwood lumber, roads are built and are used by a range of forest products companies: pulp and paper mills, panel mills, hardwood mills, etc.

¹⁶⁴ Kalt/Topel Revised & Final Report ¶ 158.

¹⁶⁵ Kalt/Topel Revised & Final Report ¶ 160.

144. Professor Topel's assertion that road building decisions are effectively a form of sawmill investment informed by marginal return comparisons to other sawmill investments ignores that the presence of measures like the Road Tax Credit distort investment decisions. Such distortion leads to choices that, but for the Road Tax Credit measure, would not be made.¹⁶⁶ The road tax credit is not a fund of money that a lumber executive can use in the way that the executive deems most efficient, allocating investment funds across all possible alternatives (including roads and other opportunities). The Road Tax Credit can only be used for roads, and the benefit in question is the incremental benefit (if any) that results from increasing the credit from 40% to 90% of the cost of the road. As Professor Kalt describes, the Road Tax Credit's likely effect has been to encourage roads to be built sooner than they would otherwise have been.¹⁶⁷ Such acceleration of road spending is implied even under Professor Topel's approach and it consumes investment dollars that would otherwise have been available for the mill investment. The result implies inhibiting, rather than enhancing, mill performance.

145. Professor Topel's approach ignores other material factual and legal constraints related to road building and maintenance. Roads are a practical necessity: trees grow in the forest, dozens or hundreds of miles from mills. Roads are built and maintained to access standing timber and enable logs harvested from that timber to be

¹⁶⁶ For example, harvest levels are controlled by annual allowable cut ceilings and smaller allocations within those ceilings that cannot be violated. Incremental road building does not change the harvest allocation and cannot cause more wood to be harvested than has been allocated. Therefore if roads are built in response to incentives such as the Road Tax Credit, they are by definition roads that would not otherwise have been built.

¹⁶⁷ Kalt/Topel Revised & Final Report ¶ 152.

transported for processing.¹⁶⁸ As a matter of law, roads built on public land in Québec are the property of the Gouvernement du Québec from the moment they are built and companies have no ownership or control of roads, nor any priority or exclusivity on their use.¹⁶⁹ Roads must be built to standards specified by the Gouvernement du Québec, and in conformity with the laws and regulations relating to entry on and improvement to public lands, including the many laws, regulations, and standards relating to wetlands, water courses, wildlife, aboriginal rights, and other considerations not implicated on private lands.¹⁷⁰

146. By contrast, investments in milling plant and equipment have no such constraining limitations and are owned by the mill that purchases them. Saws, planers and the like are the mill owner's property and benefit the mill owner's mill. Roads built and maintained on public lands do not belong to the mill, they belong to Québec, and can be used by the mill the built them, that mill's competitors, pulp and paper mills, outfitters, and other users, without limitation. In short, benefits tied to open public roads built to access public land are not at all like benefits that a producer has chosen to use for milling equipment that is carried on the mill's balance sheet and locked up safely at night. Professor Topel's approach of treating roads as simply one part of an undifferentiated pool of lumber production capital ignores the record evidence showing that road building is not an unconstrained investment decision made unilaterally by the mill as an impartial investor motivated by return on investment analysis. Instead, as

¹⁶⁸ Stmt. of Defence ¶¶ 255-259; Canada Rejoinder ¶¶ 289, 294; Canada Post-Hearing Reply Brief ¶¶ 120, 123, 135.

¹⁶⁹ An Act Respecting Lands in the Domain of the State, R.S.Q., ch. T-8.1, §§ 55, 57, 58 (RA-100); Canada Rejoinder ¶¶ 289, 294; Canada Post-Hearing Reply Brief ¶¶ 120, 123.

¹⁷⁰ Stmt. of Defence ¶¶ 256, 259; Canada Rejoinder ¶¶ 288-290; Canada Post-Hearing Reply Brief ¶¶ 120, 121, 123.

Professor Kalt notes, roads must be reflected in the 5-year plans submitted to the MNRF for review and approval in order to earn the road tax credit.¹⁷¹ The record establishes that as a matter of law all planned roadbuilding must be included in the 5-year plans submitted to the MNRF (and in the 25-year plans) and that those plans are published for public comment prior to approval.¹⁷² The location and extent of road building therefore is not a decision made by the tenureholder as a profit maximizing investor neutrally weighing different investment options, it is a decision made by the MNRF following a period of public scrutiny and comment on the proposed plans.

147. Ownership and control of roads after they are built, coupled with final authority over where, when, and to what standards they will be built, naturally rests with the Gouvernement du Québec as the owner of public forest lands. This is the point Canada made by analogizing to arguments made by the United States in other fora that so long as the price paid by a government for a good or service is reasonable, no benefit is conferred.¹⁷³ On the record, Québec purchases roads from tenureholders. In the past, it did so exclusively through lower stumpage prices. Now it does so through a combination of stumpage prices and a credit (only part of which remains at issue in this proceeding).¹⁷⁴ The end result is the same: tenureholders incur the up-front cost of planning and building roads, the MNRF must approve those plans, the MNRF must inspect and accept the roads, and the roads belong to Québec and are part of the public

¹⁷¹ Kalt/Topel Revised & Final Report n.129.

¹⁷² Stmt. of Defence ¶ 259; Canada Rejoinder ¶¶ 289-290; Canada Post-Hearing Reply Brief ¶¶ 120, 125.

¹⁷³ Canada Rejoinder ¶¶ 294-295.

¹⁷⁴ In Procedural Order No. 6, the Tribunal directed the experts to limit their estimation of benefits and of potential compensatory adjustments to the incremental portion of the road tax credit above the original 40% announced with immediate effect in March 2006.

road network from the moment they open. No benefit is conferred on tenureholders through Québec's purchase of roads that open vast, otherwise undeveloped areas of the province.

b. The Record in this Proceeding and the History of Disputes Involving Softwood Lumber Confirm that Roads Are an Element of Wood Cost, Not of Milling Capital

148. The core element in delivered log cost is the price of standing timber: stumpage. The prior comments of the Parties, and of Professor Kalt, recognize that Québec's timber pricing system features the cost of building and maintaining roads as a core element in determining stumpage and has for many years.¹⁷⁵ The unchallenged testimony of M. Jean-Pierre Adam explains that road building and maintenance are a core element of Québec's timber pricing and have been for more than 20 years, even to the point of constituting a specific variable in the parity formula.¹⁷⁶ M. Adam testified that through the parity formula road building costs affect stumpage prices. The United States accepts that roads are part of Québec's timber pricing system, and both experts have agreed on the amount of the stumpage price effect of the road tax credit (to increase Québec stumpage prices) to be included in their calculations for the Joint Report.¹⁷⁷

149. On the record of this proceeding, admitted by all the experts and the Parties, stumpage in Québec is determined, in part, by the cost of building and maintaining roads. But despite having admitted that road building costs are part of

¹⁷⁵ Stmt. of Defence ¶ 219; Adam Statement ¶¶ 16-17; Kalt Report ¶¶ 11, 17-18; Canada Rejoinder ¶ 294; Beck Report ¶ 22 (Ex. C-1) (Here, Mr. Beck acknowledges that "stumpage' charges are an important component of delivered log costs."); Canada Post-Hearing Brief ¶¶ 159-161; Canada Post-Hearing Reply Brief ¶¶ 120, 133.

¹⁷⁶ Adam Statement ¶ 17 (*Cfr* = Cost of building and maintaining forest roads), and ¶¶ 24-25 (Ex. R-3); Adam Reply ¶¶ 27-29.

¹⁷⁷ See Kalt/Topel Revised & Final Report, Figure 28 ("Stumpage Offset").

stumpage pricing in Québec, Professor Topel argues that for purposes of modeling “the most salient attributes of the real world,” the two stage process of producing delivered logs and converting those logs into softwood lumber should be collapsed into a single process in which every capital expenditure from tree to finished lumber has precisely the same effect in precisely the same way. No evidence, fact, forest industry practice, or cited theory supports Professor Topel’s approach.

150. Professor’s Topel’s suggestion that road building is a pure capital investment choice of the same nature as mill investments conflicts with the long history of the softwood lumber disputes the SLA sought to resolve. The U.S. Department of Commerce in past proceedings concerning lumber has consistently treated roads as an element of the value of standing timber and not as an investment to capital.

- In a 2002 Notice of Final Determination in the countervailing duty investigation of Certain Softwood Lumber Products from Canada¹⁷⁸ the U.S. Department of Commerce stated that in determining whether Québec stumpage (the price for standing timber) conferred a benefit “[w]e are making an adjustment for primary and secondary road construction and maintenance.”¹⁷⁹
- In a 2004 Notice of Final Results of Review the Department spoke even more directly to the central role that forest access costs play in the price (and value) of wood in all of Canada’s provinces describing them as “[t]he necessary costs associated with accessing the timber for harvesting in the subject provinces differ depending on the market conditions in those regions. These include road construction and maintenance costs and, for example in the case of Québec, cost for logging camps.”¹⁸⁰ The

¹⁷⁸ Certain Softwood Lumber Products from Canada 67 Fed. Reg 15,545 (Dep’t of Commerce Apr. 2, 2002) (final determination) (“Lumber IV”) (RA-1).

¹⁷⁹ Memorandum from B. Carreau to F. Shizad, re: Issues and Decision Memorandum: Final Results of the Countervailing Duty Investigation of Certain Softwood Lumber Products from Canada Case No. C-122-839 (Mar. 21, 2002) at 57 (Ex. RA-44).

¹⁸⁰ Notice of Final Results of Countervailing Duty Administrative Review and Rescission of Certain Company-Specific Reviews: Certain Softwood Lumber Products from Canada, 69 Fed. Reg. 75, 917 (Dep’t. of Commerce Dec. 20, 2004) (RA-160); Memorandum from B. E. Tillman to

Department then made adjustments to account for the effect of road building and maintenance costs on the price of standing wood in Alberta, Manitoba, Ontario, Saskatchewan, and Québec.¹⁸¹

- Other decisions dating back to the countervailing duty proceedings between 2001 and adoption of the SLA in October 2006, and in the early proceedings from 1991 to 1996 make the same points. In each instance the analysis recognizes that road building costs have a direct influence on stumpage – the price of wood.

151. The lesson of this history, and of the record in this proceeding, is that road building and maintenance is part of the cost of wood in Québec as properly characterized by Professor Kalt. This is a fact admitted by Professor Topel in one part of the Joint Report (Figure 28), even as he proposes a different choice elsewhere in the model. The structure of Québec's parity formula makes roads part of wood cost, and a consistent line of decisions reaching back over the history of softwood lumber disputes between the United States and Canada confirm that road building and maintenance are part of wood costs and that the decision to build roads is driven by the practical necessity that trees must be harvested where they stand.

152. Although Professor Topel characterizes Professor Kalt's approach as "*ad hoc*," review of the evidence, the history of this proceeding, the literature, and the context of lumber production in Québec establishes that it is Professor Kalt who adheres to the well-established norm that roads are part of the cost of wood, while Professor Topel pursues an *ad hoc* hypothesis unconnected with the record in this proceeding or the long

J. J. Jochum re: Issues and Decision Memorandum: Final Results of Administrative Review: Certain Softwood Lumber Products from Canada, Case No. C-122-839, at 106 (Dec. 13, 2004) (RA-161). Like road building and maintenance, forest camps are a specific variable in Québec's parity formula (C_{cp} = Cost of Forest Camps, Adam Statement ¶ 17 (Ex. R-3).

¹⁸¹ *Id.*

consistent history of treating roads as part of wood cost, not as mill capital, that grossly overstates the possible effect of road building on the production of lumber.

153. If, after considering Canada's arguments showing that the incremental road tax credit does not circumvent the SLA, the Tribunal nevertheless chooses to assign a benefit and determine a compensatory adjustment, that adjustment must treat the cost of building and maintaining roads as an element of delivered log cost as do Professor Kalt, Québec's timber pricing system, and an unbroken line of prior U.S. decisions. For these reasons, the "Model Parameter" decision point should be answered "Roads Tax Credit as Reduction in Delivered Wood Cost – Kalt" on the Interactive Spreadsheet.

PART III. TRIBUNAL DECISION POINTS – ADDITIONAL ISSUES

154. As noted at the outset of these comments, this Part address two additional decision points that are not clearly presented in the Joint Report. Both issues affect the estimation of benefits and amount of any compensatory adjustment. To enable the Tribunal to properly and fully consider and decide these issues, Canada asked Professor Kalt to prepare a more detailed version of the Interactive Spreadsheet that was included with the Joint Report on June 22. That new, more detailed spreadsheet is attached to these Comments. The differences between the two spreadsheets only relate to these Ontario-specific issues. Comparing results produced by the two spreadsheets will show no impact on the results for Québec, but will show the consequential effects of these decision points for Ontario.

A. ONTARIO BENEFIT CALCULATION

1. **The Benefit Assumptions Made by the Economists Do Not Reflect the Actual Experience Under the Ontario Programs and Are Not Supported by the Record**

155. Procedural Order No. 6 directed the economists to assume that the programs under examination continued in operation throughout the term of the SLA.¹⁸² With respect to Ontario, Professors Kalt and Topel agreed on two assumptions to implement this direction. First, they assumed that the full budget of the grant program would be consumed during the remaining life of the SLA. Thus, the economists assumed that \$150 million in grants would be awarded under the Ontario Forest Sector Prosperity Fund. They then allocated actual amounts granted to years 2006-2009, deducted those amounts from \$150 million, and allocated the remainder to years 2010-2013 on a straight-line basis. This allocation can be seen on Figure 1 of the June 22 Joint Report.

156. Second, for the Ontario Loan Guarantee Program, the economists assumed that a total of \$350 million in loan principal would be guaranteed during the life of the program.¹⁸³ They then performed a similar allocation: they allocated amounts actually guaranteed to years 2006-2009, deducted those amounts from \$350 million, and

¹⁸² Procedural Order No. 6 ¶ 1.2(a).

¹⁸³ The Tribunal should recall that the Ontario LGP does not simply set a cap on loan principal guaranteed. It also [

] ON-CONF-07253R (Ex. R-22). Ontario officials must [

] As Professor Kalt has noted, this is a significant flaw in Professor Topel's assumption that Ontario is issuing very risky guarantees. Kalt/Topel Revised & Final Report ¶ 46. If that were so, Ontario's program would be [

allocated the remainder to years 2010-2013 on a straight-line basis. This allocation can be seen on Figure 2 of the June 22 Joint Report.

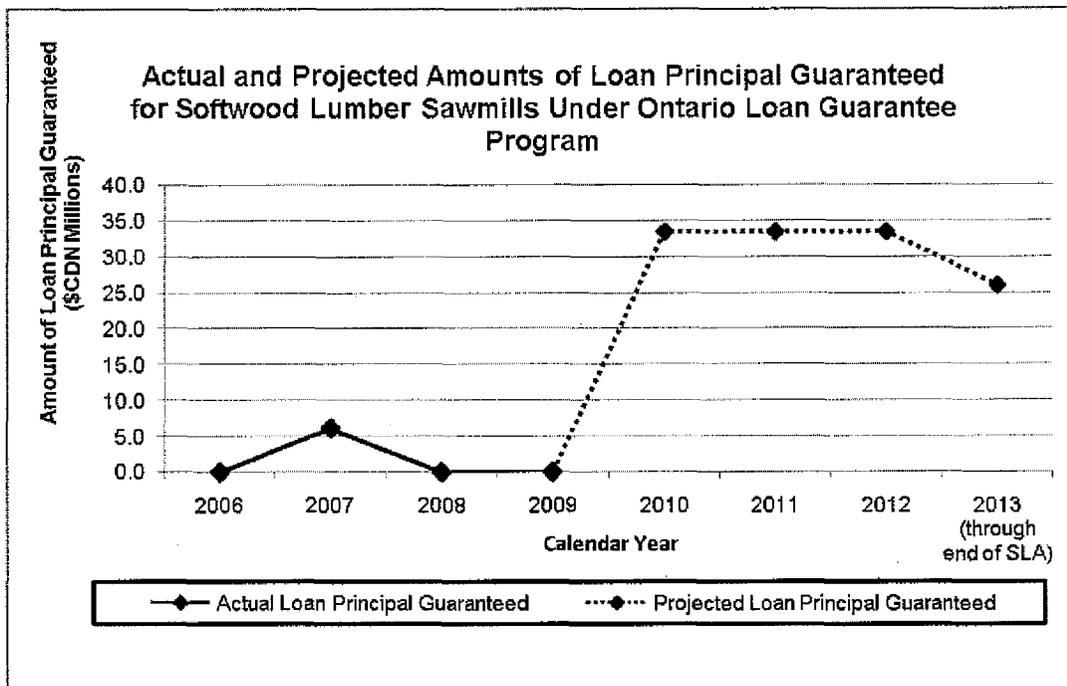
157. The assumptions employed unfortunately do not reflect the actual experience under the program, and are contradicted by facts on the record. In the case of the LGP, only \$35 million in principal has been guaranteed in the four years to date. The economists, however, have assumed that another \$315 million will be guaranteed before October 12, 2013. In the case of grants, \$52.5 million have been issued in the past four years, but the economists have assumed that \$97.44 million more will be issued by October 12, 2013.

158. To put this in context, the maximum amount of loan principal guaranteed by the Ontario LGP in a single year was \$13.6 million, in the boom year of 2007.¹⁸⁴ Yet the economists assumed that Ontario will guarantee \$83.3 million in loan principal in 2010 – more than six times as much as the 2007 boom-year peak.¹⁸⁵ And in spite of the economists' assumption, the record shows that not a single loan guarantee had been issued in 2010 through early June.¹⁸⁶ The figure below shows just how far the assumptions regarding future loan guarantees depart from actual experience.

¹⁸⁴ Kalt/Topel Revised & Final Report, Figure 2.

¹⁸⁵ Kalt/Topel Revised & Final Report, Figure 2.

¹⁸⁶ Kalt/Topel Revised & Final Report, Att. 46.



159. The economists also assume that Ontario will issue \$1.46 million in grants to sawmills in 2010 despite the fact only a single \$25,000 grant was issued to a sawmill in all of 2008 and 2009 combined.¹⁸⁷ The economic analysis thus makes the unrealistic assumption that 2010 will feature the second largest issuance of grants since 2007, even though the record shows that not a single grant has been issued in 2010 as of early June.¹⁸⁸

160. Canada understands that the economists reviewed the question of future program use in light of the Tribunal's instruction that they should assume that programs [] The economists had before

¹⁸⁷ Kalt/Topel Revised & Final Report, Figure 2.

¹⁸⁸ Kalt/Topel Revised & Final Report, Att. 46.

¹⁸⁹ Procedural Order No. 6, ¶ 1.2(a)

them the relatively low rate of both Ontario grant and loan guarantee program use through 2009. They also were aware that the [

]

And the economists had before them the [

]

161. While these facts were before the economists, Canada understands that the economists took the view that PO No. 6 required them to assume that programs not only would continue until the expiration of the SLA, but also that budgeted amounts for those programs would be fully expended during the term of the SLA. These estimates thus do not represent the joint opinion of the economists that the full amounts will in fact be expended, but appear to be informed by an understanding that these estimates were their instruction from PO No. 6. Indeed, at no place in the June 22 Joint Report is there any statement that the economists actually expect grants and loans to be issued at the rates assumed, and the Joint Report notes that the assumption regarding the Ontario LGP is contradicted by information on the record.¹⁹²

162. While Canada respects the economists' attempts to a project program expenditures out to the end of the SLA, Canada believes that the projection they assume is neither required by PO No. 6 nor a reasonable representation of the facts. Daily it becomes more clear that full Ontario program budgets will not be expended.

¹⁹⁰ See footnote X, above (fn 2 in this draft)

¹⁹¹ ON-CONF-7296 and ON-CONF-7315 (Ex. R-23); Kalt/Topel Revised & Final Report ¶ 19, n.8.

¹⁹² Kalt/Topel Revised & Final Report ¶ 19, n.8.

2. There Is No Evidence Suggesting the Grant and Loan Guarantee Levels Assumed by the Economists Will Actually Occur, and Considerable Evidence Shows that They Will Not

163. Canada notes that grants and loan guarantees are issued by the Ontario programs only to support new capital investment projects.¹⁹³ In order to obtain a grant or loan guarantee for a sawmill, the mill owner must first decide to invest in sawmill operations. That decision to proceed with an investment entails considerable risk. Ontario Government support is limited. Grants to sawmills may not exceed 10% of the total project value (up to a maximum grant of \$25 million), and loan principal guaranteed may not exceed \$25 million. The grant recipient thus must privately finance 90% of the project, and only up to \$25 million of that private financing may enjoy a loan guarantee.¹⁹⁴

164. The Parties and both economists have recognized that the financial crisis and continued depressed rate of U.S. new home construction have substantially slowed down new investment in sawmills relative to 2006 and 2007. Indeed, Professor Topel expanded at length on the significance of the financial crisis in making difficult the financing of new lumber investment.¹⁹⁵ But Professor Topel apparently never considered whether those same conditions would also tend to reduce lumber mill investment, and thus *reduce* program usage. The two assumptions reflected in the report – tight financial and market conditions, but a rapid increase in investment in sawmills – cannot stand together.

¹⁹³ Exhibits R-27 and R-30.

¹⁹⁴ *Id.*

¹⁹⁵ Kalt/Topel Revised & Final Report ¶¶ 49-51.

165. The record makes clear that economic conditions are likely to cause both programs to be undersubscribed. As early as 2006 – at the outset of the program, and in the very midst of the U.S. housing boom – [

] This is [] than the \$350 million assumed in the Joint Report. It also is clear that a new projection, undertaken in light of the change in economic conditions since 2006, yields a [] number.

166. Those same conditions also will continue the trend that is evident on the record – that lumber investment in particular will decline disproportionately faster than other types of forest investment. There is already evidence on the record that forest resource projects such as wood pellet electricity generation are proceeding (there is a much stronger market for electricity than for lumber) while lumber projects are not: The only project supported in 2010 as of June 7, by either the FSPF or the LGP, is a wood pellet production investment related to electricity generation.¹⁹⁷

3. Professor Kalt's Alternative Ontario Benefit Calculation Is Based on the Record, and Should Be Used by the Tribunal for Ontario Export Tax Calculations

167. The economists' assumption regarding Ontario program benefits is just that – an assumption – and not a realistic one in light of current economic conditions. Canada accordingly asked Professor Kalt to explore two alternative assumptions, and to run the model based on those alternatives.

¹⁹⁶ ON-CONF-7296 and ON-CONF-7315 (Ex. R-23); Kalt/Topel Revised & Final Report ¶ 19, n.8.

¹⁹⁷ Kalt/Topel Revised & Final Report, Att. 46.

168. **First Alternative: Actual Use.** Canada's first alternative assumption is that expenditures under the Ontario programs will continue in the future at the same rate as they have in the past. This is a quite reasonable assumption. It does not pretend, for example, that LGP benefits in the second half of 2010 will be so massive as to cause 2010 guarantees to be six times greater than those issued in 2007. On the contrary, this assumption recognizes that the past experience under the program reflects two boom years (part of 2006 and all of 2007), one year of great transition (2008), and two years of deep recession (2009 and part of 2010). This past experience is balanced between boom and bust, and thus is a reasonable baseline on which to base future projections. Equally important, this past experience is a measure of actual usage, which is not the case with program budgeted amounts.

169. Professor Kalt has responded to Canada's request by taking two steps. First, he totaled the grants awarded and loan principal guaranteed for lumber projects as of the time of the Joint Report.¹⁹⁸ He then divided each figure by the amount of time between the inception of the program and the most recent award announced under the program. The result of that division is an annual rate of award for each program. Professor Kalt then assumed that annual rate as the amount of award for each future year. (The remainder of 2010 and 2013 are partial years, and are allocated a proportional amount.)

170. This alternative is provided as an option for the Tribunal to consider on Professor Kalt's Interactive Spreadsheet, attached to this brief. The Tribunal may select this option by referring to spreadsheet issue "Ontario Program Utilization Assumptions" and choosing the option "Projections Based on Historic Usage". For convenience,

¹⁹⁸ These amounts are found on Attachment 46 of the Kalt/Topel Revised & Final Report.

Figure 1 displays the results of Professor Kalt's calculation of the annual rate in paper form for one particular scenario. Figure 1 compares benefit amounts for the Ontario FSPF and LGP for 2010-2013 based on actual historic use to those assumed in the Joint Report. The actual historic rates of program usage are starkly lower. The comparison in Figure 1 involves the "maximum" scenario: one that accepts every proposal of Professor Topel, such as inclusion of post-SLA effects, very high interest rates, Professor Topel's new export tax calculation, and so on. In the Joint Report, the 2011 Ontario LGP benefit amount for this maximum scenario is []. Comparing the exact same maximum scenario, but using historic rates of program usage rather than budgeted amounts, Figure 1 shows that the 2011 Ontario LGP benefit amount drops to [].

171. Professor Kalt's second step was to use the benefits calculated in this historic use scenario to calculate export taxes. Here, the Tribunal again will see a stark contrast between the outcome of the economists' assumption and actual historic program usage. The same maximum scenario, reflecting all of Professor Topel's proposals, yields an 2011 Ontario export tax of 2.27% . Comparing the exact same scenario, but using historic usage rather than budget amounts, Figure 1 shows that the Ontario export tax rate drops to 0.8% .

172. **Second Alternative: Ontario's Projected Use.** Canada's second alternative is based on Ontario's current estimate of actual usage of the FSPF and LGP programs. Ontario's current estimate is that the FSPF will conclude having issued [] in grants – [] less than the \$150 million budget number. Ontario also expects the LGP to conclude having guaranteed [] in loan principal – only [] of the amount assumed by the Joint Report.

173. Canada asked Professor Kalt to run the model to analyze this alternative as well. This Ontario projection alternative is provided as another option for the Tribunal to consider on Professor Kalt's Interactive Spreadsheet, attached to this brief. To select this option, the Tribunal should choose "Projections Based on Ontario Expectations" under the "Ontario Program Utilization Assumptions" issue. For convenience, Figure 2 displays the results of Professor Kalt's calculation of this option for the same maximum scenario. The Tribunal will see that the 2011 Ontario LGP benefit amount for the "maximum" scenario – accepting all of Professor Topel's proposals – drops from [] when calculated using Ontario's projected program usage. The tax rate on the maximum scenario falls from 2.27% to 1.10% .

174. Both of these alternatives are a far more reasonable representation of the facts in the record than the projections set for the in the Joint Report. Canada respectfully urges the Tribunal to reject the unrealistic assumption of full program amounts, and instead to use either Professor Kalt's actual usage scenario or his Ontario budget scenario in its calculations.

B. PROFESSOR TOPEL'S NEW ASSUMPTION REGARDING THE TIMING OF ONTARIO BENEFITS IS PREJUDICIAL AND NOT SUPPORTED BY THE RECORD

175. Professor Topel's June 22 calculations feature a significant change from the June 15 methodology that is not explained in the Joint Report. The change more than [] Ontario's already-inflated compensatory export duty rate in some scenarios, and is unsupported by the record. This section explains the issue and describes Professor Topel's error, and also explains how the Tribunal can correct for this error in its decision.

176. The issue is the difference in time between when program support is announced, on the one hand, and the time that capital assets financed with that support actually enter productive service, on the other hand. The in-service date is important, because that is the date at which program benefits actually can begin to affect the lumber market. The record shows that there is an average of two years' time between Ontario's announcement of program support for an investment and the entry into service of that investment.

177. The treatment of the timing of Ontario benefits in the model was a matter of agreement between Professors Topel and Kalt, and was reflected in every run of the model produced by Professor Topel (and Professor Kalt) prior to late in the evening on June 22, including the proffered "final" runs on which their June 15 submission was based. But, for certain scenarios on the June 22 Interactive Spreadsheet, the time difference was reduced by one year. There is no mention of this in the Joint Report because Professor Topel's staff changed the method after 11pm (U.S. Eastern time zone) on June 22, as the June 22 report was being readied for final production. It was then far too late to permit the issue to be raised to the Tribunal as an issue for decision, and Professor Topel's staff made no changes to the text (e.g., at ¶ 173) wherein Professor Topel describes the experts' agreement that [] (for Ontario) are pushed out in time relative to other investments (i.e., for Québec). The submitted June 22 model results and certain of Professor Topel's cases in the Interactive Spreadsheet no longer contain this pushing out in time.

178. As a consequence of this last minute action, the timing change is not discussed in the Joint Report and is not presented on the June 22 Interactive Spreadsheet as a decision point for the Tribunal. Canada draws the Tribunal's attention to the following: (1) the new assumed time difference for Ontario investments is

inconsistent with the record; (2) the new assumed time difference is inconsistent with every model run prior to the eleventh hour on June 22, including the June 15 Interactive Spreadsheet; and (3) the new assumption significantly increases the export tax for Ontario in certain scenarios

1. The Record Demonstrates that the Time From Ontario Announcement to In-Service Date Is on the Order of Two Years

179. The experts' modeling entails, in effect, a convention under which the effects of benefits on Ontario and Québec softwood lumber mills' capital stock show up in yearly increments. Model consistency requires that the supply and demand effects of expanded industry supply capability occur in yearly increments (e.g., there is no monthly timing in the model) and that the earliest that such capability arises is in the year immediately following the investment. Appendix A lists all Ontario FSPF and LGP projects for which the record contains both announcement date and the required in-service date information. As shown in Appendix A, for Ontario projects, the average time between announcement of program support and the required in-service date of equipment is over []. On a dollar-weighted basis, these figures are [].¹⁹⁹

180. The reasons for the differences between dates of announcement and in-service dates are directly related to the nature of the Ontario-supported projects in question. These projects typically involve substantial construction and/or system engineering with multiple phases of construction. This is reflected in the record documents on the loans and grants in question, which commonly require that [

¹⁹⁹ These calculations are conservative as when a range has been provided, rather than using the end of the range, the mid-point between the end of the time period and the announcement date has been used as the placed-in-service date.

]. The average time between the announcement by Ontario and the Commencement Date, the date on which construction or installation [] is [].²⁰⁰ The result is that projects are commonly not in a position to start affecting lumber supply and demand, and hence lumber prices, for about two years following announcement of project support.²⁰¹

2. Use of the Correct In-Service Time Is Significant

181. The Tribunal might ask whether the in-service time is a significant issue. The answer is that it is quite significant for Ontario. By making his error, Professor Topel assumes that projects affect the lumber market at an earlier time than they actually do or could.

182. As Canada has pointed out, only economic activity that occurs during the time of the SLA is capable of offsetting the Export Measures; subsequent to the SLA there will be no measures to offset.²⁰² By failing to account for the lag in Ontario project completion, Professor Topel assumes that an entire additional year's worth of projects announced will have an economic effect during the SLA, even though those projects in

²⁰⁰ Weighted by project value, the lag between announcement by Ontario and the expected commencement is more than two years. No commencement date for the [] project is identified on the record.

²⁰¹ None of the project support at issue in Ontario entails, for example, working capital benefits (which would be expected to show shorter lags between announcement and marketplace effect). In the case of Québec, program benefits entail a mixture ranging from working capital support to road building benefits, with an associated range of time passage between announcement and in-service dates (with, e.g., working capital benefits appearing quickly and road building, albeit not measurable with record data, reasonably taking longer to come into service. Taking date of announcement as occurring at time (or year), $t=0$, both experts have consistently treated (e.g., in both the June 15 and June 22 submissions) the in-service time of Québec -benefit provision as $t=1$. This is required for model consistency.

²⁰² Para. 157, *supra*.

fact will not enter into service until after October 2013. Worse, the value of this incorrectly accelerated investment is itself unrealistically high. As has already been explained by Canada, the economists have made unrealistically inflated assumptions about future Ontario benefits.²⁰³ Professor Topel thus compounds two false assumptions. His benefit amount is too high, and he assumes that any resulting investment enters into service, and correspondingly affects lumber production, earlier than it will. All of this creates fictional economic effects in Professor Topel's model runs.

3. Proposed Tribunal Action

183. Because Professor Topel's staff changed its timing assumption at the very last moment, the Tribunal has not been given a convenient means by which to address the issue. As the matter currently stands, the timing change is co-mingled with Professor Topel's proposed "Model Parameter" option on the Interactive Spreadsheet supplied on June 22. If the Tribunal were to select Professor Topel's "Road Tax as Capital" option under "Model Parameter," which involves arguments about the treatment of wood and roads, then it would unknowingly also be selecting Professor Topel's new in-service time assumption for the totally unrelated issue of Ontario benefits.

184. Fortunately, there is a relatively straightforward path out of this situation. The Tribunal has two options. If the Tribunal agrees with Professor Kalt on both the issue of "Road Tax as Delivered Wood Cost" under "Model Parameter" and also on the issue of the Ontario announcement-to-in-service timing, then it can select both of those

²⁰³ The Tribunal will recall that the economists already have assumed an unrealistically aggressive distribution of benefits by Ontario, in which, for example, the level of LGP guarantees announced in years 2010-2013 will each be six times greater than the maximum annual amount announced so far. See paras. 155-174, *supra*.

options on the new interactive spreadsheet submitted with this brief.²⁰⁴ Selecting those options will deliver figures based on the correct in-service timing. If, however, the Tribunal decides to select the "Road Tax as Capital" under "Model Parameter," but agrees that Ontario in-service times should be calculated in accordance with Professor Kalt's view, then the Tribunal can also obtain the correct result for that scenario from Professor Kalt's new interactive spreadsheet. To do so it can select "Road Tax as Capital" under "Model Parameter" and also "In-Service Timing – Kalt" under "Ontario Equipment In-service Timing".

²⁰⁴ Alternatively, the Tribunal could use the interactive spreadsheet submitted with the June 22 Joint Report. If that spreadsheet is used, then the Tribunal could select "Road Tax as Delivered Wood Cost" under "Model Parameter" and need do nothing further. That spreadsheet will also calculate according to Professor Kalt's in-service timing assumption if the "Road Tax as Delivered Wood Cost" option is selected.

ANNEX 1

PROFESSOR TOPEL'S CRITICISM OF PROFESSOR KALT AND DEFENSE OF HIS OWN METHODOLOGY ARE RIFE WITH ERRORS AND REVEAL A FUNDAMENTAL MISUNDERSTANDING OF FINANCIAL CONCEPTS

1. Canada has demonstrated in the text of the brief, at paragraphs 18-59, that the loans and loan guarantees provided by the LGP and PSIF were secured; and therefore that appropriate market benchmark for the loans that forestry companies received under these programs is the rate those companies would have received for secured financing, and not the rate that they would have obtained for unsecured loans, as Professor Topel has suggested. In this Annex, we address in further detail some of the arguments and criticisms of Professor Topel.

2. The first section of this Annex considers Professor Topel's attempts to discredit Professor Kalt's array of examples of companies that successfully obtained secured financing. These examples demonstrate the error of Professor Topel's suggestion that secured credit was unavailable. The second section reviews Professor Topel's criticism of Professor Kalt's use of the BB Corporate Bond Index. His criticism is predicated on a misunderstanding of the role of this index in Professor Kalt's model. The third section explains that Professor Topel's attacks on Mr. Reilly are unavailing. The fourth section reviews Professor Topel's incorrect interpretation of an administrative modification to Ontario's LGP. The final section highlights Professor Topel's erroneous assumptions about the riskiness of small companies and the riskiness of the loans

guaranteed by Ontario's LGP. In sum, Professor Topel has comprehensively failed in his efforts to rebut the sensible approach that Professor Kalt has pursued.¹

A. Professor Topel Fails in His Attempts to Discredit Professor Kalt's Specific Examples of Secured Lending

3. In the Experts' Joint Report, Professor Kalt offers a number of examples of forestry companies that had successfully obtained secured lending on reasonable terms during the financial crisis.² This is highly significant, for two reasons. First, it demonstrates the error in Professor Topel's attempt to portray credit as unavailable or prohibitively expensive. Second, as pointed out in the text of this brief, Ontario's LGP guarantees and Québec PSIF loans were always extended on the basis of a security interest in assets.³ Secured loans are the appropriate standard for comparison.

4. Professor Topel attempts to discredit Professor Kalt's examples, but his efforts are inapposite and sometimes factually wrong.⁴ Professor Topel attempts to

¹ Symptomatic of Professor Topel's approach is his reliance on a press conference with a Canadian minister, Jean-Pierre Blackburn, in April, 2009. Kalt/Topel Revised & Final Report ¶ 49. Professor Topel, much as did Mr. Beck, seizes upon the informal, politically-charged pronouncements of a government official rather than engage in rigorous economic analysis. Professor Topel fails to explain how Mr. Blackburn's statements regarding a hypothetical federal program are relevant to Ontario's Loan Guarantee Program; how Mr. Blackburn's statements regarding the prevailing market conditions in 2009 are relevant to loans issued at other times (not a single loan was issued in 2009 under the LGP); or how a broad assessment of the market can substitute for particularized analysis of each company seeking financing. And needless to say, Professor Topel did not inquire whether the quotation would be relevant to secured financing. Canada is unaware of any finance textbook that suggests the use of political statements as an input to a loan valuation model.

² See Kalt/Topel Revised & Final Report ¶ 32 and Figure 9.

³ See ¶¶ 27-30.

⁴ For example, Professor Topel is simply wrong that Smurfit-Stone was able to receive financing in April 2010 because it had just emerged from bankruptcy, and, by implication, had eliminated its prior debt. In fact, Smurfit-Stone was not cleared to exit bankruptcy until June 21, 2010 – and did not in fact exit bankruptcy on June 30 – well after the company obtained the asset-based lending

distinguish Professor Kalt's examples by arguing that these examples were [

1

But this argument fails for three reasons.

5. ***Professor Topel is wrong to suggest that the use of accounts receivable and inventory as security is, somehow, a point of differentiation.*** As a preliminary matter, Professor Topel offers no evidence that the Ontario LGP and Québec PSIF loans are *not* secured by accounts receivables and inventories, and the record shows that guaranteed lending in Ontario is supported by security interests in such assets.⁶ But Professor Topel is equally wrong on the facts. Professor Kalt's examples, which would remain quite relevant even if they included only examples of accounts receivable and inventory financing, in fact include several companies that obtained financing that was secured by a claim on *equipment and other assets* – not just accounts receivables or inventories.

identified by Professor Kalt. See Marie Beaudette, "Smurfit-Stone Leaves Bankruptcy" *Wall Street Journal* (June 30, 2010) (Ex. R-165).

⁵ Kalt/Topel Revised & Final Report ¶ 51.

⁶ For example, the LGP loans regularly use accounts receivable and inventory as security. See, e.g., Olav Haavaldsrud Loan Guarantee Agreement, ON-CONF-07124, Sec. 2.2 (Ex. R-6L) (providing that the Bank has a security interest in receivables and inventory of Haavaldsrud); ¶¶ 40-45. Although the United States and its experts have never examined the actual PSIF loan files, all PSIF loans required security interests including security on inventory, receivables, equipment, buildings, and many other company assets. Depending on the type of loan and project at issue, any or all forms of these security interests were taken by Investissement Québec. See Investissement Québec, PSIF – "Working Capital" (stating under "Terms and Conditions" that "[s]ecurities are required based on the financing granted."), <http://www.investquebec.com/en/index.aspx?page=2128&prt=1> (Ex. R-152); see also PSIF – "Investment," (stating under "Terms and Conditions" that "[s]ecurities are required based on the financing granted.") <http://www.investquebec.com/en/index.aspx?page=2129&prt=1> (Ex. R-153).

- On April 1, 2008, AbitibiBowater obtained a \$400 million 364-day senior secured term loan due March 30, 2009 secured by a first lien on the equipment of an AbitibiBowater subsidiary, the pledge of stock and other equity interests of other subsidiaries and by real estate relating to a newsprint mill.⁷
- The collateral securing Bowater's Canadian bank credit facility included real estate, fixtures, and equipment owned by Bowater mills.⁸
- Catalyst Paper secured a new \$330 million asset-based revolving ABL facility maturing August 2013. Collateral for this loan included a first charge on the property, plant and equipment of the company's Snowflake mill, in addition to all accounts receivable, inventories and cash of the company.⁹
- Collateral for Domtar's \$800 million senior secured a tranche B term loan facility and \$750 million senior secured revolving credit facility included all of the equity interests and a perfected first priority security interest in substantially all of the tangible and intangible assets of the company and its subsidiaries.¹⁰
- Collateral for Pope and Talbot's \$325 million senior secured credit facility included substantially all of the assets of the company and its subsidiaries.¹¹

All of these companies are also in Professor Topel's analysis.

6. ***Professor Topel does not explain why the experience of large, diversified and publicly traded companies is inapplicable.*** In fact, he sees fit to base his own methodology almost exclusively on such companies.¹²

⁷ AbitibiBowater 2008 10-K, p. 98 (Ex. R-149-MMM)

⁸ *Id.* at p. 99 (Ex. R-149-MMM).

⁹ Catalyst 2009 Annual Report, p. 89, Att. 50 to Kalt/Topel Revised & Final Report.

¹⁰ Domtar 2007 10-K, p. 116 (Ex. R-149-OOO).

¹¹ Pope & Talbot 2006 10-K, p. 60, Att. 19 to Kalt/Topel Revised & Final Report.

7. ***Professor Topel is wrong to suggest that the companies in Professor Kalt's examples are "very different" from Canadian softwood lumber producers.*** Professor Topel bases this allegation on the fact that certain of these examples are based in the United States and are not adversely affected by the restrictions of the SLA.¹³ Professor Kalt's examples include companies such as AbitibiBowater, Domtar, Tembec, Ainsworth, Cascades and Catalyst Paper, each of which has Canadian headquarters and extensive Canadian operations, and feature prominently in Professor Topel's own yield to maturity analysis.¹⁴

8. The fact that some of Professor Kalt's examples are companies based in the United States does not undermine his point. On the contrary, as Professor Kalt has explained, the U.S. and Canadian wood products companies are in a common North American market and both commonly access the U.S. credit market.¹⁵ If U.S.-based forestry companies were able to secure loans on the basis of their assets, there is no reason to think that Canadian-based companies would be unable to do so. The applicability of the SLA was well-known and, according to standard financial economics, would have been incorporated into investors' expectations well before the critical period of Professor Topel's extremely high interest rates. Moreover, the dominant characteristic shared by U.S. and Canadian forest product companies during that period was the deep recession in the *North American* market.

¹² All but one of Professor Topel's examples are publicly traded, as Professor Topel states in ¶ 74 of the Kalt/Topel Revised & Final Report, and many are highly diversified (see Reilly Surrebuttal Report, Exhibit 4A (Ex. R-149).

¹³ Kalt/Topel Revised & Final Report ¶ 51.

¹⁴ See Kalt/Topel Revised & Final Report ¶ 73 and Figure 14.

¹⁵ Kalt/Topel Revised & Final Report ¶ 32.

9. In short, it is not relevant that several of Professor Kalt's examples are not subject to the SLA because they have operations on the U.S. side of the border.

Professor Topel has offered no analysis to suggest that the restrictions of the SLA affect the availability of financing. Professor Topel does not seem to believe his own critique of Professor Kalt, since his *own* benchmark is built on companies largely insulated from the SLA because they primarily produce paper products.¹⁶

10. In sum, none of Professor Topel's objections to Professor Kalt's examples stand up to scrutiny. Professor Kalt's examples demonstrate the availability of secured lending on reasonable terms during the recession and associated financial crisis.

B. Professor Topel Apparently Misunderstands Professor Kalt's Use of the BB Corporate Bond Index

11. Professor Topel criticizes Professor Kalt for his use of the Merrill Lynch High-Yield Canadian BB corporate bond index in the model. Professor Topel argues that this [

] Professor Topel argues that the use of lower-rated corporate bonds would reveal substantially higher "but for" borrowing costs for forestry companies. This, in part, is but another reflection of Professor Topel's failure to recognize the significance of secured lending and his misunderstanding of Professor Kalt's use of the BB bond index as a conservative proxy for such lending. As pointed out in the text of this brief, he included in his analysis low-rated *unsecured* corporate bonds of forestry companies even though those same companies enjoyed far higher credit

¹⁶ Kalt/Topel Revised & Final Report ¶ 73 and Figure 14, Reilly Surrebuttal Report. Exhibit 4A (Ex. R-149).

¹⁷ Kalt/Topel Revised & Final Report ¶ 80.

ratings on their secured debt.¹⁸ Indeed, the table at paragraph 34 above in this brief demonstrates that forestry companies consistently obtained significantly higher credit ratings (and lower interest rates) for secured lending than they did for senior unsecured debt.

12. More importantly, Professor Topel misunderstands Professor Kalt's methodology. Professor Kalt does not use the BB corporate bond index as a *starting point* in the model. Rather, Professor Kalt started with a detailed analysis of the actual secured loans that Ontario forestry companies obtained under the auspices of the LGP. Then, he analyzed the availability of secured loans outside the program, and found that secured financing continued to be available and to be committed. As Professor Kalt noted, [

]

13. Based on this analysis in Ontario, Professor Kalt then sought the appropriate input on "but for" financing. He recognized that he lacked the comprehensive data to calculate an across-the-board market rate for asset-based lending;²⁰ and that, of course, there is no public index on secured financing rates. He noted, however, that Mr. Reilly was able to establish a spread above the prime rate of interest for secured lending in Ontario,²¹ and that the BB corporate bond index bore a similar relationship to the prime rate, with asset-based rates (in Mr. Reilly's examination

¹⁸ See ¶ 29.

¹⁹ Kalt/Topel Revised & Final Report ¶ 32.

²⁰ Kalt/Topel Revised & Final Report ¶ 22.

²¹ Kalt/Topel Revised & Final Report ¶ 36.

of Ontario and in Professor Kalt's own examples) in fact somewhat cheaper (as illustrated by Figure 6 in the Joint Report).²² Professor Kalt also noted that his examples of asset-based lending in Ontario were at rates consistently less than the BB corporate bond index, making his analysis conservative.

14. It should now be clear that Professor Topel's criticism misses the mark. Professor Kalt uses the BB index as a proxy for secured lending. Professor Kalt does not use a corporate bond index corresponding to typical forestry companies because that would only show us the unsecured bond rates of forestry companies, and not their secured loan rates. The *unsecured* bond rates of forestry companies are plainly irrelevant because the LGP and PSIF feature secured financing.

C. Professor Topel Fails Equally in His Efforts to Impugn Mr. Reilly's Analysis of Lending Conditions in 2006 and 2007

15. Mr. Reilly provided a highly-detailed analysis of two examples where forestry companies participating in the LGP also obtained commercial financing outside the program: Mr. Reilly showed that [

] These Ontario examples provide actual evidence of "but-for" borrowing costs for secured lending, and support the finding that an [] market interest rate for secured lending to those Ontario companies at that time is both credible and conservative.

²² Kalt/Topel Revised & Final Report ¶ 38.

²³ Reilly Rebuttal Report ¶ 32 (citing [] (Ex. R-144).

²⁴ Reilly Report ¶ 44 (citing [] (Ex. R-6).

16. Faced with Mr. Reilly's robust analysis of Ontario companies, Professor Topel does not offer an alternative analysis, or provide any competing evidence.

Professor Topel simply asserts that in his opinion, Mr. Reilly's conclusion that forestry companies had access to secured loans at a rate of approximately [] is [

] This is not a serious expert opinion based on underlying empirical analysis; in fact, it is little more than name-calling. Professor Topel then offers two dubious lines of attack.

17. ***Professor Topel cites data from Investissement Québec ("IQ") to challenge the reasonableness of Mr. Reilly's [] "but-for" financing benchmark.***

Professor Topel selects as his best evidence IQ's budgetary estimates of "effective interest rate" data for a range of financial instruments with differing maturity dates including fixed term "interest-free loans" and also "other loans, shares, units, and receivable guarantee fees." Without examination of, for example, differences in the types and degrees of security applicable to loans across firms and sectors, he then generalizes and asserts that: [

] This proposition is supposedly self-evident, and Professor Topel forthwith concludes, without any further argument, that Mr. Reilly's opinion must be wrong.

18. Even if Professor Topel were properly characterizing this divergent IQ data as "market interest rates on loans"— and he is not — his argument is perplexing.

²⁵ Kalt/Topel Revised & Final Report ¶ 57.

²⁶ Kalt/Topel Revised & Final Report ¶ 61 (emphasis in original).

Professor Topel highlights tranches of financial instruments – not simply loans – with various maturity periods for the period from April 2007 to March 2008.²⁷ Unsurprisingly, the “effective interest rate” data vary considerably between the shorter-term financial instruments (3-12 month interest-free loans had interest rates on the order of 10.5%) and longer-term financial instruments (1-5 year interest-free loans had rates on the order of 8.9% and 5-plus year interest-free loans had rates on the order of 8.1%). Professor Topel’s observation that the “average” recipient of IQ support had higher rates than 8% (Mr. Reilly’s estimate for forestry companies) is *literally* true – but it is trivially so. The more precise observation is that the IQ budgetary estimates of “effective interest rate” data for interest-free loans with maturity periods around [] – both the [] and [] loans, which Mr. Reilly analyzed, had [] – are remarkably similar to Mr. Reilly’s [] estimate. The weighted average for the “effective interest rate” data for interest-free loans with a 1-5 year or 5-plus year maturity period, for the year in question, is 8.3%.²⁸ Rather than undermining Mr. Reilly’s estimate of the market rate, the IQ data appear to confirm it. Much like Ontario’s forestry companies, assorted companies in Québec would have been able to obtain longer-term financing secured to their valuable assets at interest rates on the order of [].

19. Moreover, Professor Topel has provided IQ data for only a single year – the period from April 2007 to March 2008.²⁹ As it turns out, this year had the highest “effective interest rate” data of all four years that the SLA has been in effect. The

²⁷ Kalt/Topel Revised & Final Report ¶ 60.

²⁸ Calculation based on data provided in IQ 2007-2008 Annual Report, p. 108, Att. 25 to Kalt/Topel Revised & Final Report.

²⁹ Kalt/Topel Revised & Final Report ¶ 59.

following Table shows the relevant IQ data for interest-free loans for all four years.³⁰ For the first year of the SLA, for example, 1-5 year loans had a rate of only 7.7% and 5-plus year loans had a rate of only 6.8%. In fact, the weighted average of the effective interest rate for interest-free loans with a 1-5 year or 5-plus year maturity period, for all four years, is 7.5%.³¹ This is substantially lower than the weighted average for only 2007-2008 (8.3%) and is, of course, lower than Mr. Reilly's [] estimate.

IQ Data on Effective Interest Rates for Interest-Free Loans

	Maturity Period	
	1-5 years	More than 5 years
2006-2007 Annual Report	7.7%	6.8%
2007-2008 Annual Report	8.9%	8.1%
2008-2009 Annual Report	8.5%	7.1%
2009-2010 Annual Report	8.1%	7.5%

20. Indeed, it also should be noted that the IQ data selected by Professor Topel are inapplicable to the PSIF loans at issue in this proceeding. None of the PSIF loans to softwood lumber producers subject to the SLA is interest-free.³² And none is a

³⁰ See IQ 2006-2007 Annual Report, p. 84, Att. 24 to Kalt/Topel Revised & Final Report; IQ 2007-2008 Annual Report, p. 108; IQ 2008-2009 Annual Report, p. 114, Att. 32 to Kalt/Topel Revised & Final Report; IQ 2009-2010 Annual Report, p. 141, Att. 56 to Kalt/Topel Revised & Final Report.

³¹ IQ 2006-2007 Annual Report, p. 84, Att. 24 to Kalt/Topel Revised & Final Report.

³² As previously explained to the Tribunal and the United States, there are no interest free loans to softwood lumber producers subject to the SLA. The only identified interest free loan on the record of this proceeding was to an excluded company whose products are, by definition, not Softwood Lumber Products under the terms of the Agreement. See Canada Rejoinder ¶ 336, n.347. Moreover, the United States is aware that Investissement Québec issued an internal memorandum to its PSIF portfolio managers ensuring that interest free loans would not be provided to softwood lumber producers. See Canada Rejoinder ¶¶ 335-338 and Exhibit R-134. Accordingly, Professor Topel's claims about what the effective interest rate data represent is

fixed-rate loan – PSIF loans are variable rate loans tied to prime and thus are represented, if anywhere, in the first column of the Interest Rate Sensitivity Table for which there is no “effective interest rate” data whatsoever. In addition, virtually every PSIF loan at issue in this proceeding is for a term of five or more years with many having terms of seven and eight years.

21. Furthermore, while Professor Topel presents the IQ data for interest-free loans, he notes [] The suggestion is that the data for guaranteed loans would be more supportive to his case. This is highly misleading. In fact, the entry in the IQ chart is only for “other loans, shares, units, and *receivable guarantee fees*.”³⁴ Not only does this category include a number of financial instruments besides simply loans including equity shares held by Investissement Québec in borrowing companies, “receivable guarantee fees” are not at all the same as guaranteed loans.

22. Finally, Professor Topel confuses and mischaracterized the IQ data he selects. The note to the financial statement appearing in Section 25 – Interest Rate Sensitivity – provides an express explanation of the internal budgetary purpose for which the “effective interest rate” data is created and used.³⁵ The data provides a general

equally flawed to the degree he relies on rates based on interest free loans. Indeed, Professor Topel’s many references to interest-free loans made under the PSIF are, similar to Mr. Beck’s previous assertions, both incorrect and meaningless. See Kalt/Topel Revised & Final Report ¶ 94 (“The record in this case includes a detailed enumeration of interest-free and other subsidized loans provided to SWL producers and others under PSIF through May 2008.”)

³³ Kalt/Topel Revised & Final Report ¶ 60.

³⁴ IQ 2007-2008 Annual Report, p. 108, Att. 25 to Kalt/Topel Revised & Final Report (emphasis added).

³⁵ *Id.*

overview of the risk to Investissement Québec of its holdings for a given period. Interest risk arises if changes in the interest rates of Investissement Québec's assets diverge over time from changes in the interest rates of Investissement Québec's liabilities. This is why the note references the earlier of the date of modification of the contract and the maturity date. Accordingly, the "effective interest rate" is *not* the market rate, as Professor Topel incorrectly asserts in an attempt to rebut the more thoughtful and accurate conclusions reached by Mr. Reilly after his examination of actual Ontario company files.

23. ***Professor Topel suggests that Mr. Reilly's approach is inconsistent with asset-based lending.*** Professor Topel embarks on a lengthy discussion of asset-based lending.³⁶ Professor Topel makes one telling point in this context, although it is hardly one that supports his position. Professor Topel observes that asset-based loans can impose certain costs on the borrowing company, over and above the interest rate for the loan: he argues that [

] This is an accurate observation. In fact, however, this observation only lends further credence to the approach of Mr. Reilly and Professor Kalt. It helps explain why companies demand considerably lower interest rates for secured loans, as opposed to unsecured bonds. It also demonstrates the vital importance of a proper apples-to-apples comparison between the loans and the benchmark market rate. An approach which compares the rates on secured loans, loans that burdened the borrowing

³⁶ Kalt/Topel Revised & Final Report ¶ 62, *et seq.*

³⁷ Kalt/Topel Revised & Final Report ¶ 65. Professor Topel's sentence ends with the less accurate statement [] He again seems to assume that default leads inevitably to liquidation, and also does not seem to recognize that even unsecured lenders have a claim on assets that is senior to that of owners. A more accurate point would be that once an asset is pledged, the owner cannot readily pledge it to another lender. But this confusion does not affect the discussion above.

companies with the indirect costs that Topel infers (but does not empirically quantify), to unsecured corporate bonds that do *not* entail those costs is clearly *not* an appropriate comparison.³⁸

24. As Professor Topel correctly observes, [

] That is plainly the case: the government-supported loans in the record *are* security-based, as made clear in the text of Canada's brief.⁴⁰ Professor Topel's reliance on unsecured corporate bonds, instead of the actual secured loans that forestry companies obtained, is irreparably flawed.

D. Professor Topel Misrepresents the Record on the Administrative Modifications to the Ontario Loan Guarantee Program

25. Not for the first time, Professor Topel attempts to draw unfounded conclusions from Ontario's administrative decision to move from a [

]. Professor Topel asserts that this shift is proof that forest-sector lending was excessively risky. However, Professor Topel misunderstands the theory and ignores the record.

26. The original [

³⁸ As pointed out by Professor Kalt in the Kalt/Topel Revised & Final Report ¶ 33, even on its own terms, Professor Topel's argument requires that secured lending dilute the claims of unsecured lenders. This is not the case when secured projects add value to the firm and move it further away from insolvency.

³⁹ Kalt/Topel Revised & Final Report ¶ 64.

⁴⁰ See ¶¶ 27-30.

]. Quite simply, as Professor Kalt discusses in the Joint Report, the original program []⁴¹ The credit risk assessment employed by banks treats a [], and so banks that were willing to take on a 50% risk were just as willing to [] – and consequently refused to offer more favorable terms for the former over the latter.⁴² The LGP therefore []

]. There was no shortage of investments in the forestry sector, many of which could have qualified for the LGP; indeed, these investments were made without recourse to the LGP. This demonstrates that the []⁴³

27. The evidentiary record also belies Professor Topel's assertions. If the LGP redesign had been necessary because projects could not obtain financing without it, then one of two results should have happened for each project. Either the project should have received loan guarantees under the new program, or in the alternative, if the projects still were not attractive with a [], then the projects should have been abandoned.

28. The facts do not show this. Subsequent to the change []

⁴¹ Kalt/Topel Revised & Final Report ¶ 25.

⁴² See Reilly Rebuttal Report ¶ 22 (Ex. R-144).

⁴³ Kalt/Topel Revised & Final Report ¶ 25.

⁴⁴ See Kalt/Topel Revised & Final Report, Att. 46, "Projects Supported to Date," and Ex. R-23 (identifying [] as the only LGP application pending at the time of the modification that eventually received support under the modified LGP).

].⁴⁵ The projects which proceeded without financing under the loan guarantee program, even after the modification, included: [

].⁴⁹ The administrative redesign of the LGP was undertaken to make sure that [].

29. This can also be seen by Professor Topel's misquotation of the record. He quotes an MNR document proposing the change to the LGP program as stating: [] This misquotation would lead the reader to believe that [

]. But Professor Topel has left key words out of his quotation. The quotation with the missing words replaced is: [

]

The meaning here is not that no financing was available, as suggested by Professor

⁴⁵ These projects received grants, but even with the maximum 10% grants had to arrange private financing for the remaining 90%.

⁴⁶ Kalt/Topel Revised & Final Report, Att. 46, "Projects Supported to Date."

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ Kalt/Topel Revised & Final Report ¶ 55.

⁵¹ Kalt/Topel Revised & Final Report ¶ 54 (citing ON-CONF-07230) (emphasis added).

Topel. On the contrary, projects proceeded with no guarantee at all. The meaning is that not very many projects found the [

]

E. Professor Topel Fails to Confront the Errors in His Assumptions About the Riskiness of Small Companies and the Riskiness of Loans Guaranteed by the Ontario LGP

30. Canada already has shown that Professor Topel's methodology is fundamentally flawed, in so far as it measures unsecured corporate bonds, rather than the sort of secured loans that are properly equivalent to the transactions under the LGP and PSIF. In this final section, Canada draws the Tribunal's attention to two further mistakes in Professor Topel's analysis.

31. First, Professor Topel attempts to defend his methodology by claiming that the forestry sector companies, whose unsecured bonds he has used, are large, publicly-traded companies that are much less risky than the smaller companies that typically participated under the LGP and PSIF.⁵³ Thus, he calls this approach "conservative."

32. This is mere assertion, supported by no analysis. Professor Topel offers no academic authority for the proposition that *unsecured* bonds of large, publicly-traded companies are in fact less risky than *secured* debt of smaller companies; nor does he provide any arguments as to why this might be the case.

⁵² See Summary of [] (May [], 2006), Attaching [] (May [], 2006) at ON-CONF 07296-R (Exhibit R-23).

[] (May [], 2006) at ON-CONF

⁵³ Kalt/Topel Revised & Final Report ¶ 74.

33. Professor Topel's argument is belied both by his own analysis and by the facts. No fewer than six of Professor Topel's fourteen large companies – Abitibi, Ainsworth, Bowater, Fraser Papers, Pope & Talbot and Tembec – have gone through insolvency proceedings during the most recent industry downturn.⁵⁴ This is one reason why his yields on unsecured bonds are so high: over 40% of his companies became insolvent.

34. Second, Professor Topel repeatedly portrays the guaranteed loans issued under Ontario's LGP as extremely risky. At no point in his analysis, however, does he confront the inconsistency between that view and his assumption that Ontario will ultimately guarantee \$350 million in loan principal.

35. Ontario's LGP does not simply set a dollar cap on the loan principal that may be guaranteed; rather, the program requires both that [

[]⁵⁵ Ontario officials must manage to both figures. The [] even if the loan principal is, at that point, significantly lower than \$350 million. (The relationship between the two figures, predicated on the simplifying assumption of a [] for each loan, is nothing more than estimate.) Riskier loan guarantees, if undertaken, would lead to a deduction of [

] As Professor Kalt has noted, this

⁵⁴ Kalt/Topel Revised & Final Report, n.83.

⁵⁵ Summary of [] (June [], 2005), at ON-CONF-07253-R.

is a significant flaw in Professor Topel's assumption.⁵⁶ If Professor Topel wants to assume that Ontario is issuing very risky loans, then the loan principal that can be [] is significantly less than \$350 million; alternatively, if Professor Topel wants to assume that the loan principal amount is \$350 million, then he cannot characterize the loans as excessively risky.

⁵⁶ Kalt/Topel Revised & Final Report ¶ 46.

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**Figure 1:
ACTUAL USE CASE: COMPARISON OF BENEFITS AND EXPORT TAXES IN "MAXIMUM SCENARIO"**

Program (\$ Millions)	2006	2007	2008	2009	2010	2011	2012	2013	Total	Post SLA
Ontario FSPF Benefit Amount (\$CDN)										
June 22 Report Case										
Projections Based on Historical Usage										
Ontario FSPF Tax Rate										
Tax Rate	--	--	--	--	--	0.71%	0.71%	0.71%	--	--
Projections Based on Historical Usage	--	--	--	--	--	0.52%	0.52%	0.52%	--	--
Ontario LGP Benefit Amount (\$CDN)										
June 22 Report Case										
Projections Based on Historical Usage										
Ontario LGP Tax Rate										
June 22 Report Case	--	--	--	--	--	1.60%	1.60%	1.60%	--	--
Projections Based on Historical Usage	--	--	--	--	--	0.28%	0.28%	0.28%	--	--
Ontario Tax Rate										
June 22 Report Case	--	--	--	--	--	2.27%	2.27%	2.27%	--	--
Projections Based on Historical Usage	--	--	--	--	--	0.80%	0.80%	0.80%	--	--

**Figure 2:
ONTARIO'S PROJECTED USE CASE: COMPARISON OF BENEFITS AND EXPORT TAXES IN "MAXIMUM SCENARIO"**

Program (\$ Millions)	2006	2007	2008	2009	2010	2011	2012	2013	Total	Post SLA
Ontario FSPF Benefit Amount (\$CDN)										
June 22 Report Case										
Projections Based on Ontario Expectations										
Ontario FSPF Tax Rate										
Tax Rate	--	--	--	--	--	0.71%	0.71%	0.71%	--	--
Projections Based on Ontario Expectations	--	--	--	--	--	0.55%	0.55%	0.55%	--	--
Ontario LGP Benefit Amount (\$CDN)										
June 22 Report Case										
Projections Based on Ontario Expectations										
Ontario LGP Tax Rate										
June 22 Report Case	--	--	--	--	--	1.60%	1.60%	1.60%	--	--
Projections Based on Ontario Expectations	--	--	--	--	--	0.57%	0.57%	0.57%	--	--
Ontario Tax Rate										
June 22 Report Case	--	--	--	--	--	2.27%	2.27%	2.27%	--	--
Projections Based on Ontario Expectations	--	--	--	--	--	1.10%	1.10%	1.10%	--	--

APPENDIX A

TIME BETWEEN ANNOUNCEMENT DATE AND IN-SERVICE DATE

Company	Location	Announcement Date	Commencement Date	In-Service Date	Grant Available
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Note: (1) Where in-service date is a range the mid-point between the announcement date and latest in-service date is used.

Sources: Reilly Table 5B; Reilly Attachment H.