2013 Actuarial Report on the Employment Insurance Premium Rate

Presented to the CEIFB Board of Directors

August 31, 2012

CEIFB CANADA EMPLOYMENT INSURANCE FINANCING BOARD

31 August 2012

Board of Directors of the Canada Employment Insurance Financing Board
Ottawa, Canada

Dear Directors,

Pursuant to section 14 of the *Canada Employment Insurance Financing Board Act*, I am pleased to submit the 2013 report which provides actuarial forecasts and estimates for the purposes of section 66 of the *Employment Insurance Act*. Please note that the estimates presented in this report are based on the Employment Insurance provisions as of July 31, 2012.

Yours sincerely,

Michel Millette, F.C.I.A., F.S.A.
Chief Actuary
Canada Employment Insurance Financing Board

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I. Executive Summary

A. Purpose of the Report

This Actuarial Report of the Chief Actuary of the Canada Employment Insurance Financing Board ("CEIFB" or "Board") is the third one to be presented to the board of directors of the CEIFB in compliance with the *Canada Employment Insurance Financing Board Act* ("CEIFB Act"), which came into force on June 20, 2008.

Pursuant to section 14 of the CEIFB Act, the purpose of this report is to provide the board of directors of the CEIFB with actuarial forecasts and estimates for the purposes of section 66 of the *Employment Insurance Act* ("EI Act").

In accordance with section 66 of the EI Act, the Board shall set the premium rate in order to generate just enough premium revenue during the upcoming year to ensure that at the end of that year, the total amounts credited to the Employment Insurance ("EI") Operating Account after December 31, 2008 are equal to the amounts charged to that Account after that date.

In setting the premium rate, the Board shall take into account the prescribed information that is provided to the Board on an annual basis, the amount by which the Board's financial assets exceeds its financial liabilities if applicable, the regulations made under section 69 of the EI Act and any other relevant information.

More specifically, this report provides the board of directors of the CEIFB with the forecast break-even premium rate for the upcoming year and a detailed analysis in support of the forecast, including data sources, methodology and assumptions. In addition, this report provides a determination and analysis of any difference between the premium rate set by the Board that is two years before the current year (i.e. 2010 premium rate) and what that rate should have been for that year in order to meet the objective of subsection 66(1) of the EI Act. Finally, given that the Board currently has no assets under management, this report does not provide the forecast fair market value of the Board's financial assets minus its financial liabilities. This projection will be presented in future reports if it applies.

This report reflects changes that were brought forth in Budget 2012 and Bill C-38, *An Act to Implement Certain Provisions of the Budget Tabled in Parliament on March 29, 2012 and Other Measures* ("Bill C-38"), which are discussed in more details throughout the report. In addition to changes that affect benefit payments and the definition of suitable employment, Bill C-38 affects the 2013 Actuarial Report in two ways. The report is now due no later than August 31st of each year (rather than October 31st), and the annual change in premium rate is now limited to 0.05% of insurable earnings (rather than 0.10% of insurable earnings).

B. Overview of Methodology

The forecast break-even rate is the premium rate required to cover next year's expenditures and eliminate any surplus or deficit in the EI Operating Account. It is determined prior to the application of the 0.05% limit, and is split into two components. The upcoming year rate, which is the premium rate required to cover the expected EI expenditures in the upcoming year, and the account balance rate, which is the premium rate required to eliminate the projected EI Operating Account deficit as of December 31, 2012.

Since January 1, 2006, the Quebec Parental Insurance Plan has been providing maternity, parental and adoption benefits to Quebec residents. In accordance with section 69(2) of the EI Act and related regulations, a mechanism to reduce EI premiums paid by Quebec residents and their employer was introduced.

As such, the upcoming year rate must be split in two. The base rate, which applies to residents of all provinces, is the premium rate that is required to cover the cost of all expected EI expenditures, net of expenditures related to maternity, parental and adoption benefits. The MPA rate, which applies to residents of all provinces except Quebec, is the premium rate that is required to cover the cost of expected EI maternity, parental and adoption benefits. The MPA rate represents the premium reduction that applies to Quebec residents.

C. Main Findings

The following estimates are based on the EI provisions as of July 31, 2012, on the information provided to the Board on July 31, 2012 by the Minister of Human Resources and Skills Development and the Minister of Finance, and on the methodology and assumptions developed by the Chief Actuary.

The 2013 forecast break-even rate that is needed to generate just enough premium revenue such that the projected EI Operating Account balance is $0 as of December 31, 2013 is based on the projection of three main variables: the 2013 earnings base, the 2013 expenditures and the EI Operating Account balance as of December 31, 2012.

The 2013 earnings base is mainly driven by the earnings on which salaried employees and their employers are expected to pay EI premiums (total insurable earnings). In 2013, insured employees and their employers will pay EI premiums on their earnings up to the 2013 maximum insurable earnings of $47,400, an increase of $1,500 or 3.3%, from the 2012 maximum insurable earnings of $45,900. The 2013 projected total insurable earnings are $532 billion, which represents a 4.2% increase from the 2012 total insurable earnings of $511 billion. This increase is the result of an increase in the number of contributors explained by a declining unemployment rate, an increase in the average earnings of the contributors and the increase in the maximum insurable earnings. The 2013 earnings base is also driven by other less significant elements such as employee premium refunds and earnings of self-employed individuals who have opted into the EI program. The 2013 forecast break-even rate must also be adjusted to reflect the estimated impact of wage-loss replacement plans.

In 2013, total expenditures are projected to reach $20.4 billion, a 3.9% increase from the 2012 projected expenditures of $19.7 billion. The expected decrease in the unemployment rate from 7.3% in 2012 to 7.2% in 2013 has the effect of lowering the number of beneficiaries, which has a direct impact on projected benefits. Benefit payments are further reduced as a result of the Economic Action Plan initiatives which ended in 2012, and the phasing out of a number of pilot-projects scheduled to end in 2012. However, these reductions are more than offset by the implementation of a new benefit calculation methodology (variable best weeks), the expected increase in the beneficiary-to-unemployed ratio, and a higher average weekly benefit rate, due to expected wage increases and the above-noted increase in the maximum insurable earnings.

As of December 31, 2011, the EI Operating Account had a deficit of $9.2 billion. With an expected surplus of $0.3 billion in 2012, the projected deficit as of December 31, 2012 is $8.9 billion. This deficit is mostly explained by actual experience related to EI expenditures and revenues being different than expected, including the impact of the economic downturn that began in late 2008, the impact of freezing the 2010 premium rate at the 2009 level, and the impact of limiting the premium increase to 0.05% of insurable earnings in 2011 and 2012.

Based on the foregoing, the Chief Actuary has determined that the 2013 forecast break-even rate is 2.48% for residents of all provinces except Quebec and 2.12% for residents of Quebec. The premium reduction of 0.36% that applies to residents of Quebec represents the estimated savings to the EI program following the establishment of the Quebec Parental Insurance Plan, which provides maternity, parental and adoption benefits to residents of Quebec. These combined break-even rates are expected to generate just enough premium revenue to ensure that, at the end of 2013, all amounts credited and charged to the EI Operating Account after December 31, 2008 are equal.

However, subsection 66(7) of the EI Act limits the amount by which the premium rate can increase or decrease from one year to the next to 0.05% of insurable earnings. Therefore, the 2013 maximum premium rate for residents of all provinces except Quebec is 1.88% of insurable earnings, which is equal to the 2012 premium rate of 1.83% plus 0.05%. The corresponding 2013 maximum premium rate for residents of Quebec is 1.52% of insurable earnings, or 1.88% less the premium reduction of 0.36% for the maternity, parental and adoption benefits provided by the Quebec Parental Insurance Plan.

Table 1 shows a summary of the projected variables that factor into the calculation of the 2013 forecast break-even rate, along with a breakdown of the components of the forecast break-even rate (base rate, MPA rate and account balance rate). It also presents the resulting premium rates prior to and after the application of the 0.05% limit.

Table 1 - 2013 Forecast Break-Even Rate (Millions)	
Earnings Base	
Total Insurable Earnings for Salaried Employees (Out-of-Quebec Residents)	$411,203
Total Insurable Earnings for Salaried Employees (Quebec Residents)	$120,892
Total Insurable Earnings	**$532,095**
Self-Employed Earnings (Out-of-Quebec Residents)	$137
Self-Employed Earnings (Quebec Residents)	$23
Total Self-Employed Earnings	**$160**
Adjustment Due to Employee Premium Refunds (% of Total Insurable Earnings)	2.59%
Wage-Loss Premium Reduction	$1,012
Expenditures	
Total Excluding Maternity-Parental-Adoption	$16,969
Maternity-Parental-Adoption, Including Administrative Expenses	$3,476
Total	**$20,445**
EI Operating Account Cumulative Surplus (Deficit) - December 31, 2012	**($8,867)**
Components of the Forecast Break-Even Rate (as a % of Insurable Earnings)	
1) Upcoming Year Rate	
A) Base Rate	1.42%
B) MPA Rate	0.36%
Sub-Total (Upcoming Year)	1.78%
2) Account Balance Rate	
A) Cumulative (Surplus)/Deficit	0.70%
Premium Rate Prior to the Application of the 0.05% Limit (Forecast Break-Even Rate)	
Residents of All Provinces Except Quebec	**2.48%**
Residents of the Province of Quebec	**2.12%**
2013 Maximum Premium Rate (i.e. After the Application of the 0.05% Limit)	
Residents of All Provinces Except Quebec	**1.88%**
Residents of the Province of Quebec	**1.52%**

As shown in the table above, the 2013 maximum premium rate (1.88%/1.52%) is lower than the forecast break-even rate (2.48%/2.12%) and higher than the upcoming year rate (1.78%/1.42%). As a result, the 2013 premium revenue is expected to surpass the 2013 EI expenditures. This excess premium revenue will be used to eliminate a portion of the deficit in the EI Operating Account. However, the excess premium revenue will not be sufficient to eliminate the deficit in its entirety. This is highlighted in Table 2.

Table 2 shows the status of the EI Operating Account for 2011, as well as the projected evolution of the account for 2012 and 2013. For 2013, the account projection is shown under two bases:

- Using the forecast break-even rate prior to the application of the 0.05% limit (2.48%/2.12%), the cumulative deficit is eliminated;
- Using the maximum premium rate which reflects the 0.05% limit (1.88%/1.52%), the cumulative deficit is reduced to $7.6 billion.

Table 2 - Summary of the EI Operating Account (Millions)	Actual	Forecast		
			Break-Even Rate	Maximum Premium Rate
	2011	2012	2013	2013
Premium Rate				
Out-of-Quebec Residents	1.78%	1.83%	2.48%	1.88%
Quebec Residents	1.41%	1.47%	2.12%	1.52%
Premium Revenue	$18,548	$20,015	$29,287	$21,707
Government Funding	$421	$0	$0	$0
Adjustment for Prior Year Premium Assessments	N/A	($45)	$0	$0
Net Expenditures	$20,199	$19,677	$20,445	$20,445
Annual Surplus (Deficit)	**($1,231)**	**$292**	**$8,843**	**$1,262**
Cumulative Surplus (Deficit)	**($9,158)**	**($8,867)**	**($24)**	**($7,604)**

D. Sensitivity of Results

Two of the most relevant assumptions used to determine the forecast break-even rate are the unemployment rate, which is provided by the Minister of Finance, and the beneficiary-to-unemployed ratio, or B/U ratio, which is estimated each year by the Chief Actuary of the CEIFB.

With all other assumptions remaining constant:

- a variation in the unemployment rate of one-tenth of a percentage-point (0.10%) would have an expected net impact of $173 million on the balance of the EI Operating Account;
- a variation in the B/U ratio of one-half of a percentage-point (0.5%) would have an expected $123 million net impact on the balance of the EI Operating Account; and
- a one-hundredth percentage point (0.01% of insurable earnings) change in the premium rate would have an expected $126 million net impact on the balance of the EI Operating Account.

E. Conclusion

Based on the relevant economic and demographic assumptions provided by the Minister of Finance, the expenditure estimates provided by the Minister of Human Resources and Skills Development, and the methodology and assumptions developed by the Chief Actuary of the CEIFB, it is the opinion of the Chief Actuary that the 2013 EI forecast break-even rate which is expected to generate sufficient premium revenue to ensure that at the end of 2013 the amounts credited and charged to the EI Operating Account after December 31, 2008 are equal is:

- **2.48% of insurable earnings for residents of all provinces except Quebec; and**
- **2.12% of insurable earnings for residents of the province of Quebec.**

However, subsection 66(7) of the EI Act limits the amount by which the premium rate can increase or decrease from one year to the next to 0.05% of insurable earnings. Therefore, the 2013 maximum premium rate that the board of directors can set is:

- **1.88% of insurable earnings for residents of all provinces except Quebec; and**
- **1.52% of insurable earnings for residents of the province of Quebec.**

The 2013 maximum premium rate is lower than the forecast break-even rate and higher than the upcoming year rate. As a result, should the Board set the 2013 premium rate at the maximum premium rate, the 2013 premium revenue is expected to surpass the 2013 EI expenditures by $1.3 billion. This excess premium revenue will be used to eliminate a portion of the deficit in the EI Operating Account. However, the excess premium revenue will not be sufficient to eliminate the deficit in its entirety. The projected deficit in the EI Operating Account as of December 31, 2013 is $7.6 billion.

It is important to note that assumptions are not predictions, and eventual differences between future experience and assumptions will be analyzed and taken into account in subsequent reports.

The information presented in this report, which has been prepared in accordance with the relevant legislation and accepted actuarial practices, has been provided to the board of directors of the Canada Employment Insurance Financing Board in support of their mandate to set the 2013 EI premium rate on or before September 14, 2012.

II. Introduction

In its 2008 budget, the Government of Canada announced the creation of a new independent Crown corporation, the Canada Employment Insurance Financing Board ("CEIFB" or "Board"). The CEIFB's purpose is to help the Government of Canada ensure that all Employment Insurance ("EI") premiums and related revenues are used exclusively for Canada's EI program. The CEIFB was also created to maintain an arm's-length, independently managed fund to hold any future surplus of the EI Operating Account.

Pursuant to the *Canada Employment Insurance Financing Board Act* ("CEIFB Act") and to the *Employment Insurance Act* ("EI Act"), the CEIFB is responsible for:

- Setting the premium rate under section 66 of the EI Act;
- Managing a separate account, where any EI premium revenues that exceed EI expenditures from January 1, 2009 onward will be held and invested until they are returned, upon request from the Minister of Finance, to the EI Operating Account; and
- Investing its financial assets with a view to meeting its financial obligations.

According to section 66 of the EI Act and subject to a limit of 0.05% in the annual change in premium rate, the Board shall set the premium rate in order to generate just enough premium revenue during the upcoming year to ensure that at the end of that year, the total amounts credited to the EI Operating Account after December 31, 2008 are equal to the amounts charged to that Account after that date. This premium rate is based on actuarial and economic forecasts which take into account the prescribed information that is provided to the Board on an annual basis, the amount by which the Board's financial assets exceed its financial liabilities if applicable, the regulations made under section 69 of the EI Act and any other relevant information.

As a result of economic conditions and subsequent government responses, the EI Operating Account is not in a surplus position, and has not been in a surplus position since its inception on January 1, 2009. As such, the Board's responsibilities related to investing assets and managing a separate account do not currently apply.

A. Purpose of the Report

This Actuarial Report of the Chief Actuary of the CEIFB is the third one to be presented to the board of directors of the CEIFB in compliance with the CEIFB Act, which came into force on June 20, 2008.

The Chief Actuary of the CEIFB is an officer of the Board under the direction of the Chief Executive Officer. Pursuant to subsection 14(3) of the CEIFB Act, the Chief Actuary shall prepare forecasts and estimates for the purposes of section 66 of the EI Act, and shall, on or before August 31st of each year, provide the board of directors with:

- the forecast premium rate for the upcoming year and a detailed analysis in support of the forecast;
- the forecast fair market value of the Board's financial assets less its financial liabilities, at the end of the following year;
- a determination and analysis of any difference between the premium rate set by the Board for the year that is two years before the current year and what that rate should have been for that year in order to meet the objectives of subsection 66(1) of the EI Act; and
- the source of the data, the actuarial and economic assumptions and the actuarial methodology used.

This report provides the board of directors of the CEIFB with the forecast premium rate for 2013 along with a detailed analysis in support of the forecast, including data sources, methodology and assumptions. Given that the Board currently has no assets under management, this report does not provide the forecast fair market value of the Board's financial assets minus its financial liabilities. This projection will be presented in future reports if it applies.

B. Recent Legislative Changes

Budget 2012 and Bill C-38*, An Act to Implement Certain Provisions of the Budget Tabled in Parliament on March 29, 2012 and Other Measures* ("Bill C-38") introduced a number of amendments to the EI Act and to the CEIFB Act. Certain amendments related to the financing of the EI program will only take effect after the transition year, while other amendments are currently in force. The transition year is defined as the first year for which the CEIFB reports that, at the end of that year, the balance of the EI Operating Account will be greater or equal to $0.

Prior to the transition year, there are no changes in the annual premium rate setting process, except as follows:

- The annual change in premium rate is now limited to 0.05% of insurable earnings rather than 0.10% of insurable earnings;
- The deadlines inherent to the process are two months earlier. More information on these deadlines is provided in Appendix I;
- Any references to the Board's reserve have been repealed.

In accordance with the amendments to the EI Act, starting in the transition year, the Board shall set the premium rate each year in order to generate just enough premium revenue to ensure that, at the end of the seven-year period that begins at the beginning of that year, the total amounts credited to the EI Operating Account after December 31, 2008 is equal to the total of the amounts charged to that Account after that date. The 0.05% limit will continue to apply, except for the rate determined during the year of transition.

Bill C-38 also introduced a number of other amendments that are related to the EI program rather than the EI financing. The most important program changes are:

- Changes to the methodology used in the calculation of the Maximum Insurable Earnings ("MIE") – currently in force;
- Starting on April 7, 2013, employment insurance regular benefits will be calculated based on highest insurable earnings over a minimum number of weeks (variable best weeks) based on the applicable regional rate of unemployment;
- Changes to the definition of suitable employment – Bill C-38 currently in force; related regulations will follow.

The changes to the methodology used in the calculation of the MIE are reflected in the 2013 MIE. The expected impacts of the other program changes are provided by the Minister of Human Resources and Skills Development Canada (HRSDC) in accordance with Section 66.1(1) of the EI Act and included in this report.

C. Scope of the Report

The methodology used in determining the premium rate is presented in Section III of this report. The main variables used in determining the premium rate are the 2013 expected earnings base, the 2013 expected expenditures and the projected EI Operating Account balance as of December 31, 2012. An overview of the most important assumptions used in projecting the earnings base and expenditures is outlined in Section IV. Based on the methodology and assumptions from the previous sections, Section V provides the resulting 2013 premium rate and the projection of the status of the EI Operating Account Balance. The sensitivity of these results to the main assumptions is outlined in Section VI.

This report also provides a determination and analysis of any difference between the premium rate set for 2010 and what that rate should have been for that year in order to meet the objective of subsection 66(1) of the EI Act. A reconciliation of the 2010 premium rate is developed in Section VII.

Concluding remarks and the actuarial opinion are presented in Section VIII and Section IX. The various appendices provide supplemental information on the EI program and on the data, assumptions and methodology employed.

In addition, in 2010, the Canada Employment Insurance Commission ("CEIC") entered into an agreement with the CEIFB, to have the CEIFB perform calculations for the CEIC as per subsection 28(4) of *Department of Human Resources and Skills Development Act*, for the purposes of sections 4 and 69 of the EI Act. As such, this report presents the 2013 annual MIE as per section 4 of the EI Act, and the 2013 premium rate reduction for residents of Quebec[1] as per subsection 69(2) of the EI Act. Detailed information on the calculation of the MIE is presented in Appendix II. The development of the methodology and related assumptions inherent to the calculation of the premium rate reduction for residents of Quebec is covered throughout the report.

[1] Due to the Quebec provincial plan for maternity, parental and adoption benefits, known as the Quebec Parental Insurance Plan. For further details, please refer to subsection 5 of section IV and to Appendix III.

III. Methodology

Based on relevant assumptions and prior to a limit of 0.05% in the annual change in the premium rate, the 2013 forecast break-even rate is the premium rate that is expected to generate sufficient premium revenue to ensure that at the end of 2013 the amounts credited and charged to the EI Operating Account after December 31, 2008 are equal.

The forecast break-even rate is calculated using the projected earnings base and EI expenditures. The earnings base represents the total insurable earnings on which salaried employees and their employers pay EI premiums, and the earnings on which self-employed individuals that opted into the EI program pay EI premiums. Prior to an adjustment to reflect employee premium refunds, the employer portion of the earnings base for salaried employees is equal to 1.4 times the employee portion of the earnings base for salaried employees. The forecast break-even rate must also be adjusted to reflect the estimated impact of wage-loss replacement plans.

The earnings base and EI benefits are projected using the expected growth rates in the relevant economic and demographic variables applied to the base-year, the last year for which complete data are available. The base-year for the earnings base is 2010, which is the most recent year for which fully assessed T4 data are available. However, for certain assumptions, the 2011 partially assessed information is used. Complete data for 2011 will not become available until January 2013. The base-year for EI benefits is calendar-year 2011.

The earnings base and EI expenditures are projected from the base-year using:

- Data and assumptions provided by HRSDC, including prescribed information as set out in Section 66.1(1) of the EI Act;
- Assumptions and forecasts provided by the Department of Finance in accordance with Section 66.2(1) of the EI Act;
- Data provided by the Canada Revenue Agency ("CRA") and Statistics Canada; and
- Methodology and assumptions developed by the Chief Actuary.

Forecast Break-Even Rate

The forecast break-even rate includes two components. The first component is the **upcoming year** rate, which is the premium rate required to cover the expected EI expenditures in the upcoming year. It does not include any adjustment to reflect the status of the EI Operating Account as of December 31, 2012.

Since January 1, 2006, the Province of Quebec has been responsible for providing maternity, parental and adoption ("MPA") benefits to the residents of Quebec through the Quebec Parental Insurance Plan. In accordance with section 69(2) of the EI Act and related regulations, a mechanism to reduce

EI premiums paid by Quebec residents and their employer was introduced. The reduced premium rate reflects the savings to the EI program following the introduction of the Quebec Parental Insurance Plan. As such, the upcoming year rate must be split into two sub-components:

- the **base** rate, which applies to residents of all provinces, is the premium rate that is required to cover the cost of the upcoming year's expected EI expenditures, net of expenditures related to providing EI MPA benefits.
- the **MPA** rate, is the premium rate that is required to cover the cost of the upcoming year's expected EI MPA expenditures, including the variable administrative costs related to the delivery of EI MPA benefits to the residents of all provinces except Quebec.

The sum of the base rate and the MPA rate represents the upcoming year rate that should generate sufficient premium revenue to cover the upcoming year's expected EI expenditures. While residents of all provinces except Quebec pay both the base rate and the MPA rate, residents of the province of Quebec get a premium reduction equal to the MPA rate.

The second component of the forecast break-even rate is the **account balance** rate, which is the premium rate that is required to amortize the projected EI Operating Account balance as of December 31, 2012 over the year 2013. The account balance rate takes into account the amount by which the Board's financial assets exceed its financial liabilities. It includes the following two sub-components:

- the **cumulative surplus/deficit** rate, which takes into consideration any amounts credited or charged to the EI Operating Account between December 31, 2008 and December 31, 2012; and
- the **investment** rate, which takes into account the assets managed by the Board as well as the expected return in 2013 on these assets. Given that the Board has no invested assets, this component does not apply for 2013. It should be noted that interest is not charged on any negative balance in the EI Operating Account.

In prior reports, a reserve target rate was also included as a sub-component of the account balance rate. However, the concept of the reserve was repealed in Bill C-38.

Depending on the cumulative balance in the EI Operating Account, the account balance rate could either increase or decrease the forecast break-even rate. For 2013, given that the projected EI Operating Account as of December 31, 2012 is a deficit, the account balance rate increases the forecast break-even rate.

The sum of these four sub-components (base rate, MPA rate, cumulative surplus/deficit rate and investment rate) equals the forecast break-even rate prescribed in section 66 of the EI Act. The table below shows a summary of these components, and is followed by a brief description of the mathematical development of each of these components.

Components of the Forecast Break-Even Rate			
Upcoming Year Rate		Account Balance Rate	
Base rate	Covers the cost of the upcoming year's expected EI expenditures, excluding EI MPA expenditures (applies to residents of all provinces)	Cumulative surplus/deficit rate	Eliminates any surplus or deficit in the projected EI Operating Account as of December 31, 2012 (applies to residents of all provinces)
MPA rate	Covers the cost of the upcoming year's EI MPA expenditures (applies to residents of all provinces, except Quebec)	Investment rate	Reflects the assets managed by the Board as well as the expected return on these assets (does not apply since there are currently no assets to manage)

Base Rate

The base rate is calculated such that the expected EI premium revenue in the upcoming year is equal to the expected annual EI expenditures, net of expected EI MPA expenditures.

The expected EI premium revenue is comprised of:

- Employer premiums, which take into account the premium reduction for employers who have a qualified wage-loss replacement program;
- Employee premiums deducted at source on earnings included in insured employment of salaried employees, net of refunds that apply in certain situations (e.g. insurable earnings below $2,000, over contributions due to multiple employments in the year); and
- Employee premiums for self-employed individuals who voluntarily opted into the EI program.

The expected EI expenditures, net of expected EI MPA expenditures are comprised of:

- EI Part I benefits, excluding EI MPA benefits, net of benefit repayments that apply in certain situations (e.g. if a claimant's income for a tax year exceeds 1.25 times the annual MIE, the claimant is required to repay a portion of or all benefits received);
- EI Part II benefits, that is, employment benefits and support measures;
- Additional benefits paid through various pilot projects and transitional measures, net of government funding;
- Administration costs, net of variable administration costs related to EI MPA benefits; and
- Other costs such as bad debt expense, net of penalties and interests recovered from claimants.

The base rate is defined such that expected EI expenditures net of EI MPA expenditures are equal to expected EI premium revenue. The formula for the base rate is developed as follows:

Expenditures (net of MPA) = Premium Revenue

$$\text{Expenditures (net of MPA)} = \underbrace{1.4 \times \text{Base Rate} \times \text{TIE} - \text{Rwlr}}_{\substack{\text{Employer premiums paid on behalf of}\\ \text{salaried employees, adjusted for}\\ \text{premium reduction for employers who}\\ \text{have a qualified wage-loss program}}} + \underbrace{\text{Base Rate} \times \text{TIE} \times (1 - \text{PR\%})}_{\substack{\text{Salaried employee premiums}\\ \text{deducted at source adjusted}\\ \text{for employee refunds}}} + \underbrace{\text{Base Rate} \times \text{TSEE}}_{\substack{\text{Employee premiums}\\ \text{for self-employed}}}$$

$$\textbf{Base Rate} = \frac{\textbf{Expenditures (net of MPA) + Rwlr}}{\textbf{1.4 x TIE + TIE x (1 – PR\%) + TSEE}}$$

Where: TIE = total insurable earnings for salaried employees prior to adjustments for employee premium refunds;
PR% = adjustment to reflect employee premium refunds (as a percentage of TIE);
Rwlr = reduction in employer premiums due to qualified wage-loss replacement programs;
TSEE = total self-employed earnings for individuals who opted into the EI program; and
1.4 x TIE + TIE x (1 – PR%) + TSEE = earnings base of residents of all provinces.

MPA Rate

In accordance with the agreement signed between the Government of Canada and the Government of Quebec, the premium reduction for the MPA provincial plan in the province of Quebec is equal to the ratio of EI MPA expenditures, including EI MPA benefits and the variable administrative costs related to administering EI MPA benefits, to the earnings base of residents outside the province of Quebec. Accordingly, the formula for the MPA rate is as follows:

$$\textbf{MPA Rate} = \frac{\textbf{EI MPA Expenditures}}{\mathbf{1.4 \times TIE_{(OQ)} + TIE_{(OQ)} \times (1 - PR\%) + TSEE_{(OQ)}}}$$

Where: $TIE_{(OQ)}$ = total insurable earnings for out-of-Quebec resident salaried employees, prior to adjustments for employee premium refunds;
PR% = adjustment to reflect employee premium refunds (as a percentage of TIE);
$TSEE_{(OQ)}$ = total self-employed earnings for out-of-Quebec residents who opted into the EI program; and
$1.4 \times TIE_{(OQ)} + TIE_{(OQ)} \times (1–PR\%) + TSEE_{(OQ)}$ = earnings base for out-of-Quebec residents.

Account Balance Rate

Given that there are currently no assets managed by the Board, the account balance rate for 2013 represents the rate that will generate sufficient premium revenue to eliminate the projected deficit in the EI Operating Account as of December 31, 2012. The account balance rate is therefore equal to the ratio of the projected EI Operating Account deficit as of December 31, 2012 to the earnings base of residents of all provinces. Accordingly, the formula for the account balance rate is as follows:

$$\textbf{Account Balance Rate} = \frac{\textbf{EIOA Deficit as of December 31, 2012}}{\textbf{1.4 x TIE + TIE x (1 – PR\%) + TSEE}}$$

Where: EIOA = EI Operating Account;
TIE = total insurable earnings for salaried employees prior to adjustments for employee premium refunds;
PR% = adjustment to reflect employee premium refunds (as a percentage of TIE);
TSEE = total self-employed earnings for individuals who opted into the EI program; and
1.4 x TIE + TIE x (1 – PR%) + TSEE = earnings base of residents of all provinces.

A description of the assumptions used in projecting the variables included in the above formulas is provided in Section IV, with additional supporting information provided in Appendix III.

IV. Assumptions

This section provides a brief overview of the main assumptions used in projecting the variables included in the calculation of the forecast break-even rate. More detailed information and supporting data are provided in Appendix III. The section is broken down into two subsections: assumptions related to the earnings base and assumptions related to expenditures. For consistency, the estimated reduction in premiums due to wage-loss replacement programs is included in the earnings base section.

A. Earnings Base

The earnings base is detailed in the denominator of the formula for the base rate, the MPA rate and the account balance rate developed in the previous section. The earnings base is comprised of the total insurable earnings on which employers pay EI premiums prior to any adjustment for wage-loss replacement programs, the total insurable earnings on which employees pay EI premiums adjusted to reflect employee premium refunds, and the earnings on which self-employed individuals that opted into the EI program pay EI premiums. The estimated reduction in premiums due to wage-loss replacement programs is factored into the numerator of the base rate.

The main assumptions used in determining the earnings base and the estimated reduction in premiums due to wage-loss replacement programs, are presented in Table 3 below.

Table 3 - Assumptions for Earnings Base

	2011	2012	2013
Increase in Maximum Insurable Earnings	2.31%	3.85%	3.27%
Increase in Number of Earners	1.75%	0.69%	0.92%
Increase in Average Employment Income	4.10%	3.50%	3.30%
Increase in Total Employment Income	5.92%	4.22%	4.25%
Increase in Total Insurable Earnings	4.90%	4.41%	4.23%
Net Transfer of Insurable Earnings to Quebec Reflecting the Province of Residence	0.34%	0.34%	0.34%
Adjustment Due to Employee Premium Refunds (% of Total Insurable Earnings)	2.59%	2.59%	2.59%
Increase in Covered Self-Employed Earnings:			
Total	36.43%	35.37%	27.63%
Out-of-Quebec Residents	35.70%	36.09%	27.99%
Quebec Residents	40.69%	31.27%	25.48%
Wage-Loss Premium Reduction (% of Total Insurable Earnings)	0.19%	0.19%	0.19%

1. Maximum Insurable Earnings

The Maximum Insurable Earnings ("MIE") represents the income level up to which EI premiums are paid and up to which EI benefits are calculated, and is a key element in determining the earnings base. Section 4 of the EI Act provides details on how to determine the yearly MIE. In accordance with this section, the

MIE increases annually based on increases in the Average Weekly Earnings ("AWE"), as reported by Statistics Canada.

The 2013 MIE is equal to $47,400, which represent a 3.3% increase to the 2012 MIE of $45,900. This increase reflects amendments to Section 4 of the EI Act following Bill C-38. Detailed explanations and calculations are provided in Appendix II.

2. Number of Earners

The number of earners and their distribution across income ranges is used to determine the earnings base of salaried employees. The projected number of workers per year, which is based on an average of the number of workers per month, is provided by the Department of Finance. However, the total number of earners for a year is higher than the average of the number of earners for each month given that not everyone works for the full year. The number of earners includes all individuals who had earnings at any time during the year rather than an average per month.

The preliminary number of earners for the year 2011 is derived from the 2011 year-to-date assessed premiums and the 2011 increase in average employment income provided by the Department of Finance such that the resulting insurable earnings are in line with the expected assessed premiums for 2011. The projected number of earners for 2012 and 2013 was derived from a regression analysis which is described in more details in Appendix III.

The number of earners is expected to increase by 1.75%, 0.69% and 0.92% in 2011, 2012 and 2013 respectively. In addition, given the historical year-to-year stability of the distribution of earners across income ranges, the projected distribution of earners as a percentage of average employment income is based on the 2010 distribution.

3. Average and Total Employment Income

The increase in average employment income, combined with the increase in the number of earners, is used to determine the increase in total employment income. The 2010 distribution of the total employment income across income ranges is used to determine the future distribution of total employment income.

The increase in average employment income is provided by the Department of Finance and is expected to increase by 4.10%, 3.50% and 3.30% in 2011, 2012 and 2013 respectively. Based on these increases in average employment income and the expected increases in the total number of earners, the total employment income is expected to increase by 5.92%, 4.22% and 4.25% in 2011, 2012 and 2013 respectively.

4. Total Insurable Earnings

The total insurable earnings of salaried employees are equal to the total employment income, up to the annual MIE, earned by a person employed in insured employment. They are used to determine the earnings base for salaried employees. Prior to any adjustments for employee premium refunds, the earnings base for salaried employees is equal to 2.4 times the total insurable earnings (employer premiums are equal to 1.4 times the employee premiums, for a combined total of 2.4).

Historical information regarding total insurable earnings is derived from aggregate assessed premiums gathered from T4 slips of all salaried employees, and is provided by CRA. For employees with multiple employments in the year, this information is based on the combined total EI premiums. This means that, although insurable earnings of each employment are capped at the MIE, the combined total insurable earnings can exceed the MIE. The adjustment to insurable earnings and to the earnings base to reflect multiple employments is captured in the employee premium refund section below.

The expected total employment income capped at the annual MIE for 2011, 2012 and 2013 is derived from the 2010 distribution of the total employment income and of the total number of earners as a percentage of average employment income, and the expected increases in these variables. The resulting capped employment income is adjusted for consistency with total insurable earnings which take into account multiple employments as well as excluded employments.

Based on this methodology, the total insurable earnings, before any adjustment for premium refunds, are expected to increase by 4.90%, 4.41% and 4.23% in 2011, 2012 and 2013 respectively. For 2011, the resulting insurable earnings reflect the year-to-date assessed premiums and related total expected assessed premiums for 2011.

5. Split of Total Insurable Earnings Due to Provincial Plan

For the purposes of determining the MPA rate which applies to all residents of Canada except for residents of provinces with a provincial plan, the earnings base for salaried employees must be split between residents of provinces with and without a provincial plan. The only province that currently has a provincial plan is Quebec. Therefore, the earnings base for salaried employees must be split based on the province of residence (between out-of-Quebec residents and Quebec residents).

The information used to derive historical insurable earnings provided by CRA is on a T4 basis, and is therefore based on the province of employment. The historical distribution of insurable earnings on a T4 basis shows that the distribution between out-of-Quebec and Quebec is stable from one year to the next. Therefore, it is reasonable to assume that the distribution of insurable earnings on a T4 basis for the years 2012 and 2013 will be equal to the 2011 preliminary distribution as provided by CRA.

The information on historical assessed premiums provided by CRA includes adjustment payments made between the Government of Canada and the Government of Quebec each year to reflect the province of residence rather than the province of employment of each employee. These adjustment payments are the object of an administrative agreement between both parties, and can be used as a basis to adjust the distribution of insurable earnings to reflect the province of residence. The methodology used in adjusting the distribution of insurable earnings based on aggregated adjustment payments was validated against administrative data for the year 2010. The administrative data for 2010 were provided by CRA and are part of the annual exchange of information between the Government of Canada and the Government of Quebec.

Based on historical information from 2007 to 2010 provided by CRA with regards to these adjustment payments, the net annual transfer of insurable earnings on a T4 basis to reflect actual province of residence represents on average 0.34% of total insurable earnings, with the transfer of insurable earnings on a T4 basis going to Quebec from the rest of Canada. Given the stability of these percentages in the past and taking into consideration the low level of sensitivity of the MPA rate to this transfer of insurable earnings, it is reasonable to assume that the transfer of insurable earnings on a T4 basis to reflect actual province of residence for the years 2011 to 2013 will be equal to the average adjustment for the years 2007 to 2010, that is, 0.34% of total insurable earnings.

6. Employee Premium Refunds

In general, salaried employees contribute EI premiums on their total insurable earnings in a given tax year up to the annual MIE. However, when filing their tax returns, some employees may exceed the maximum contribution and receive a refund of all or a portion of the EI premiums paid in the year (e.g. multiple employers in the same year, insurable earnings below $2,000). The insurable earnings that are inherent to any subsequent premium refund must be excluded from the earnings base. Given that the data from T4 slips that are used to project total insurable earnings include insurable earnings for which premiums may later be refunded, an adjustment must be made to reduce the earnings base. It is important to note that the employer does not receive a refund. Thus, only the employee's portion of the total earnings base is adjusted, which is reflected in the formulas presented in Section III.

Based on historical data provided by CRA with regards to total insurable earnings prior to any adjustment for refunds and annual employee premium refunds, the total insurable earnings subject to a subsequent employee refund as a percentage of total insurable earnings is relatively stable. From 2005 to 2010, this percentage varied between 2.33% and 2.99%, with an average of 2.66%.

For 2011 to 2013, the adjustment to employee insurable earnings to reflect subsequent premium refunds is assumed to be 2.59% of total insurable earnings, the three year average adjustment from 2008 to 2010.

7. Self-Employed Earnings

Since January 31, 2010, under *The Fairness for the Self-Employed Act*, self-employed workers have been able to voluntarily opt into the EI program to receive EI special benefits for those who are sick, pregnant or caring for a newborn or adopted child, or caring for a seriously ill family member. Although self-employed residents of Quebec are able to access MPA benefits through their provincial plan, they may voluntarily opt into the EI program to access other special benefits, including sickness and compassionate care. As such, the earnings base used in calculating the forecast break-even rate must take into account the covered earnings of self-employed individuals who opt into the EI program.

Participants in the self-employed EI program contribute premiums based on their self-employed earnings, up to the annual MIE, at the employee rate which corresponds to their province of residence, and there are no employer premium contributions. Therefore, as with the insurable earnings of salaried employees, self-employed covered earnings must be split between out-of-Quebec residents and Quebec residents.

The increase in self-employed earnings reflects the expected increase in the number of participants, and in the average earnings of self-employed individuals.

The projected number of participants is based on information regarding historical enrolments, and assuming that the average number of weekly enrolments in 2012 will remain stable. The increase in average earnings is assumed to be the same increase in average earnings as for salaried employees.

Based on this methodology, the earnings of all self-employed individuals are expected to increase by 36.43%, 35.37% and 27.63% in 2011, 2012 and 2013 respectively. This represents respective increases of 35.70%, 36.09% and 27.99% for out-of-Quebec residents and 40.69%, 31.27% and 25.48% for Quebec residents.

8. Wage-Loss Replacement Programs

Generally, EI premium contributions paid by the employer are equal to 1.4 times the premiums deducted by the employer on behalf of the employee, referred to as the employer multiplier. However, under subsection 69(1) of the EI Act, the employer multiplier can be reduced when employees are covered under a qualified wage-loss replacement plan. There are four distinct categories of qualified wage-loss replacement plans.

The reduction rates are determined for each category based on the three-year average of the ratio of the estimated EI savings that are generated by employer sponsored wage-loss replacement plans to the insurable earnings. These reduction rates are then converted into reduced employer multipliers. The employer premium reductions and multipliers are determined annually by the Chief Actuary in accordance with the EI Act and Regulations.

In 2011 and 2012, the reduction rates for each category as a percentage of insurable earnings were identical. For 2013, it is assumed that the reduction rates will also remain unchanged.

The amount of the estimated employer premium reduction is based on the weighted average of the distribution of insurable earnings per category along with the associated reduction per category, and on the percentage of insurable earnings covered by a wage-loss replacement plan. Based on the year-to-date 2011 assessed premiums, the employer premium reduction due to wage-loss replacement plans is equal to 0.19% of insurable earnings. The distribution of insurable earnings per category and the percentage of insurable earnings covered by a wage-loss replacement plan are assumed to remain unchanged in 2012 and 2013. As such, the employer premium reduction due to wage-loss replacement plans for 2012 and 2013 is expected to be equal to 0.19% of each year's projected insurable earnings.

B. Expenditures

EI Part I benefits are projected from actual 2011 benefits paid using several economic and demographic assumptions. The assumptions used to project benefits are the unemployment rate, the labour force, the average weekly earnings, the average weekly benefits, the beneficiary-to-unemployed ratio, the week weight, and the percentage of claimants with earnings above the MIE.

Demographic assumptions, including the projection of the labour force population and the paid workers, and economic assumptions such as unemployment rate and average weekly earnings projections, are provided by the Department of Finance. Additional information used to project other expected expenditures such as pilot projects, temporary measures, the cost of new permanent measures, administration costs and employment benefits and support measures (EI Part II benefits) are provided by HRSDC.

Regular EI benefits represent more than 50% of total EI expenditures and are projected as follows, based on the latest year of known actual regular EI benefits, that is, year 2011. A detailed description of the methodology used to project all benefits is available in Appendix III.

$$\textbf{Regular Benefits}_T = \underbrace{\frac{UR_T}{UR_{T-1}} \times \frac{LF_T}{LF_{T-1}}}_{\text{Yearly growth in unemployed, that is, in potential claimants}} \times \underbrace{\frac{WW_T}{WW_{T-1}} \times \frac{AWB_T}{AWB_{T-1}}}_{\text{Yearly growth in average benefits}} \times \underbrace{\frac{B/U_T}{B/U_{T-1}}}_{\text{Yearly growth in the ratio of unemployed receiving benefits}} \times \textbf{Regular Benefits}_{T-1}$$

Where: UR = unemployment rate;
LF = labour force;
WW = week weight;
AWB = average weekly benefits; and
B/U = beneficiary-to-unemployed ratio.

Table 4 presents a summary of the most important expenditure assumptions used in this report.

Table 4 - Assumptions for Expenditures

	2011	2012	2013
Unemployment Rate	7.5%	7.3%	7.2%
Increase in Labour Force	1.0%	1.0%	1.2%
Increase in Average Weekly Earnings	2.5%	2.5%	2.4%
Increase in Average Weekly Benefits	2.6%	3.5%	3.2%
Beneficiary-to-Unemployed Ratio	43.6%	43.0%	45.7%
Week Weight	52.0	52.2	52.2
Percentage of Claimants with Insurable Earnings above the MIE	40.5%	41.0%	41.5%

1. Unemployment Rate

The unemployment rate affects regular employment insurance benefits directly by increasing/decreasing the number of potential claimants. The average unemployment rate was 7.5% in 2011, and is expected to be 7.3% in 2012 and 7.2% in 2013.

2. Labour Force

The labour force affects most of Part I benefits directly by also increasing/decreasing the number of potential claimants. The labour force population is expected to increase from 18.7 million in 2011 to 18.9 million in 2012 and to 19.1 million in 2013. This represents increases of 1.0% and 1.2% in 2012 and 2013 respectively.

3. Average Weekly Earnings

The average weekly earnings are provided by the Department of Finance. The growth in average weekly earnings on a calendar year basis is used, in conjunction with the increase in the MIE, to project the average weekly benefits. The growth in average weekly earnings for 2012 and 2013 is expected to be 2.5% and 2.4% respectively.

4. Average Weekly Benefits

The average weekly benefits growth affects employment insurance expenditures directly through a corresponding increase/decrease in Part I expenditures. The average weekly benefit rate is equal to the benefit payments divided by the number of benefit weeks paid for each Part I benefit type.

The average weekly benefits is determined by the sum of the change in the MIE and the average weekly earnings, weighted by the proportion of claimants with insurable earnings above and below the annual MIE and the prior year average weekly benefits for claimants with insurable earnings above and below the annual MIE.

$$\mathbf{AWB_T = AWB_{above(T-1)} \times (\%_{above(T)}) \times \frac{MIE_T}{MIE_{T-1}} + AWB_{below(T-1)} \times (\%_{below(T)}) \times \frac{AWE_T}{AWE_{T-1}}}$$

$$\mathbf{AWB_{growth} = AWB_T / AWB_{T-1} - 1}$$

Where: AWB = average weekly benefits;
AWB_{above} = AWB for claimants with insurable earnings above the MIE;
AWB_{below} = AWB for claimants with insurable earnings below the MIE;
MIE = maximum insurable earnings;
AWE = average weekly earnings;
$\%_{above}$ = percentage of claimants with insurable earnings above the MIE; and
$\%_{below}$ = percentage of claimants with insurable earnings below the MIE.

The annual average weekly benefit growth rates for all benefit types are forecasted at 3.5% and 3.2% for 2012 and 2013, respectively.

5. Beneficiary-to-Unemployed Ratio

Beneficiaries, as reported by Statistics Canada, refers to the number of active claimants in a given month who received EI regular benefits during the reference week of the labour force survey, usually the week containing the 15th day of the month. The beneficiary–to–unemployed ratio represents the proportion of unemployed persons in a given period who are receiving EI regular benefits.

For the purposes of forecasting regular benefit payments, the number of beneficiaries was estimated starting with beneficiary data as reported by Statistics Canada by age group and gender.

Based on Statistics Canada historical data from 1998 to 2011, in general, younger age-groups have lower B/U ratios than older age-groups. Similarly, women of all ages have lower B/U ratios than men. In addition, the proportion of older workers in the labour force is slowly increasing, creating upward pressure on the overall B/U ratio.

In this report, the beneficiary–to–unemployed ratio for each age-group and gender is assumed to decrease slightly in 2012, reflecting actual experience over the first 6 months of 2012, before returning to its 5-year pre-recession average (2004–2008) towards the end of 2014.

The expected aggregate beneficiary–to–unemployed ratios for years 2012 and 2013 are 43.0% and 45.7% respectively.

6. Week Weight

EI expenditures are reported in the EI Operating Account on an accrual basis, that is, they are recorded in the period for which they should have been paid, regardless of the delay in processing the payment. For example, if a claimant is eligible to receive benefits starting the first week of December 2011, but receives his first benefit payment only in February 2012, this payment will be recorded in the EI Operating Account for the year 2011.

Furthermore, EI benefits are paid on a weekly basis, but only weekdays that belong to a particular period are reported in that period. For example, December 31, 2012 is a Monday and for every benefit week that should have been paid for the week of December 31, 2012, one day will be reported in calendar year 2012 and four will be reported in calendar year 2013.

The week weight affects Part I expenditures as benefits are payable for every weekday of the year, regardless of Holidays. The number of workdays in a year ranges from 260 days to 262 days. Therefore, to enhance the accuracy of EI benefit projections, an adjustment to projected benefits is included to reflect the number of days benefits are paid in any year. The number of workdays for years 2011, 2012 and 2013 are 260, 261 and 261 respectively. The week weight for years 2011, 2012 and 2013 is therefore 52.0, 52.2 and 52.2 respectively.

7. Percentage of Claimants with Earnings Above MIE

Based on the distribution of claimants by insurable earnings range provided by HRSDC, 40.5% of 2011 EI claimants had earnings above the MIE compared to 40.1% in 2010. The proportion was slightly higher in years 2007 to 2009, averaging 43.0%, with a peak at 44.0% in 2009. The proportion of claimants with earnings above the MIE is assumed to return to its pre-recession average of 42.5% (2007 and 2008) by 2015.

The proportion of claimants with earnings above the MIE in 2012 and 2013 is assumed to be 41.0% and 41.5% respectively.

V. Results

A. Overview

Based on the EI provisions as of July 31, 2012, on the information provided to the Board on July 31, 2012 by the Minister of HRSDC and the Minister of Finance, and on the methodology and assumptions developed by the Chief Actuary, the Chief Actuary has calculated the forecast break-even rate for purposes of Section 66 of the EI Act. The key observations and findings, which take into account the recent amendments to the EI Act and to the CEIFB Act under Bill C-38, are described below.

- The total earnings base is expected to grow from $1,107 billion in 2010 to $1,263 billion in 2013.
- The premium reduction for wage-loss replacement programs is expected to grow from $0.877 billion in 2010 to $1.012 billion in 2013.
- Total expenditures are expected to decrease from $20.2 billion in 2011 to $19.7 billion in 2012 and increase to $20.4 billion in 2013.
- The 2013 base and MPA rates are 1.42% of insurable earnings and of 0.36% insurable earnings respectively. The upcoming year rate is therefore 1.78% of insurable earnings for residents of all provinces except Quebec and 1.42% of insurable earnings for residents of the province of Quebec.
- The cumulative deficit in the EI Operating Account is expected to be $8.9 billion as of December 31, 2012. In light of the fact that the Board currently has no assets under management, the 2013 account balance rate is equal to 0.70% of insurable earnings.
- The 2013 forecast break-even rate is 2.48% of insurable earnings for residents of all provinces except Quebec and 2.12% of insurable earnings for residents of the province of Quebec.
- However, subsection 66(7) of the EI Act limits the amount by which the premium rate can increase or decrease from one year to the next to 0.05% of insurable earnings. Therefore, the 2013 maximum premium rate that the Board can set is 1.88% of insurable earnings for residents of all provinces except Quebec (2012 premium rate of 1.83% plus 0.05%), and 1.52% of insurable earnings for residents of the province of Quebec.
- The 2013 maximum premium rate is lower than the forecast break-even rate and higher than the upcoming year rate. As a result, should the Board set the 2013 premium rate at the maximum premium rate, the 2013 premium revenue is expected to surpass the 2013 EI expenditures by $1.3 billion. This excess premium revenue will be used to eliminate a portion of the deficit in the EI Operating Account. However, the excess premium revenue will not be sufficient to eliminate the deficit in its entirety. The projected deficit in the EI Operating Account as of December 31, 2013 is $7.6 billion.

B. Earnings Base

Based on the methodology and assumptions developed in section IV, Table 5 shows the variables required in calculating the earnings base, and the estimated premium reduction to reflect employer sponsored wage-loss replacement programs. These results are used in the projection of the EI Operating Account Balance as of December 31, 2012 and in the calculation of the components of the 2013 forecast break-even rate.

Table 5 - Results - Earnings Base (Millions)				
	Actual	Forecast		
	2010	2011	2012	2013
Total Insurable Earnings (TIE) for Salaried Employees, Prior to Adjustment for Premium Refunds (Province of Residence)				
Total	$466,078	$488,917	$510,502	$532,095
Out-of-Quebec Residents	$360,174	$377,835	$394,516	$411,203
Quebec Residents	$105,904	$111,082	$115,986	$120,892
Adjustment Due to Employee Premium Refunds as a % of TIE (PR%)	2.44%	2.59%	2.59%	2.59%
Total Self-Employed Earnings (TSEE)				
Total	$68	$93	$126	$160
Out-of-Quebec Residents	$58	$79	$107	$137
Quebec Residents	$10	$14	$18	$23
Earnings Base (1.4 x TIE + TIE x (1 - PR%) + TSEE)				
Total	$1,107,278	$1,160,830	$1,212,110	$1,263,408
Out-of-Quebec Residents	$855,683	$897,097	$936,729	$976,375
Quebec Residents	$251,595	$263,733	$275,381	$287,033
Wage-Loss Premium Reduction	$877	$930	$971	$1,012

C. Expenditures

This section examines the expenditures side of the forecast break-even rate. EI expenditures include Part I and Part II (Employment Benefits and Support Measures (EBSM)) benefit payments, administration costs and doubtful debts. EI benefits may also include temporary spending initiatives, such as pilot-projects or the special measures announced by the Government of Canada as part of Canada's Economic Action Plan in response to the global economic downturn. A detailed explanation of the methodology and assumptions used to derive the results is available in Appendix III.

Although penalties and interest on overdue accounts receivable are accounted for as revenues, for the purposes of the forecast break-even rate calculation they are included as credits on the expenditures side of the equation.

Table 6 shows the breakdown of the 2011 EI expenditures, as well as a projection for 2012 and 2013.

Table 6 - Results - Expenditures (Millions)			
	Actual	Forecast	
	2011	2012	2013
EI Benefits – Part I (Income)			
Regular	$11,614	$11,116	$11,853
Fishing	$264	$274	$283
Work-Sharing	$41	$29	$25
Special (Sickness, Compassionate and MPA)	$4,246	$4,474	$4,680
Repayments	($238)	($170)	($218)
Sub-Total	$15,927	$15,723	$16,623
EI Benefits – Part II (EBSM)	$2,243	$2,107	$2,093
Total Benefits	**$18,169**	**$17,830**	**$18,716**
Administration Costs	$1,990	$1,829	$1,728
Bad Debt	$103	$81	$68
Total Expenditures	**$20,262**	**$19,740**	**$20,511**
Penalties	($52)	($51)	($54)
Interest	($11)	($11)	($12)
Net Expenditures	**$20,199**	**$19,677**	**$20,445**

Maternity, parental and adoption benefits included in Part I special benefits, as well as direct EI administrative costs incurred to provide MPA benefits (variable administration costs), are required to determine the MPA rate. EI MPA benefits are projected from the base year (2011) using the increase in paid workers, average weekly benefits and week weight. The projected MPA expenditures used to determine the MPA rate are shown in Table 7.

Table 7 - MPA Expenditures (Millions)			
	Actual	Forecast	
	2011	2012	2013
EI MPA Benefits	$3,135	$3,304	$3,459
Variable Administration Costs	$17	$17	$17
MPA Expenditures	**$3,152**	**$3,321**	**$3,476**

D. Forecast Break-Even Rate

The forecast break-even rate is the rate that, based on the relevant assumptions, is expected to generate sufficient premium revenue to ensure that, at the end of the year, the amounts credited and charged to the EI Operating Account after December 31, 2008 are equal. For 2013, the forecast break-even rate is comprised of three separate sub-components: the base rate, the MPA rate and the account balance rate. More information on how these rates are calculated is provided in Section III.

1. Base Rate

The 2013 base rate is the premium rate required to cover the cost of the 2013 expected EI expenditures, net of expenditures related to providing EI MPA benefits. From the equation shown in Section III, the base rate is equal to the ratio of EI expenditures, net of MPA expenditures, plus the premium reduction for wage-loss replacement plans to the earnings base of residents of all provinces.

Table 8 shows the variables that are required in the calculation of the base rate, as well as the resulting base rate.

Table 8 - Base Rate Calculation (Millions)	
	Forecast 2013
Net Expenditures	$20,445
MPA Expenditures	($3,476)
Wage-Loss Premium Reduction	$1,012
Total Expenditures for Base Rate	**$17,980**
Total Salaried Insurable Earnings (TIE)	$532,095
Total Self-Employed Earnings (TSEE)	$160
Adjustment Due to Employee Premium Refunds as a % of TIE (PR%)	2.59%
Earnings Base (1.4 x TIE + TIE x (1 – PR%) + TSEE)	$1,263,408
Unrounded Base Rate	1.4232%
Base Rate	**1.42%**

2. MPA Rate

The MPA rate is equal to the ratio of MPA expenditures (EI MPA benefits and variable administrative costs) to the earning base of residents of all provinces without a provincial plan, that is, residents of all provinces except Quebec. It is the premium reduction for Quebec residents as it relates to the savings to the EI Program resulting from the Quebec Provincial Insurance Plan.

Table 9 shows the estimates of the variables that are required in the calculation of the MPA rate, as well as the resulting MPA rate.

Table 9 - MPA Rate Calculation (Millions)	
	Forecast 2013
MPA Expenditures	**$3,476**
Total Salaried Insurable Earnings for Out-of-Quebec Residents ($TIE_{(OQ)}$)	$411,203
Total Self-Employed Earnings for Out-of-Quebec Residents ($TSEE_{(OQ)}$)	$137
Adjustment Due to Employee Premium Refunds as a % of TIE (PR%)	2.59%
MPA Earnings Base (1.4 x $TIE_{(OQ)}$ + $TIE_{(OQ)}$ x (1 – PR%) + $TSEE_{(OQ)}$)	$976,375
Unrounded MPA Rate	0.3560%
MPA Rate	**0.36%**

3. Account Balance Rate

The 2013 account balance rate is the premium rate that is required to amortize the projected EI Operating Account balance as of December 31, 2012 over the year 2013, taking into account the amount by which the Board’s financial assets exceed its financial liabilities, as well as the expected investment return on these assets. Given that there are currently no assets managed by the Board, the account balance rate for 2013 is equal to the ratio of the projected EI Operating Account deficit as of December 31, 2012 to the earnings base of residents of all provinces.

In order to calculate the account balance rate, a projection of the EI Operating Account balance as of December 31, 2012 is required. HRSDC provides the Board with the actual balance of the EI Operating Account as of December 31, 2011 and the Chief Actuary estimates the balance of the EI Operating Account as of December 31, 2012 based on projected revenues and expenditures.

Based on the 2012 forecasted amounts shown in Table 5, the expected premium revenue for 2012, which is used to project the status of the EI Operating Account as of December 31, 2012, is $20.0 billion. A breakdown is provided in Table 10.

Table 10 - Projected 2012 Premium Revenue (Millions)			
	Quebec	Out-of-Quebec	Total
Legislated Premium Rate	1.47%	1.83%	N/A
Employee Premiums (Salaried, Net of Employee Refunds)	$1,661	$7,033	$8,693
Employer Premiums (Salaried, Before Adjustment for Wage-Loss Premium Reduction)	$2,387	$10,108	$12,495
Wage-Loss Premium Reduction	N/A	N/A	($971)
Self-Employed Premiums	$0	$2	$2
Reduction in Premiums For Small Business Hiring Credit	N/A	N/A	($205)
Total Net Premium Revenue	**N/A**	**N/A**	**$20,015**

Based on the projected 2012 premium revenue shown above, the 2012 projected EI expenditures presented in Table 6, and an expected adjustment in 2012 for prior year premium assessments, the projected deficit of the EI Operating Account as of December 31, 2012 is $8.9 billion, as presented in Table 11.

Table 11 - Projected 2012 EI Operating Account (Millions)		
	Actual 2011	Forecast 2012
Opening Balance	($7,928)	($9,158)
Premium Revenue	$18,548	$20,015
Government Funding	$421	$0
Adjustment for Prior Year Premium Assessments	N/A	($45)
Expenditures	$20,199	$19,677
Sub-Total: Yearly Surplus (Deficit)	($1,231)	$292
Closing Balance	**($9,158)**	**($8,867)**

Table 12 shows the estimates of the variables that are required in the calculation of the account balance rate, as well as the resulting rate.

Table 12 - Account Balance Rate Calculation (Millions)	
	Forecast 2013
Projected EI Operating Account Balance as of December 31, 2012	($8,867)
Board's Financial Assets Less its Financial Liabilities	$0
Investment Income	$0
Sub-Total (Account Balance)	**($8,867)**
Total Salaried Insurable Earnings (TIE)	$532,095
Total Self-Employed Earnings (TSEE)	$160
Adjustment Due to Employee Premium Refunds as a % of TIE (PR%)	2.59%
Earnings Base (1.4 x TIE + TIE x (1 – PR%) + TSEE)	$1,263,408
Unrounded Account Balance Rate	0.7018%
Account Balance Rate	**0.70%**

4. Summary of Forecast Break-Even Rate

The forecast break-even rate for residents of all provinces except Quebec includes the base rate, the MPA rate and the account balance rate. The forecast break-even rate for residents of the province of Quebec excludes the MPA rate, as MPA benefits are made available to Quebec residents through the Quebec Parental Insurance Plan.

The 2013 forecast break-even rate is 2.48% for residents of all provinces except Quebec and 2.12% for residents of Quebec. These combined rates are expected to generate just enough premium revenue to ensure that, at the end of 2013, all amounts credited and charged to the EI Operating Account after December 31, 2008 are equal.

However, subsection 66(7) of the EI Act limits the amount by which the premium rate can increase or decrease from one year to the next to 0.05% of insurable earnings. Therefore, the 2013 maximum premium rate for residents of all provinces except Quebec is 1.88% of insurable earnings, which is equal to the 2012 rate of 1.83% plus 0.05%. The corresponding 2013 maximum premium rate for residents of Quebec is 1.52% of insurable earnings, or 1.88% less the premium reduction of 0.36% of insurable earnings.

Table 13 shows the breakdown of the forecast break-even rate as well as maximum premium rates that apply in 2013 for residents of Quebec and for residents of all other provinces.

Table 13 - Breakdown of Forecast Break-Even Rate and Maximum Premium Rate

	Forecast 2013
Components of the Forecast Break-Even Rate (as a % of Insurable Earnings)	
1) Upcoming Year Rate	
A) Base Rate	1.42%
B) MPA Rate	0.36%
Sub-Total (Upcoming Year)	1.78%
2) Account Balance Rate	
A) Cumulative (Surplus)/Deficit	0.70%
Premium Rate Prior to the Application of the 0.05% Limit (Forecast Break-Even Rate)	
Residents of All Provinces Except Quebec	2.48%
Residents of the Province of Quebec	2.12%
Maximum Premium Rate (i.e. after the Application of the 0.05% Limit)	
Residents of All Provinces Except Quebec	1.88%
Residents of the Province of Quebec	1.52%

E. Financial Status of the EI Operating Account

The 2013 maximum premium rate is lower than the forecast break-even rate and higher than the upcoming year rate. As a result, should the Board set the 2013 premium rate at the maximum premium rate, the 2013 premium revenue is expected to surpass the 2013 EI expenditures by $1.3 billion. This excess premium revenue will be used to eliminate a portion of the deficit in the EI Operating Account. However, the excess premium revenue will not be sufficient to eliminate the deficit in its entirety. The projected deficit in the EI Operating Account as of December 31, 2013 is $7.6 billion.

Table 14 provides a projection of the EI Operating Account as of December 31, 2013, assuming that the Board will set the 2013 premium rate at the maximum premium rate (i.e. **1.88%** for residents of all provinces except Quebec and **1.52%** for residents of Quebec).

Table 14 - EI Operating Account Projections (Millions)

	Actual	Forecast		
			Break-Even Rate	Maximum Premium Rate
	2011	2012	2013	2013
Earnings - Out-of-Quebec Residents				
Total Insurable Earnings	$377,835	$394,516	$411,203	$411,203
Total Self-Employed Earnings	$79	$107	$137	$137
Sub-Total	$377,914	$394,624	$411,341	$411,341
Earnings - Quebec Residents				
Total Insurable Earnings	$111,082	$115,986	$120,892	$120,892
Total Self-Employed Earnings	$14	$18	$23	$23
Sub-Total	$111,096	$116,004	$120,915	$120,915
Premium Rate (Out-of-Quebec Residents)	**1.78%**	**1.83%**	**2.48%**	**1.88%**
Premium Rate (Quebec Residents)	**1.41%**	**1.47%**	**2.12%**	**1.52%**
Gross EI Premium Revenue	$19,881	$21,421	$30,630	$22,967
Wage-Loss Premium Reduction	($930)	($971)	($1,012)	($1,012)
Employee Refunds	($215)	($231)	($331)	($248)
Small Business Hiring Credit	($189)	($205)	$0	$0
Government Funding	$421	$0	$0	$0
Total Revenues	$18,968	$20,015	$29,287	$21,707
Adjustment for Prior Year Premium Assessments	N/A	($45)	$0	$0
Total Expenditures	$20,199	$19,677	$20,445	$20,445
Annual Surplus (Deficit)	($1,231)	$292	$8,843	$1,262
Opening Balance	($7,928)	($9,158)	($8,867)	($8,867)
Closing Balance	($9,158)	($8,867)	($24)	($7,604)

VI. Sensitivity of Projections

While a change in the value of any one of the various assumptions used in the preparation of the actuarial estimates presented in this report would have an impact on the forecast break-even rate, two particular assumptions, the unemployment rate and the beneficiary-to-unemployed ratio ("B/U ratio"), are analysed more closely. The impact of a variation in the premium rate on premium revenue is also examined.

1. Unemployment Rate

Assuming all other assumptions remain constant, a variation in the unemployment rate (UR) of one-tenth of a percentage-point (0.10%) would have an expected net impact of $173 million on the balance of the EI Operating Account.

Table 15 - Sensitivity of 2013 Results to the Unemployment Rate Assumption (Millions)

Variation in 2013 UR	UR	Total Insurable and Self-Employed Earnings	Total Revenue	Total Program Costs	Annual Surplus	Cumulative Balance as at Dec. 31, 2013	Variation in Cumulative Balance as at Dec. 31, 2013
-0.50%	6.7%	$535,011	$21,819	$19,690	$2,130	($6,737)	$867
-0.40%	6.8%	$534,460	$21,797	$19,841	$1,956	($6,910)	$694
-0.30%	6.9%	$533,909	$21,774	$19,992	$1,783	($7,084)	$520
-0.20%	7.0%	$533,358	$21,752	$20,143	$1,609	($7,257)	$347
-0.10%	7.1%	$532,807	$21,730	$20,294	$1,436	($7,431)	$173
Base	**7.2%**	**$532,256**	**$21,707**	**$20,445**	**$1,262**	**($7,604)**	**$0**
0.10%	7.3%	$531,705	$21,685	$20,596	$1,089	($7,778)	($173)
0.20%	7.4%	$531,154	$21,662	$20,747	$915	($7,951)	($347)
0.30%	7.5%	$530,603	$21,640	$20,898	$742	($8,125)	($520)
0.40%	7.6%	$530,052	$21,617	$21,049	$568	($8,298)	($694)
0.50%	7.7%	$529,500	$21,595	$21,200	$395	($8,472)	($867)

2. B/U Ratio

As shown in the following table, a 0.5% increase in the B/U ratio in 2013 from the base assumption of 45.7% would, all other assumptions remaining constant, result in a $123 million increase in expenditures, due to an increase in the number of beneficiaries. A 0.5% decrease in the B/U ratio from the base assumption would have the opposite impact on the EI Operating Account.

Table 16 - Sensitivity of 2013 Results to the B/U Ratio Assumption (Millions)

Variation in 2013 B/U Ratio	B/U Ratio	Total Insurable and Self-Employed Earnings	Total Revenue	Total Program Costs	Annual Surplus	Cumulative Balance as at Dec. 31, 2013	Variation in Cumulative Balance as at Dec. 31, 2013
-1.00%	44.70%	$532,256	$21,707	$20,198	$1,509	($7,358)	$246
-0.50%	45.20%	$532,256	$21,707	$20,321	$1,386	($7,481)	$123
Base	**45.70%**	**$532,256**	**$21,707**	**$20,445**	**$1,262**	**($7,604)**	**$0**
0.50%	46.20%	$532,256	$21,707	$20,568	$1,139	($7,727)	($123)
1.00%	46.70%	$532,256	$21,707	$20,691	$1,016	($7,851)	($246)

3. Premium Rate

As demonstrated in the following table, for every cent (0.01%) variance in the premium rate in 2013, all other assumptions remaining constant, there is a $126 million impact on the premium revenue generated.

Table 17 - Sensitivity of 2013 Results to the Premium Rate (Millions)

Variation in 2013 EI Premium Rate	Resulting EI Premium Rate	Total Insurable and Self-Employed Earnings	Total Revenue	Total Program Costs	Annual Surplus	Cumulative Balance as at Dec. 31, 2013	Variation in Cumulative Balance as at Dec. 31, 2013
-0.05%	1.83%	$532,256	$21,075	$20,445	$631	($8,236)	($632)
-0.04%	1.84%	$532,256	$21,202	$20,445	$757	($8,110)	($505)
-0.03%	1.85%	$532,256	$21,328	$20,445	$883	($7,983)	($379)
-0.02%	1.86%	$532,256	$21,454	$20,445	$1,010	($7,857)	($253)
-0.01%	1.87%	$532,256	$21,581	$20,445	$1,136	($7,731)	($126)
Base	**1.88%**	**$532,256**	**$21,707**	**$20,445**	**$1,262**	**($7,604)**	**$0**
0.01%	1.89%	$532,256	$21,833	$20,445	$1,389	($7,478)	$126
0.02%	1.90%	$532,256	$21,960	$20,445	$1,515	($7,352)	$253
0.03%	1.91%	$532,256	$22,086	$20,445	$1,641	($7,225)	$379
0.04%	1.92%	$532,256	$22,212	$20,445	$1,768	($7,099)	$505
0.05%	1.93%	$532,256	$22,339	$20,445	$1,894	($6,972)	$632

VII. Reconciliation

A. Introduction

According to subsection 14(3) of the CEIFB Act, the Chief Actuary shall provide the CEIFB's board of directors with a determination and analysis of any difference between the premium rate set by the Board for the year that is two years before the current year (i.e. 2010 rate) and what that rate should have been for that year in order to meet the objective of subsection 66(1) of the EI Act. Subsection 66(1) of the EI Act states that the Board shall set the premium rate for each year in order to generate just enough premium revenue during that year to ensure that at the end of that year the total of the amounts credited to the EI Operating Account after December 31, 2008 is equal to the total of the amounts charged to that Account after that date.

The CEIFB began its operations in January 2010 and set its first premium rate for the year 2011. This section provides an analysis of the 2010 premium rate despite the fact that this rate was not set by the Board.

B. Experience Update

In the 2010 Report of the Chief Actuary to the EI Commission on the EI Break-Even Rate and Maximum Insurable Earnings ("2010 Report"), the forecast break-even rate was 2.43%, before Government funding for special measures. However, in response to the global economic downturn, the 2010 premium rate was maintained at the 2009 level of 1.73%. Based on the final data for calendar year 2010, the actual break-even rate, after taking into account the Government funding for special measures, is 2.01%.

Table 18 provides a reconciliation of the 2010 premium rate by major contributing sources.

Table 18 - 2010 Premium Rate Reconciliation (Millions)			
	Forecast 2010	Actual 2010	Impact on Premium Rate
2010 Report Forecast Break-Even Rate			2.43%
Earnings Base			
Total Insurable Earnings	$458,097	$466,078	(0.05%)
Wage-Loss Replacement Plans	$836	$877	0.01%
Government Funding	$0	$1,582	(0.14%)
Total Revenues	$24,721	$18,977	(0.18%)
Expenditures			
Unemployment Rate	9.0%	8.0%	(0.13%)
Beneficiary-to-Unemployed Ratio	49.6%	43.1%	(0.15%)
Average Weekly Benefits Growth	1.7%	-0.3%	(0.03%)
EI Benefits – Part II (EBSM)	$2,128	$2,583	0.04%
Administration Costs	$2,005	$1,868	(0.01%)
Other			0.04%
Total - Expenditures	$24,721	$22,050	(0.24%)
Actual Break-Even Rate			2.01%
Actual Premium Rate Set by Legislation			1.73%
EI Operating Account Annual Surplus (Deficit)	$0	($3,073)	(0.28%)

The 2010 total insurable earnings were 1.7% higher than expected, which resulted in a decrease of 0.05% in the break-even rate. Higher than expected premium reduction for wage-loss replacement programs resulted in an increase of 0.01% in the break-even rate. The net effect, a 0.04% increase in the break-even rate is explained by a combination of higher than expected increases in the average earnings of contributors, and higher than expected number of individuals working and paying premiums into the EI program.

The 2010 forecast break-even rate of 2.43% does not reflect any Government funding for special measures implemented in the Government's 2009 budget. Based on the 2010 Report, the forecast break-even rate would have been 2.30% had anticipated Government funding been taken into account. Based on actual Government funding for 2010, the forecasted break-even rate of 2.43% is reduced by 0.14%.

Actual expenditures in 2010 were lower than expected and accounted for an estimated 0.24% reduction in the 2010 break-even rate. The actual 2010 unemployment rate was significantly lower than expected, resulting in an estimated 0.13% saving due to a lower number of potential claimants. In addition, the beneficiary-to-unemployed ratio[2] was lower than expected in 2010, resulting in an estimated 0.15% saving. The lower beneficiary-to-unemployed ratio is likely the result of individuals having exhausted their benefits and having difficulty qualifying for EI benefits due to the fact that 2010 was the second year following the downturn that occurred at the end of 2008.

The average benefit growth was also lower than expected, accounting for an estimated 0.03% reduction in the break-even rate. EI Part II benefits were higher than expected while administration costs were lower, combining for a 0.03% increase in the break-even rate. Other miscellaneous variations increased the break-even rate by 0.04%. The miscellaneous variations include items such as higher than expected costs for special measures and pilot projects, and deviations between the methodology developed to project expenditures and the reality.

The actual premium rate that should have been charged in order to pay for all benefits accrued in 2010 is 2.01%. Since the premium rate for 2010 was set by legislation and frozen at its 2009 level of 1.73%, an annual deficit equivalent to $3.1 billion, unfolded.

C. Improvements

The experience update provides useful information on the main factors affecting the projection of the break-even rate. As anticipated, a variation between expected and actual unemployment rate has a significant impact on the forecast break-even rate. For the purpose of the Actuarial Report, this assumption is provided by the Department of Finance and is based on a consensus of private economic forecasts. This is not expected to change in the near future.

The assumption that had the largest impact on the 2010 forecast break-even rate is the beneficiary-to-unemployed ratio. Work is currently under way to improve the methodology used to determine this assumption. Starting with this report, the aging of the population is taken into account by projecting age-group specific beneficiary-to-unemployed ratios. More information on the current methodology is available in Appendix III. Additional analysis pertaining to the evolution of the beneficiary-to-unemployed ratio throughout the business cycle will be performed over the coming years and an improved methodology is expected to be included in future reports.

[2] The 2010 actual beneficiary-to-unemployed ratio presented here is based on the 2012 Report of the Chief Actuary and excludes additional beneficiaries due to pilot projects and special measures. It differs from the actual beneficiary-to-unemployed ratio presented in Appendix II which is based on information from Statistics Canada.

VIII. Conclusion

Based on the assumptions of the relevant economic and demographic variables as provided by the Minister of Finance and the expenditure estimates provided by the Minister of HRSDC on July 31, 2012, and the assumptions derived from historical data by the Chief Actuary, it is the opinion of the Chief Actuary of the CEIFB that the rate which would generate sufficient premium revenue to cover the expected $20.4 billion costs to the EI program in 2013 and pay down the projected $8.9 billion cumulative deficit in the EI Operating Account as of December 31, 2012, is 2.48% for residents of all provinces except Quebec and 2.12% for residents of Quebec.

Subsection 66(7) of the EI Act limits the amount by which the premium rate can increase or decrease from one year to the next to 0.05% of insurable earnings. Therefore, for 2013, the premium rate cannot increase by more than 0.05% above the 2012 rate of 1.83%, or **1.88%** for residents of all provinces except Quebec. The corresponding premium rate that applies to residents of Quebec would be **1.52%**, or 1.88% less the premium reduction of 0.36%. This reduction represents the estimated savings to the EI program following the establishment of the Quebec Parental Insurance Plan, which provides maternity, parental and adoption benefits to residents of Quebec.

Given the difference between the 2013 upcoming year rate of 1.78% (the rate which should generate sufficient premium revenue to cover expenditures expected to be incurred in 2013) and the maximum legislated premium rate of 1.88%, should the Board set the 2013 Employment Insurance premium rate at the maximum levels described in the above paragraph, it is expected that revenues would exceed expenditures by $1.3 billion, reducing the cumulative deficit in the EI Operating Account to $7.6 billion as of December 31, 2013.

It is important to note that assumptions are not predictions and eventual differences between future experience and assumptions will be analyzed and taken into account in subsequent reports.

IX. Actuarial Opinion

In our opinion, considering that this report was prepared pursuant to the *Canada Employment Insurance Financing Board Act* and the *Employment Insurance Act*:

- the data on which this report is based are in aggregate sufficient and reliable;
- the methodology used is appropriate and consistent with sound actuarial principles; and
- the actuarial assumptions used are in aggregate reasonable, appropriate and set on a best estimate basis.

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

Michel Millette, F.C.I.A., F.S.A.
Chief Actuary
Canada Employment Insurance Financing Board

Mathieu Désy, F.C.I.A., F.S.A.
Actuary
Office of the Superintendent of Financial Institutions Canada

Christine Dunnigan, F.C.I.A., F.S.A.
Actuarial Officer
Office of the Superintendent of Financial Institutions Canada

Ottawa, Canada
31 August 2012

Appendix I. Summary of EI Legislation

The Unemployment Insurance program was first implemented in 1940, with the last major reform occurring in 1996. At that time, the name of the program was changed from "Unemployment Insurance" to "Employment Insurance," to reflect the program's primary objective of promoting employment in the labour force and to better emphasize that individuals' access to the program is linked to significant work attachment.

The Employment Insurance (EI) program provides assistance to individuals who are laid off or are unable to work due to specific life circumstances, and helps unemployed people across the country find employment. This Appendix provides a brief overview of the EI program.

A. EI Part I Benefits

Part I of the EI program provides temporary financial assistance to workers who have lost their job through no fault of their own while they look for work or upgrade their skills.

EI benefits paid under Part I of the EI Act include regular benefits, which provide temporary financial assistance for unemployed persons, fishing benefits for self-employed fishers and work-sharing benefits for workers willing to work a temporarily reduced work-week to avoid lay-offs. Part I benefits also include special benefits for those who are sick, pregnant or caring for a newborn or adopted child, or caring for a seriously ill family member.

Although access and entitlement to benefits vary depending on each benefit type, the calculation of weekly benefit rates is the same for all benefit types.

Until April 6, 2013, weekly benefit payments are generally equal to 55% of the insurable earnings of a claimant in the last 26 weeks divided by the greater of the number of weeks worked or a minimum divisor between 14 and 22 determined by the regional unemployment rate.

Starting April 7, 2013, benefit payments are equal to 55% of the claimant's variable best weeks over the qualifying period (generally 52 weeks). The number of best weeks taken into account is determined by the regional unemployment rate and varies from 14 to 22 insurable earnings weeks. The maximum amount payable is determined by the MIE.

1. Regular Benefits

EI regular benefits provide temporary income-support to eligible insured persons who have lost their jobs through no fault of their own, such as due to shortage of work, or seasonal or mass lay-offs, and are available to work.

To qualify for regular benefits, individuals must have been without work and without pay for at least seven consecutive days. In addition, an insured person must have worked at least the minimum required number of insurable hours, between 420 and 700 hours, as determined by the regional unemployment rate, in the 52-week qualifying period. A minimum of 910 hours may be required for new entrants to the work force or those re-entering the work force after a two-year absence. The number of hours required to qualify may increase as a result of a violation (fraudulent overpayment) on a previous EI claim.

The maximum number of regular benefit weeks varies from 14 to 45 weeks, depending on the number of insurable hours accumulated in the qualifying period and the regional unemployment rate.

The family supplement provides additional benefits to low-income families with children, based on net family income up to a maximum of $25,921 per year and the number of children in the family and their ages. The maximum family supplement is up to 80% of insurable earnings, but cannot exceed the maximum benefit rate.

2. Fishing Benefits

EI fishing benefits are paid to self-employed fishers. Eligibility for fishing benefits is determined by the claimant's insurable fishing earnings accumulated during the qualifying period, rather than the number of hours worked. A self-employed person engaged in fishing who has earned at least between $2,500 and $4,200 (depending on the regional unemployment rate) during the maximum 31 week qualifying period is eligible to receive up to 26 weeks of EI fishing benefits. For new fishers or fishers returning after an absence of at least one year, a minimum of $5,500 of fishing earnings is required.

3. Work-Sharing Benefits

To avoid temporary lay-offs due to a reduction in the normal level of business activity caused by factors that are beyond the control of the employer, employers and employees can enter into a work-sharing agreement with the EI Commission through Service Canada to provide EI benefits to eligible workers willing to work a temporarily reduced work-week. This enables employers to retain staff and adjust their work activity during temporary work shortages, as well as avoid the expenses of hiring and training new staff once business levels return to normal. Employees are able to retain their skills and jobs while receiving EI benefits for the days that they do not work.

Work-sharing agreements have a minimum duration of 6 weeks and a maximum of 26 weeks, with a possible extension of up to 12 weeks for a maximum duration of 38 weeks. In *Budget 2009*, as part of Canada's EAP, the Government provided a 14-week extension to agreements over two-years, for a maximum duration of 52 weeks, and increased access to the program through greater flexibility in the qualifying criteria. An additional 26-week extension was provided in *Budget 2010*, up to a maximum duration of 78 weeks, for existing or recently terminated agreements. *Budget 2011* made available an extension of up to 16 weeks, ending no later than October 29, 2011, for employers with an active or recently terminated agreement that began prior to April 3, 2011. This measure was extended by another 16 weeks to employees with active, new or recently ended agreement under the 2011 Fiscal Update. These extensions must end no later than October 27, 2012.

4. Special Benefits

Special benefits includes MPA benefits, for those who are pregnant or caring for a newborn or adopted child, sickness benefits for those who are unable to work due to sickness, injury or quarantine, and compassionate care benefits for those who take a temporary leave from work to give care or support to a family member who is gravely ill at risk of dying within 26 weeks. Since 2006, the Province of Quebec has been responsible for providing maternity, parental and adoption benefits to residents of Quebec through the Quebec Parental Insurance Plan (QPIP).

To be eligible for special benefits, the claimant's normal weekly earnings must be reduced by over 40%. In addition, special benefits require a minimum of 600 hours of insured earnings in the 52 week qualifying period. Self-employed fishers can also qualify for special benefits with fishing earnings of $3,760. In addition, self-employed individuals who opt in for special benefits can qualify if their self-employment earnings meet the minimum self-employment eligibility threshold in the calendar year preceding the claim.

Maternity benefits can be paid for a maximum of 15 weeks while parental benefit, which may be divided between both parents, can be paid for a maximum of 35 weeks for a combined maximum duration of 50 weeks. The maximum duration for sickness and compassionate care benefits are 15 weeks and 6 weeks, respectively.

As of January 31, 2010, self-employed persons can voluntarily enter into an agreement with the Commission through Service Canada to participate in the EI program to contribute premiums and access EI special benefits. Self-employed residents of Quebec entering into an agreement with the Commission cannot access EI MPA benefits, as MPA benefits are already payable through QPIP, but can access sickness and compassionate care benefits. Except for those who registered for the program before April 1, 2010, who can file a claim for benefits as early as January 1, 2011, one must be registered for at least one year prior to claiming benefits.

B. EI Part II Benefits

Employment Benefits and Support Measures ("EBSM") are benefits paid under Part II of the EI Act that provide financial assistance to eligible persons to help them re-integrate the labour market and to third parties to help them provide employment assistance services to unemployed workers and employed persons if they are facing a loss of their employment. These expenses include the direct costs of financial and employment assistance programs and related measures provided to eligible persons and third parties.

The employment programs included under EBSM are Employment Assistance Services, Job Creation Partnerships, Labour Market Partnerships, Research and Innovation, Skills Development, Self-Employment, Target Earnings Supplements and Targeted Wage Subsidies. As of February 1, 2009, all provincial and territorial governments have signed Labour Market Development Agreements (LMDA) with the Government of Canada to transfer responsibility for the design and delivery of these programs to the provinces and territories.

C. Financing

The EI program is financed by contributions from employees and employers, via premiums paid on insurable earnings up to the maximum insurable earnings (MIE) threshold.

Employee premiums apply to insurable earnings, up to the MIE. However, the EI program has specific provisions for contributors who are unlikely to qualify for benefits, i.e. employees with insured earnings of less than $2,000 are entitled to a refund of their EI premiums when they file an income tax return.

In addition, in accordance with section 69(2) of the EI Act and related regulations, a mechanism to reduce EI premiums paid by Quebec residents was introduced. The reduced premium rate reflects the savings to the EI program following the introduction of the QPIP.

Since January 31, 2010, self-employed individuals may voluntarily opt into the EI program to receive EI special benefits. Self-employed individuals pay the same EI premium rate as salaried employees but are not required to pay the employer portion of premiums, as they do not have access to EI regular benefits.

Employers pay premiums at the rate of 1.4 times those of employees. When the system was set up, it was felt that employers have more control over layoffs and, therefore, should bear a higher overall share of program costs. However, in accordance with section 69(1) of the EI Act, employers who sponsor a qualified wage-loss replacement plan which reduces the EI benefits otherwise payable receive a premium reduction if they meet the requirements set out by the EI Commission. In such cases, the employer pays premiums at a rate that is lower than 1.4 times those of employees.

D. Premium Rate

The premium rate is set annually by the Canada Employment Insurance Financing Board ("CEIFB" or "Board").

The CEIFB was created in *Budget 2008* to help the Government of Canada ensure that all Employment Insurance (EI) premiums and related revenues are used exclusively for Canada's EI program. The CEIFB is an independent Crown corporation which was established under the *Canada Employment Insurance Financing Board Act* (CEIFB Act), and one of its main responsibilities is to set the annual EI premium rate.

According to section 66 of the EI Act, the Board shall set the premium rate, subject to a limit of 0.05% in the annual change in premium rate, in order to generate just enough premium revenue during the upcoming year to ensure that at the end of that year, the total amounts credited to the EI Operating Account after December 31, 2008 are equal to the amounts charged to that Account after that date. This premium rate is based on actuarial and economic forecasts which take into account the prescribed information that is provided to the Board on an annual basis, the amount by which the Board's financial assets exceed its financial liabilities if applicable, the regulations made under section 69 of the EI Act and any other relevant information.

As a result of economic conditions and subsequent government responses, the EI Operating Account is not in a surplus position, and has not been in a surplus position since its inception on January 1, 2009.

Legislative Framework

The EI Act and the CEIFB Act include the following dates by which various responsibilities related to the setting of the EI premium rate must be met.

July 31

The Minister of HRSDC is to provide the Board with the information prescribed in section 66.1(1) of the EI Act. The Minister of Finance is to provide the Board with the information prescribed in subsection 66.2(1) and section 77.1 of the EI Act.

August 31

Under subsection 14(3) of the CEIFB Act and for the purposes of section 66 of the EI Act, the Chief Actuary shall provide the Board with the forecast of the break-even rate for the following year, along with a detailed analysis in support of the forecast and the forecast fair market value of the Board's surplus (deficit) at the end of the following year. The Chief Actuary is to provide the source of the data, the actuarial and economic assumptions and the actuarial methodology used in the forecasts.

Any payments between the Board and the Consolidated Revenue Fund ("CRF") under section 77.1 of the EI Act are to be made on or before this date. This is to account for the difference between the forecast amounts credited and charged to the EI Operating Account during the current year (year to date plus estimate covering the remainder of the current year) and the estimate total amounts credited and charged to the EI Operating Account during the immediately preceding year.

September 14

Under section 66 of the EI Act, the Board is to set the premium rate for the following year in order to generate just enough premium revenue during that year to ensure that the amounts credited and charged to the EI Operating Account after December 31, 2008 are equal.

Subsection 66(7) of the EI Act sets out the limit by which the premium rate may vary from one year to the next. As per subsection 66(8) of the EI Act, the Governor in Council, on the joint recommendation of the Ministers of HRSDC and Finance, may change the maximum percentage by which the premium rate can increase or decrease annually when considered to be in the public interest to do so.

In accordance with section 35 of the CEIFB Act, the Board shall make public a report that sets out the premium rate, as well as a detailed analysis in support of that rate, the information provided to the Board by the Chief Actuary under subsection 14(3) of the CEIFB Act and by the Minister of HRSDC under subsection 66.1(1) of the EI Act and any other information the Board took into account.

September 30

Pursuant to an Order in Council made under the authority of subsection 66.3(1) of the EI Act, on the joint recommendation of the Ministers of HRSDC and Finance, the Governor in Council may substitute a premium rate for the following year that is different from the one set by the Board, if the Governor in Council considers it to be in the public interest, or set the premium rate for the following year if the Board has not set one by September 14.

Appendix II. Maximum Insurable Earnings (MIE)

Section 4 of the *Employment Insurance Act ("EI Act")* provides details on how to determine the yearly MIE, the income level up to which EI premiums are paid and up to which EI benefits are calculated. The Section 4 of the EI Act was amended in Division 43 of Bill C-38*, An Act to Implement Certain Provisions of the Budget Tabled in Parliament on March 29, 2012 and Other Measures* ("Bill C-38").

Based on the amendments included in Bill C-38, the annual MIE is set at $39,000, beginning in 1996, until this threshold is surpassed by 52 times the product obtained by multiplying:

(a) the average for the 12-month period ending on April 30 in the preceding year of the Average Weekly Earnings ("AWE"), according to the latest revision of Statistics Canada, for each month in that period

by

(b) the ratio of the average of the 12-month period ending on April 30 in that preceding year of the AWE for each month in that 12-month period bears to the average for the 12-month period ending twelve months prior to April 30 of that preceding year of the AWE for each month in that 12-month period ending twelve months prior to April 30 of that preceding year.

In the year in which the threshold is surpassed, the MIE is equal to the amount calculated as described above, and is rounded down to the nearest multiple of $100.

For subsequent years, the MIE before rounding is equal to the previous year's MIE before rounding, multiplied by the average of the AWE for each month for the twelve month period ending April 30 of the previous year divided by the average of the AWE for each month for the twelve month period ending April 30 in the year prior to the previous year. This unrounded MIE is then rounded down to the nearest multiple of $100.

Prior to the amendments, the methodology to determine the MIE was identical to the current one, except that all references to April 30 above referred to June 30 instead. Although the MIE for historical years remain unchanged, the legislation is written such that the 2013 MIE must reflect a retroactive calculation.

In accordance with Bill C-38, the first time the $39,000 threshold is exceeded is in 2007, which is the same year as before the amendments. The revised unrounded MIE for 2007 is $40,106.68[3].

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[3] $52 \times AWE_{2006} \times \frac{AWE_{2006}}{AWE_{2005}} = 52 \times \$744.0383 \times \frac{\$744.0383}{\$717.7567}$

The unrounded MIE for 2013 is equal to the unrounded MIE from 2007 ($40,106.68) multiplied by the average of the AWE for each month for the twelve month period ending April 30, 2012 ($879.7158) divided by the average of the AWE for each month for the twelve month period ending April 30, 2006 ($744.0383).

$$MIE_{2013} = MIE_{2007} \times \frac{AWE_{2012}}{AWE_{2006}}$$

$$= \$40{,}106.68 \times \frac{\$879.7158}{\$744.0383} = \$47{,}420.25$$

Rounded down to the nearest multiple of $100, the MIE is **$47,400** for 2013. This is an increase of $1,500 or 3.3% from the 2012 MIE of $45,900.

Table 19 - Maximum Insurable Earnings				
Year	12-Month AWE Average as of April 30	Revised Unrounded MIE	Applicable MIE	% change in Applicable MIE
2005	$717.7567	$37,248.34	$39,000	
2006	$744.0383	$38,412.52	$39,000	-
2007	$765.4542	$40,106.68	$40,000	2.56%
2008	$797.3000	$41,261.08	$41,100	2.75%
2009	$815.6283	$42,977.70	$42,300	2.92%
2010	$830.9283	$43,965.67	$43,200	2.13%
2011	$863.1408	$44,790.40	$44,200	2.31%
2012	$879.7158	$46,526.79	$45,900	3.85%
2013	N/A	$47,420.25	**$47,400**	3.27%

The MIE for the years prior to 2013 are not revised and are based on the legislation prior to Bill C-38. However the 2013 MIE reflects retroactive adjustments to the calculation in accordance with Bill C-38. More information on how the MIE for previous years was calculated can be found in previous reports.

2013 Minimum Self-Employed Earnings (MSEE)

To qualify for EI special benefits, self-employed who opted in the EI program need to earn at least the MSEE during the calendar year before the year they submit a claim. In accordance with subsection 11.1 of the EI Regulations, the unrounded minimum self-employed earnings was $6,222.66 in 2012 and is adjusted annually on a compound basis by the same ratio used for the indexation of the MIE (see previous section), rounded down to the nearest dollar.

$$MSEE_{2013} = MSEE_{2012} \times \frac{AWE_{2012}}{AWE_{2011}} = \$6{,}222.66 \times \frac{\$879.7158}{\$863.1408} = \$6{,}342.15$$

The MSEE for 2013 is therefore set at $6,342.

Appendix III. Data, Methodology and Assumptions

This section describes the data, methodology and assumptions that underlie the financial projections included in this report. Although the assumptions have been developed using the best available information, the resulting estimates should be interpreted with caution. These estimates are not intended to be predictions, but rather projections of the financial status of the EI Operating Account.

A. Prescribed Data

In accordance with the EI Act, the Board shall set the premium rate based on a number of factors, including prescribed data which must be provided to the Board by the Minister of HRSDC and the Minister of Finance.

1. Human Resources and Skills Development Canada

Under subsection 66.1(1) of the EI Act, the Minister of HRSDC shall provide the Board, on or before July 31 of each year, with:

- the forecast change in payments to be made under paragraphs 77(1) (a), (b) or (c) of the EI Act during the following year if any changes to the payments to be made are announced;
- the forecast administration costs to be paid under paragraphs 77(1) (d) and (f) of the EI Act during the following year, including any forecast change in those costs resulting from any change to the payments to be made under paragraphs 77(1) (a), (b) or (c); and
- the total amounts charged to the EI Operating Account as of the last day of the most recent month for which that total is known.

In accordance with subsection 66.1(1), for the purposes of determining the 2013 premium rate under section 66, the Minister of HRSDC has provided the Board with the following information:

Table 20 - Prescribed Information provided by HRSDC (Millions)			
	Actual 2011	Forecast 2012	Forecast 2013
Pilot-Projects/Special Measures			
Extended EI Benefits	$110	$136	$77
Best 14-Weeks	$297	$271	$168
Working While on Claim	$130	$103	$44
Hiring Credit for Small Business	$189	$205	$0
Work-Sharing Enhancement Measures	$19	$6	$0
EI Training Programs (Part II)	$87	$0	$0
Other Transitional/Special Measures	$663	$25	$0
Sub-Total	**$1,495**	**$746**	**$289**
New Permanent Changes			
Variable Best Weeks	$0	$0	$87
Connecting Canadians to Available jobs	$0	$0	($33)
Special Benefits for Self-Employed	$5	$8	$11
Sub-Total	**$5**	**$8**	**$65**
Total	**$1,500**	**$754**	**$354**
	Actual 2011-2012	**Forecast 2012-2013**	**Forecast 2013-2014**
Employment Benefits and Support Measures (EBSM)	$2,082	$2,116	$2,086
Administration Costs	$1,907	$1,803	$1,703

2. Department of Finance

Under subsection 66.2(1) of the EI Act, the Minister of Finance shall provide the Board, on or before July 31 of each year, with the following:

- the most current forecast values of the economic variables relevant to the determination of the forecast break-even rate for the following year;
- the forecast amounts to be credited and charged to the EI Operating Account for the current year and an estimate of the total amounts credited to the Account as at December 31 of the previous year; and
- the amount of any payments to be made between the Board and the CRF on or before August 31 .

In accordance with subsection 66.2(1), for the purposes of determining the 2013 forecast break-even rate under section 66, the Minister of Finance has provided the Board with the following information:

Table 21 - Prescribed Information provided by the Department of Finance (Thousands)			
	Actual 2011	Forecast 2012	Forecast 2013
Working-Age Population (POP)	27,988	28,303	28,584
Labour Force (LF)	18,703	18,895	19,117
Employed (EMP)	17,309	17,514	17,745
Paid-Workers (PW)	14,639	14,837	15,020
Self-Employed (SE)	2,670	2,677	2,726
Unemployed (UN)	1,394	1,382	1,372
	Actual 2011	Forecast 2012	Forecast 2013
Unemployment Rate (UR)	7.5%	7.3%	7.2%
Average Weekly Earnings (AWE)	$874.50	$896.25	$917.75

These projections are consistent with the definitions of the corresponding seasonally-adjusted quarterly estimates in the Labour Force Survey as published by Statistics Canada.

In addition, the Minister of Finance has provided the expected increase in average employment income for the years 2011 to 2013. The average employment income is expected to increase by 4.10%, 3.50% and 3.30% in 2011, 2012 and 2013 respectively.

B. Earnings Base

The earnings base is detailed in the denominator of the formula for the base rate, the MPA rate and the account balance rate developed in Section III. The earnings base is comprised of:

- the total insurable earnings on which employers pay EI premiums prior to any adjustment for wage-loss replacement programs;
- the total insurable earnings on which employees pay EI premiums adjusted to reflect employee premium refunds; and
- the earnings on which self-employed individuals that opted into the EI program pay EI premiums.

The estimated reduction in premiums due to wage-loss replacement programs is factored into the numerator of the base rate.

Section IV presents an overview of the assumptions used in determining the earnings base and the estimated reduction in premiums due to wage-loss replacement programs. This subsection provides additional information and data in support of the development of these assumptions.

1. Number of Earners

In order to calculate the earnings base, an assumption is required for the number of earners, as well as the split of these earners between those that have insurable earnings below and above the MIE.

The annual paid workers statistic provided by Finance represents an average of the number of individuals with employment income in a month. The number of earners provided by CRA is always greater than the average paid workers monthly statistic since it represents a count of all individuals who received one or more T4 slips in the year. This is due to the fact that the number of earners includes all individuals who had earnings at any time during the year, whereas the paid workers statistic only indicates the monthly average. A historical comparison of the number of paid workers and the number of earners as presented in Table 22 highlights the need to develop a separate assumption to project the increase in the number of earners. The preliminary number of earners for the year 2011 is derived from the 2011 year-to-date assessed premiums and the 2011 increase in average employment income provided by the Department of Finance such that the resulting insurable earnings are in line with the expected assessed premiums for 2011.

Table 22 - Historical Comparison of Paid Workers Statistic and Number of Earners (Thousands)

Year	Paid Workers Statistics	Increase in Paid Workers	Number of Earners (CRA T4 Data)	Increase in Number of Earners	Difference in Annual Increases (%)
2005	13,602		16,858		
2006	13,911	2.27%	17,337	2.84%	0.57%
2007	14,195	2.04%	17,779	2.55%	0.51%
2008	14,464	1.90%	17,981	1.14%	-0.76%
2009	14,124	-2.35%	17,765	-1.20%	1.15%
2010	14,371	1.75%	17,812	0.27%	-1.48%
2011	14,639	1.86%	18,124	1.75%	-0.11%

The projected number of earners is obtained by a regression based on a correlated historical relationship from 1988 to 2011 between the four following main variables:

- The labour force population;
- The unemployed population;
- The real gross domestic product (GDP);
- The number of earners in the previous year.

Table 23 shows the actual number of earners for the year 2010, the preliminary number of earners for the year 2011 as well as the projected number of earners for the years 2012 and 2013.

Table 23 - Projected Number of Earners (Thousands)						
Year	Labour Force Population	Unemployed Population	Real GDP	Number of Earners in Year -1	Projected Number of Earners	Increase in Number of Earners
2010	18,525	1,484	1,324,993	17,765	17,812	
2011	18,703	1,394	1,356,867	17,812	18,124	1.75%
2012	18,895	1,382	1,385,361	18,124	18,249	0.69%
2013	19,117	1,372	1,415,839	18,249	18,417	0.92%

Based on CRA information with regards to the historical number of earners across income ranges[4], the distribution of earners as a percentage of average employment income is stable from year to year. Table 24 illustrates the historical distribution of earners as a percentage of average employment income for different ranges from 2005 to 2010.

Table 24 - Historical Distribution of Earners as a % of Average Employment Income							
		Range as a % of Average Employment Income					
Year	Average Employment Income	0 - 25 %	25 - 50 %	50 - 75 %	75 - 100 %	100 - 125 %	> 125%
2005	$35,957	23.3%	14.5%	12.3%	11.7%	10.0%	28.2%
2006	$37,395	23.6%	14.5%	12.3%	11.8%	10.0%	27.8%
2007	$38,800	23.9%	14.4%	12.2%	11.9%	10.0%	27.6%
2008	$39,934	23.4%	14.3%	12.2%	12.0%	10.0%	28.0%
2009	$39,856	23.3%	14.3%	12.2%	11.8%	9.9%	28.6%
2010	$41,036	23.1%	14.4%	12.4%	11.9%	9.9%	28.4%

The 2010 distribution of the number of earners as a percentage of average employment income is used to determine the proportion of earners with employment income below and above the MIE for the years 2011 to 2013. Table 25 shows the resulting split of the number of earners between those with employment income below the MIE and those with employment income above the MIE. Actual data is also shown for the years 2005 to 2010.

[4] Over 130 income ranges, mostly in increments of $1,000.

Table 25 - Number of Earners Below and Above the MIE						
			Thousands			
Year	MIE	MIE as a Proportion of Average Employment Income	Proportion of Earners Below MIE	Total Number of Earners	Number of Earners Below MIE	Number of Earners Above MIE
2005	$39,000	1.0846	65.4%	16,858	11,029	5,830
2006	$39,000	1.0429	64.1%	17,337	11,111	6,225
2007	$40,000	1.0309	63.8%	17,779	11,344	6,435
2008	$41,100	1.0292	63.3%	17,981	11,387	6,594
2009	$42,300	1.0613	64.2%	17,765	11,410	6,354
2010	$43,200	1.0527	64.0%	17,812	11,407	6,405
2011	$44,200	1.0347	63.3%	18,124	11,466	6,658
2012	$45,900	1.0381	63.4%	18,249	11,572	6,677
2013	$47,400	1.0378	63.4%	18,417	11,676	6,741

2. Average and Total Employment Income

The projected increase in average employment income provided by Finance, combined with the increase in the projected number of earners are used to determine the total employment income for the years 2011 to 2013. Table 26 shows the derivation of the projected total employment income for the years 2011 to 2013, as well as actual data provided by CRA for the years 2005 to 2010.

Table 26 - Projected Total Employment Income						
Year	Number of Earners from CRA T4 Data (Thousands)	Increase in Number of Earners	Average Employment Income from CRA T4 Data	Increase in Average Employment Income	Increase in Total Employment Income	Total Employment Income (Thousands)
2005	16,858		$35,957			$606,171,534
2006	17,337	2.84%	$37,395	4.00%	6.95%	$648,315,598
2007	17,779	2.55%	$38,800	3.76%	6.40%	$689,820,833
2008	17,981	1.14%	$39,934	2.92%	4.10%	$718,079,146
2009	17,765	-1.20%	$39,856	-0.20%	-1.40%	$708,026,958
2010	17,812	0.27%	$41,036	2.96%	3.24%	$730,938,113
2011	N/A	1.75%	N/A	4.10%	5.92%	$774,222,441
2012	N/A	0.69%	N/A	3.50%	4.22%	$806,859,283
2013	N/A	0.92%	N/A	3.30%	4.25%	$841,136,199

Based on CRA information with regards to the historical employment income across income ranges[5], the distribution of total employment income as a percentage of average employment income is stable from year to year. Table 27 illustrates the historical distribution of total employment income as a percentage of average employment income.

[5] Over 130 income ranges, mostly in increments of $1,000.

Table 27 - Historical Distribution of Employment Income as a % of Average Employment Income							
		Range as a % of Average Employment Income					
Year	Average Employment Income	0 - 25 %	25 - 50 %	50 - 75 %	75 - 100 %	100 - 125 %	> 125%
2005	$35,957	2.4%	5.3%	7.6%	10.2%	11.2%	63.1%
2006	$37,395	2.4%	5.4%	7.6%	10.3%	11.2%	63.1%
2007	$38,800	2.4%	5.3%	7.6%	10.4%	11.2%	63.1%
2008	$39,934	2.4%	5.3%	7.6%	10.5%	11.1%	63.1%
2009	$39,856	2.4%	5.3%	7.6%	10.3%	11.0%	63.4%
2010	$41,036	2.4%	5.3%	7.7%	10.4%	11.1%	63.1%

The 2010 distribution of the total employment income as a percentage of average employment income is used to determine the proportion of employment income that relates to earners with employment income below and above the MIE for the years 2011 to 2013. Table 28 shows the total employment income split between the earners with employment income below the MIE and earners with employment income above the MIE for the years 2011 to 2013. Actual data is also shown for the years 2005 to 2010.

Table 28 - Distribution of Employment Income for Earners Below and Above the MIE						
				(Thousands)		
Year	MIE	MIE as a Proportion of Average Employment Income	Proportion of Employment Income for Earners Below MIE	Total Employment Income	Total Employment Income for Earners Below MIE	Total Employment Income for Earners Above MIE
2005	$39,000	1.0846	29.4%	$606,171,534	$178,340,467	$427,831,067
2006	$39,000	1.0429	27.7%	$648,315,598	$179,301,480	$469,014,118
2007	$40,000	1.0309	27.1%	$689,820,833	$187,259,318	$502,561,515
2008	$41,100	1.0292	27.1%	$718,079,146	$194,822,680	$523,256,465
2009	$42,300	1.0613	28.3%	$708,026,958	$200,443,495	$507,583,463
2010	$43,200	1.0527	28.2%	$730,938,113	$205,850,778	$525,087,335
2011	$44,200	1.0347	27.4%	$774,222,441	$211,837,934	$562,384,506
2012	$45,900	1.0381	27.5%	$806,859,283	$222,008,427	$584,850,856
2013	$47,400	1.0378	27.5%	$841,136,199	$231,319,478	$609,816,721

3. Total Insurable Earnings

The total insurable earnings of salaried employees are equal to the total employment income, up to the annual MIE, earned by a person employed in insured employment. They are used to determine the earnings base for salaried employees. Prior to any adjustments for employee premium refunds, the earnings base for salaried employees is equal to 2.4 times the total insurable earnings.

Historical information regarding total insurable earnings is derived from aggregate assessed EI premiums gathered from T4 slips of all salaried employees, and is provided by CRA. The insurable earnings can be calculated by dividing the gross EI premium revenues by 2.4 times the weighted-average premium rate. The gross EI premium revenues are derived by adding the following components to the net EI assessed premiums:

- Unadjusted employee premium refunds (multiple employments, insurable earnings below $2,000 and net adjustments for Quebec residents working outside of Quebec and vice-versa);
- Overage (correction to EI premiums due to employer-related administrative errors);
- Employer premium reductions for wage-loss replacement plans;
- Net adjustment payments between the Government of Canada and the Government of Quebec for Quebec residents working outside of Quebec and vice-versa;
- Other accounting adjustments.

The gross EI premium revenues represent the employee EI premiums deducted at source and the corresponding employer premium before adjusting for wage-loss replacement plans, and reflect the employee's province of work. Therefore, the annual weighted-average premium rates are calculated from the split of insurable earnings between Quebec and out-of- Quebec as reflected in the T4 data provided by CRA (i.e. on a province of employment basis, not province of residence). The derivation of insurable earnings for the years 2005 to 2010 from the CRA statement of premium revenue is shown in Table 29.

Table 29 - Derived Insurable Earnings from Assessed Premiums (Millions)

	2005	2006	2007	2008	2009	2010
Net Premiums Assessed	$17,544.1	$16,741.0	$16,877.8	$16,900.4	$16,852.8	$17,336.5
Unadjusted Employee Premium Refunds	$193.7	$214.0	$218.5	$227.5	$177.7	$191.7
Overage	$4.0	$1.6	$4.7	$4.6	$4.0	$3.4
Wage-Loss Premium Reduction	$600.3	$658.0	$722.7	$809.5	$839.4	$876.8
Net Adjustment Payments (QPIP)	$0.0	$0.0	$8.4	$8.9	$8.6	$9.2
Other Accounting Adjustments	$6.4	$0.0	$5.9	$9.7	$9.3	$7.3
Gross EI Premium Revenues	$18,348.6	$17,614.6	$17,838.0	$17,960.5	$17,891.9	$18,424.9
Distribution of Insurable Earnings (Province of Employment):						
Out-of-Quebec	77.2%	77.6%	77.8%	77.9%	77.7%	77.6%
Quebec	22.8%	22.4%	22.2%	22.1%	22.4%	22.4%
EI Premium Rate:						
Out-of-Quebec	1.95%	1.87%	1.80%	1.73%	1.73%	1.73%
Quebec	1.95%	1.53%	1.46%	1.39%	1.38%	1.36%
Weighted Average Premium Rate	1.95%	1.79%	1.72%	1.65%	1.65%	1.65%
Total Insurable Earnings	**392,063**	**409,130**	**431,024**	**452,206**	**451,329**	**466,078**

For employees with multiple employments in a year, the information is based on the combined total EI premiums. This means that although insurable earnings of each employment are capped at the MIE, the combined total insurable earnings can exceed the MIE. The adjustment to insurable earnings and the earnings base to reflect multiple employments is captured in the employee premium refund section.

The 2010 distributions of the total number of earners and total employment income as a percentage of average employment income are used to calculate the insurable earnings for the years 2011 to 2013. From these distributions, the total employment income capped at the MIE is derived. The resulting capped employment income is adjusted for consistency with total insurable earnings which take into account multiple employments as well as excluded employments. For the years 2011 to 2013, the adjustment is assumed to be 96.6%, which is based on the three year average of the ratio of insurable earnings to capped employment income from 2008 to 2010. Table 30 shows details of the calculation of the projected total insurable earnings for the years 2011 to 2013, as well as the actual data for 2005 to 2010. For 2011, the resulting insurable earnings reflect the year-to-date assessed premiums and related total expected assessed premiums for 2011.

Table 30 - Projected Total Insurable Earnings

		(Thousands)					
Year	MIE	Total Employment Income for Earners Below MIE	Number of Earners Above MIE	Total Employment Income, Capped at MIE for Earners Above MIE	Total Employment Income, Capped at MIE	Total Insurable Earnings	Increase in Total Insurable Earnings
2005	$39,000	$178,340,467	5,830	$227,354,127	$405,694,594	$392,063,418	
2006	$39,000	$179,301,480	6,225	$242,784,867	$422,086,347	$409,130,363	4.35%
2007	$40,000	$187,259,318	6,435	$257,398,480	$444,657,798	$431,023,576	5.35%
2008	$41,100	$194,822,680	6,594	$271,028,183	$465,850,864	$452,206,085	4.91%
2009	$42,300	$200,443,495	6,354	$268,788,427	$469,231,922	$451,329,062	-0.19%
2010	$43,200	$205,850,778	6,405	$276,710,864	$482,561,642	$466,078,204	3.27%
2011	$44,200	$211,837,934	6,658	$294,287,145	$506,125,079	$488,916,826	4.90%
2012	$45,900	$222,008,427	6,677	$306,462,069	$528,470,497	$510,502,500	4.41%
2013	$47,400	$231,319,478	6,741	$319,503,884	$550,823,362	$532,095,367	4.23%

4. Split of Total Insurable Earnings Due to Provincial Plan

On March 1st 2005, an agreement was reached between the Government of Canada and the Government of Quebec which gave the Government of Quebec the means to set up, starting January 1st 2006, the Quebec Parental Insurance Plan (QPIP). Under the QPIP, Quebec is responsible for maternity, paternity and adoption benefits claimed by residents of Quebec. The final agreement between the Governments of Canada and Quebec includes a financial mechanism whereby the Government of Canada reduces EI premiums paid by Quebec residents and their employers so that the Government of Quebec can collect premiums for its own program. The premium reduction reflects the savings to the EI Account realized as a result of Quebec's program, including MPA benefits that are no longer paid under EI and administrative savings. As such, the upcoming year rate must be split into two sub-components, the base rate which applies to all residents of Canada and the MPA rate which applies to all residents of Canada, except for Quebec residents.

Given that eligibility for the QPIP is based on the province of residence, for the purposes of calculating the base rate and the MPA rate, insurable earnings must be split between Quebec and all other provinces based on the province of residence. The information regarding historical insurable earnings provided by CRA (T4 basis) is based on the province of employment. Therefore, an adjustment is required to transfer insurable earnings from Quebec to the rest of Canada and vice-versa to reflect the province of residence.

Split Based on Province of Employment (T4)

Premiums are remitted by employers and employees based on province of employment, or on a T4 basis. The information regarding historical insurable earnings provided by CRA is also on a T4 basis, and is therefore based on the province of employment. Historical T4 data shows that the split of insurable earnings between Quebec and out-of- Quebec based on province of employment is stable from year to year. This is highlighted in Table 31.

Table 31 - Split of Insurable Earnings Between Quebec and the Rest of Canada, Based on Province of Employment (T4 data)

Year	Proportion of Insurable Earnings for Employment in Quebec	Proportion of Insurable Earnings for Employment Out-of-Quebec
2005	22.8%	77.2%
2006	22.4%	77.6%
2007	22.2%	77.8%
2008	22.1%	77.9%
2009	22.3%	77.7%
2010	22.4%	77.6%
2011	22.4%	77.6%

The 2011 preliminary proportions provided by CRA are used to split the 2012 and 2013 insurable earnings between Quebec and out-of- Quebec based on province of employment. Adjustments to these proportions are required to reflect the province of residence.

Split Based on Province of Residence (T1)

Despite the fact that premiums are remitted based on the province of employment, in accordance with the Canada-Quebec Agreement and for the purpose of facilitating inter-provincial mobility, when a worker's premium, as well as the related employer's premium has been collected under either the EI MPA or the QPIP, and if the person for whom the premium has been collected is not covered by the regime to which he or she has contributed because of his or her province of residence, adjustment payments between the Government of Canada and the Government of Quebec will be made as long as this person is covered under the other regime. These adjustment payments are based on information included in individual tax returns and reflect the province of residence as of December 31.

The information on historical assessed premiums provided by CRA includes the annual adjustment payments between the Government of Canada and the Government of Quebec. A split between the employee adjustment payments and the employer adjustment payments, and a split between the transfer from the Government of Canada to the Government of Quebec and vice-versa is provided. Table 32 shows the detailed adjustment payments between both parties for the calendar years 2007 to 2010 (no adjustment payments were made for 2006).

Table 32 - Historical Adjustment Payments Between the Government of Canada and the Government of Quebec to Reflect Province of Residence (Thousands)

	2007	2008	2009	2010
Adjustment Payments from Government of Canada to Government of Quebec (i.e. for Quebec residents working outside of Quebec):				
Employee Portion	$8,558	$9,844	$9,992	$10,608
Employer Portion	$11,973	$13,023	$13,326	$14,120
Total	$20,531	$22,868	$23,318	$24,727
Adjustment Payments from Government of Quebec to Government of Canada (for non-Quebec residents working in Quebec):				
Employee Portion	$6,696	$7,976	$8,654	$9,017
Employer Portion	$5,434	$5,981	$6,101	$6,505
Total	$12,129	$13,957	$14,755	$15,522
Net Adjustment Payment from Government of Canada to Government of Quebec:				
Employee Portion	$1,862	$1,868	$1,337	$1,591
Employer Portion	$6,540	$7,043	$7,225	$7,614
Total	$8,402	$8,911	$8,563	$9,205

The rules on how these adjustment payments are calculated are established in Division 4 of the *Employment Insurance Regulations* and Division 5 of *An Act Respecting Parental Insurance* (QPIP). Under these rules, the employer adjustment payment for each T4 slip of a given employee is generally equal to that employee's insurable earnings times the MPA rate times the employer's multiplier. Therefore, by using the aggregate employer adjustment payments provided by CRA and an average employer multiplier, it is possible to calculate the insurable earnings of Quebec residents working outside of Quebec and vice-versa. Given that a similar exercise is not possible using the employee adjustment payments due to different rules that apply to various individual situations, the employer adjustment payments are used to calculate the transfer of insurable earnings on a province of employment basis from Quebec to the rest of Canada and vice-versa to reflect the province of residence.

Based on historical information provided by CRA with regards to aggregate employer adjustments from 2007 to 2010, on average, insurable earnings for employees who reside in Quebec and work outside of Quebec are equal to 0.64% of total insurable earnings, and insurable earnings for employees who reside outside of Quebec and work in Quebec are equal to 0.30% of total insurable earning. The resulting net effect is that, from the split based on province of employment, an average net transfer of 0.34% of total insurable earnings from the rest of Canada to Quebec occurs to reflect the province of residence. This is outlined in Table 33.

Table 33 - Adjustment to Insurable Earnings Split to Reflect Province of Residence (Thousands)				
	2007	2008	2009	2010
Total Insurable Earnings	$431,023,576	$452,206,085	451,329,062	$466,078,204
MPA Rate	0.34%	0.34%	0.35%	0.37%
Average Employer Multiplier:				
Out-of-Quebec Employers	1.31	1.30	1.29	1.29
Quebec Employers	1.28	1.26	1.26	1.25
Employer Adjustment Payments:				
From Government of Canada to Government of Quebec	$11,973	$13,023	13,326	$14,120
From Government of Quebec to Government of Canada	$5,434	$5,981	6,101	$6,505
Estimated Transfer of Insurable Earnings to Reflect Province of Residence (Employer Adjustment Payments / (MPA rate x Average Employer Multiplier))				
From Government of Canada to Government of Quebec	$2,692,102	$2,950,744	2,941,817	$2,951,394
From Government of Quebec to Government of Canada	$1,248,849	$1,391,447	1,386,241	$1,401,982
Net Transfer (from Canada to Quebec)	$1,443,254	$1,559,297	1,555,576	$1,549,413
Estimated Transfer of Insurable Earnings to Reflect Province of Residence as a % of Total Insurable Earnings				
From Government of Canada to Government of Quebec	0.62%	0.65%	0.65%	0.63%
From Government of Quebec to Government of Canada	0.29%	0.31%	0.31%	0.30%
Net From Government of Canada to Government of Quebec	0.33%	0.34%	0.34%	0.33%

The information included in the 2010 administrative file that is exchanged between CRA and Revenu Quebec was used to validate the methodology developed to estimate the transfer of insurable earnings using aggregate data. This file includes information on all Quebec residents who work outside of Quebec and vice-versa. The actual insurable earnings of the 114,300 Quebec residents working outside of Quebec and of the 68,100 non-Quebec residents working in Quebec were almost identical to the ones calculated on an aggregate basis.

Given the stability of these percentages in the past and the low sensitivity of the MPA rate to this transfer of insurable earnings, it is assumed that the transfer of insurable earnings on a T4 basis to reflect actual province of residence for the years 2011 to 2013 will be equal to the average adjustment for the years 2007 to 2010, that is 0.34%. The resulting insurable earnings on a province of residence basis are outlined in Table 34.

Table 34 - Split of Salaried Insurable Earnings Based on Province of Residence							
	Proportion of Insurable Earnings - Province of Work (T4 Basis)		Proportion of Insurable Earnings - Province of Residence		Total Insurable Earnings - Province of Residence (Thousands)		
Year	Out-of-Quebec	Quebec	Out-of-Quebec	Quebec	Canada	Out-of-Quebec	Quebec
2011	77.62%	22.38%	77.28%	22.72%	$488,916,826	$377,834,923	$111,081,903
2012	77.62%	22.38%	77.28%	22.72%	$510,502,500	$394,516,332	$115,986,168
2013	77.62%	22.38%	77.28%	22.72%	$532,095,367	$411,203,300	$120,892,067

5. Employee Premium Refunds

In general, salaried employees contribute EI premiums on their total insurable earnings in a given tax year up to the annual MIE limit. However, when filing their tax returns, employees will receive a refund if they have exceeded the maximum contribution due to multiple employments in the same year or if their insurable earnings were below $2,000. The insurable earnings that are inherent to any subsequent premium refund must be excluded from the earnings base. The data from T4 slips that are used for projection purposes include insurable earnings for which premiums may later be refunded. Therefore, an adjustment must be made to reduce the earnings base. In addition, since the employer does not receive a refund, only the employee's portion of the total earnings base is adjusted.

The annual employee refunds provided by CRA reflect the net impact of total EI premiums paid and the employee adjustment payments between the Government of Canada and the Government of Quebec to account for employees who reside in Quebec and work outside of Quebec and vice-versa.

For example, the information provided for a resident outside of Quebec who is working in Quebec for the same employer throughout the year will include a refund equal to the difference between the premium paid to the Quebec Parental Insurance Plan (QPIP) and the premium owed for EI MPA coverage. However, the total insurable earnings should not be adjusted to reflect this refund.

Another example is the case of a Quebec resident who is working outside of Quebec and who has exceeded the maximum EI contribution due to multiple employments in the year. In this case, the refund provided by CRA is net of the QPIP premium payable. The insurable earnings base should be adjusted for the refund related to the EI overpayment rather than the EI overpayment minus the QPIP premium payable.

The refunds provided by CRA must therefore be adjusted to reflect only refunds that relate to multiple employment and insurable earnings below $2,000. They should be decreased by any refund that relates to QPIP premiums paid by out-of-Quebec residents who worked in Quebec, and increased by any QPIP premiums payable by Quebec residents who had multiple employments and worked outside of Quebec. Given that the latter is not as common, the adjusted premium refunds will be lower than the refunds provided by CRA.

The adjusted premium refunds are estimated such that the net assessed premiums shown in Table 29 remain unchanged after taking into account the split of insurable earnings based on province of residence. In the reconciliation of the net assessed premiums using the province of residence (Table 35), the net adjustment payments (QPIP) shown in Table 29 are re-allocated between two items: the gross premium revenues and the premium refunds. Consequently, Table 35 shows net adjustment payments (QPIP) of $0.

The portion of the net adjustment payments that is re-allocated to the gross premium revenues is calculated by taking the difference between the gross premiums calculated using the weighted-average premium rate on a province of residence basis and the gross premiums calculated using the weighted-average premium rate on a province of employment basis. Given that the proportion of Quebec insurable earnings is higher under the province of residence basis and that Quebec residents have a lower premium rate, the gross premium revenues on a province of residence basis are lower than those on a province of employment basis.

The portion of the net adjustment payments that has not been allocated to the change in gross premium revenues to reflect the province of residence is allocated to the premium refunds. The resulting adjusted premium refunds relate only to multiple employment and insurable earnings below $2,000 and do not reflect any other adjustments due to the province of employment being different than the province of residence.

Table 35 shows the reconciliation of the net premiums and the inherent calculation of the adjusted premium refunds for the years 2005 to 2010. By comparing this table to Table 29 for the year 2010, it can be seen that the adjustment payments of $9.2 million are reflected in Table 35 through gross premiums that are $13.7 million lower (18,424.9 – 18,411.2) and through premium refunds that are $4.5 million lower (191.7 – 187.3), with no resulting effect on the total net premium.

Table 35 - Calculation of the Adjusted Premium Refunds (Millions)

	2005	2006	2007	2008	2009	2010
Total Insurable Earnings	$392,063	$409,130	$431,024	$452,206	$451,329	$466,078
Split of Insurable Earnings (Province of Residence):						
Quebec	N/A	22.7%	22.6%	22.4%	22.7%	22.7%
Outside Quebec	N/A	77.3%	77.4%	77.6%	77.3%	77.3%
EI Premium Rate:						
Outside Quebec	1.95%	1.87%	1.80%	1.73%	1.73%	1.73%
Quebec	1.95%	1.53%	1.46%	1.39%	1.38%	1.36%
Weighted Average Premium Rate	1.9500%	1.7928%	1.7233%	1.6537%	1.6506%	1.6459%
Gross Premium Revenues	$18,348.6	$17,603.3	$17,826.4	$17,947.9	$17,879.0	$18,411.2
Adjusted Premium Refunds	**$193.7**	**$202.6**	**$215.3**	**$223.8**	**$173.4**	**$187.3**
Overage	$4.0	$1.6	$4.7	$4.6	$4.0	$3.4
Wage-Loss Premium Reduction	$600.3	$658.0	$722.7	$809.5	$839.4	$876.8
Net Adjustment Payments (QPIP)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Other Accounting Adjustments	$6.4	$0.0	$5.9	$9.7	$9.3	$7.3
Net EI Premium Revenues	$17,544.1	$16,741.0	$16,877.8	$16,900.4	$16,852.8	$17,336.5

The adjusted premium refunds divided by the average premium rate are used to estimate the total insurable earnings subject to a subsequent employee refund. Based on historical data provided by CRA, the total insurable earnings subject to a subsequent employee refund as a percentage of total insurable earnings is relatively stable from year to year. Table 36 shows that from 2005 to 2010, this percentage varied between 2.33% and 2.99%, with an average of 2.66%.

Table 36 - Total Insurable Earnings Subject to a Subsequent Premium Refund (Millions)						
	2005	2006	2007	2008	2009	2010
Total Insurable Earnings (TIE)	$392,063	$409,130	$431,024	$452,206	$451,329	$466,078
Adjusted Premium Refunds	$193.7	$202.6	$215.3	$223.8	$173.4	$187.3
Average Premium Rate	1.95%	1.79%	1.72%	1.65%	1.65%	1.65%
TIE Subject to Refund ($)	$9,935	$11,303	$12,493	$13,535	$10,507	$11,378
TIE Subject to Refund (% of TIE)	2.53%	2.76%	2.90%	2.99%	2.33%	2.44%

For 2011 to 2013, the adjustment to employee insurable earnings is based on the average over the last three years (2008 to 2010), and is equal to 2.59% of total insurable earnings.

6. Self-Employed Earnings

Pursuant to the *Fairness for the Self-Employed Act*, starting January 31, 2010, self-employed persons can enter into a voluntary agreement with the EI Commission through Service Canada to participate in the EI program, contribute EI premiums at the employee rate and have access to special benefits. Self-employed residents of Quebec will continue to receive maternity, parental and adoption benefits through the Quebec Parental Insurance Plan, however they are able to access sickness and compassionate care benefits through the EI program. As such, the earnings base used in calculating the forecast break-even rate must take into account the covered earnings of self-employed individuals who opt into the EI program.

Participants in the self-employed EI program contribute premiums on their covered earnings, (i.e. their self-employed earnings up to the annual MIE), at the employee rate which corresponds to their province of residence, and there are no employer premium contributions. Therefore, as with the insurable earnings of salaried employees, self-employed covered earnings must be split between the covered earnings of residents of Quebec and the covered earnings of residents of the rest of Canada.

The expected increase in self-employed covered earnings reflects the expected increase in the number of participants, and the expected increase in average earnings of self-employed individuals.

The most recent year for which complete data is available with regards to self-employed EI premiums and inherent covered earnings is the tax year 2010. Partially assessed premiums as of July 31, 2012 are available for the tax year 2011. Table 37 shows the derived underlying covered earnings for 2011 based on the assessed premiums as of July 31, 2012 and assuming that 90% of self-employed EI premiums have been assessed as of that date. This is consistent with the analysis of partially assessed data as of July 31, 2011 and fully assessed data for the tax year 2010.

Table 37 - 2011 Covered Earnings for Self-Employed Individuals who Opted Into the EI Program			
	Out-of-Quebec Residents	Quebec Residents	Total
2011 Self-Employed Assessed Premiums as of July 31, 2012	$1,263,449	$177,030	$1,440,479
Projected Total Self-Employed Premiums	$1,403,832	$196,700	$1,600,532
Premium Rate	1.78%	1.41%	N/A
Covered Earnings (Premium Revenue divided by Premium Rate)	$78,866,979	$13,950,355	$92,817,333

Projected Number of Participants

HRSDC tracks the number of weekly self-employed enrolments for the EI program by province and provided the available enrolment data for each week up to June 30, 2012. The enrolment data also includes adjustments for individuals who have opted out of the program in each week. Table 38 shows the net number of enrolments since 2010, with a split between Quebec and out-of- Quebec residents.

Table 38 - Self-Employed EI Enrolments as of June 30, 2012						
	Out-of-Quebec Resident		Quebec Residents		Total	
	Number of Net Enrolments	Average Net Enrolments per Week	Number of Net Enrolments	Average Net Enrolments per Week	Number of Net Enrolments	Average Net Enrolments per Week
2010 (47 Weeks)	4,443	95	1,367	29	5,810	124
First 6 Months of 2011 (26 Weeks)	1,552	60	584	22	2,136	82
Last 6 Months of 2011 (27 Weeks)	1,119	41	531	20	1,650	61
Cumulative as of December 31, 2011	7,114	71	2,482	25	9,596	96
First 6 Months of 2012 (26 Weeks)	1,122	43	328	13	1,450	56
Cumulative as of June 30, 2012	8,236	65	2,810	22	11,046	88

Although the average number of weekly enrolments has been decreasing over the last 18 months, this trend is not expected to continue. It is assumed that the number of new weekly self-employed EI enrolments will stabilize at its current level.

The average number of weekly enrolments observed in 2012, that is, 13 and 43 enrolments per week for Quebec residents and out-of-Quebec residents respectively is used to determine the total number of self-employed EI enrolments for 2012 and 2013. Using the cumulative enrolments as of June 30, 2012 and the projected enrolments, Table 39 shows the estimated number of self-employed participants for 2012 and 2013.

Table 39 - Projected Self-Employed EI Participants			
	Out-of-Quebec Residents	Quebec Residents	Total
Cumulative Participants as of June 30, 2012	8,236	2,810	11,046
Number of Weeks Remaining in 2012	26	26	26
Projected Number of Enrolments per Week	43	13	56
Projected Number of Enrolments for Remainder of 2012	1,118	338	1,456
Projected Cumulative Participants as of December 31, 2012	9,354	3,148	12,502
Number of Weeks in 2013	52	52	52
Projected Number of Enrolments per Week	43	13	56
Projected Number of Enrolments in 2013	2,236	676	2,912
Projected Cumulative Participants as of December 31, 2013	11,590	3,824	15,414

Increase in Average Earnings

Historical data on the evolution of average earnings of self-employed individuals who opted into the EI program as compared to average earnings of all self-employed individuals are not available. As such, it is assumed that the average earnings of self-employed individuals who have opted into the EI program will increase at the same pace as the average earnings of salaried employees for 2012 and 2013.

The 2011 self-employed covered earnings are calculated from assessed premiums as of July 31, 2012. The projected increase in average employment earnings, combined with the increase in the number of self-employed participants are used to determine the self-employed covered earnings for the years 2012 and 2013. It is important to note that regardless of the timing of enrolment during the year, premiums are paid on the total covered earnings in that year. Table 40 shows the projected self-employed covered earnings for Quebec residents and out-of-Quebec residents for the years 2011 to 2013.

Table 40 - Projected Covered Earnings for Self-Employed Individuals who Opted Into the EI Program (Thousands)									
	Out-of-Quebec Residents				Quebec Residents				Total - Canada
Year	Increase in Average Earnings	Increase in Number of Participants	Increase in Covered Earnings	Total Covered Earnings	Increase in Average Earnings	Increase in Number of Participants	Increase in Covered Earnings	Total Covered Earnings	Total Covered Earnings
2011				$78,867				$13,950	$92,817
2012	3.50%	31.5%	36.1%	$107,329	3.50%	26.8%	31.3%	$18,313	$125,642
2013	3.30%	23.9%	28.0%	$137,374	3.30%	21.5%	25.5%	$22,980	$160,354

7. Wage-Loss Replacement Programs

Normally, EI premium contributions paid by the employer are equal to 1.4 times the premiums deducted by the employer on behalf of the employee, referred to as the employer multiplier. However, under subsection 69(1) of the EI Act, the employer multiplier can be reduced when employees are covered under a qualified Wage-Loss Replacement ("WLR") plan, which reduces EI special benefits otherwise payable, with at least 5/12 of the reduction passed on to the employees. Section 62 of the EI Regulations prescribes the methodology to be used for determining the rates of premium reduction. As presented in Section III, for purposes of calculating the break-even rate, the estimated reduction in premiums due to WLR programs is factored into the numerator of the base rate. As such, an estimate of the 2013 premium reduction due to qualified WLR plans is required.

In order to minimize the extent of disruptions among existing private plans, the qualification criteria reflect as closely as possible the prevailing provisions of private plans. There are four categories of premium reduction, which correspond to the main types of WLR plans offered to workers. A summary of each category is shown below:

Category 1:	*Cumulative paid sick leave plans that allow for a minimum monthly accumulation of at least one day and for a maximum accumulation of at least 75 days.*
Category 2:	*Enhanced cumulative paid sick leave plans that allow for a minimum monthly accumulation of at least one day and two thirds and for a maximum accumulation of at least 125 days.*
Category 3:	*Weekly indemnity plans with a maximum benefit period of at least 15 weeks.*
Category 4:	*Weekly indemnity plans provided by certain public and parapublic employers of a province with a maximum benefit period of at least 52 weeks.*

The rates of premium reduction are based on the estimated savings to the EI program that are generated by qualified WLR plans. As it would not be practical to do this on an individual employer basis nor even possible to make the calculation for new employers or small firms, the rates of premium reduction are based on the average EI benefit savings that are generated by qualified WLR plans in each category. Since the average cost of such EI benefits will vary from one category of qualified plans to another, the average rate of savings, and thus the rate of premium reduction, must also vary between the four categories.

The rates of premium reductions are determined annually by the Chief Actuary in a separate report in accordance with the EI Act and Regulations in November of each year.

The actual employer premium reduction is based on the proportion of insurable earnings that are covered by a WLR plan and on the weighted-average reduction as a percentage of insurable earnings, which reflects the distribution of insurable earnings by category and the reduction per category.

Table 41 shows the historical reductions granted as a percentage of insurable earnings for each category. It also shows the proportion of insurable earnings that are covered by a WLR plan, the annual weighted-average reduction as a percentage of insurable earnings and the resulting employer premium reduction. For 2011, the information on the proportion of insurable earnings that are covered by a WLR plan and on the weighted-average reduction as a percentage of insurable earnings is not available yet. However, the preliminary 2011 amount of employer premium reduction provided by CRA is used to derive the combined impact of these two items.

Table 41 - Historical Wage-Loss Premium Reduction					
	2008	2009	2010	2011	2012
	WLR (% of IE)	WLR (% of IE)	WLR (% of IE)	WLR (% of IE)	WLR (% of IE)
Category 1	0.27%	0.28%	0.28%	0.27%	0.27%
Category 2	0.40%	0.41%	0.41%	0.40%	0.40%
Category 3	0.38%	0.39%	0.40%	0.39%	0.39%
Category 4	0.41%	0.42%	0.43%	0.42%	0.42%
% IE Covered by a WLR Plan	48.4%	48.6%	47.8%	N/A	N/A
Weighted-Average Reduction (% IE)	0.370%	0.383%	0.393%	N/A	N/A
Employer Premium Reduction (%IE)	0.179%	0.186%	0.188%	0.190%	N/A
Employer Premium Reduction (Thousands)	$809,481	$839,448	$876,810	$929,627	N/A

The preliminary 2011 employer premium reduction due to wage-loss replacement plans is $929,627 thousand, which is equal to 0.19% of insurable earnings. In addition, the 2012 reduction rates per category are identical to the 2011 reduction rates per category. Given the stability of these reduction rates, the 2013 reduction rates per category are assumed to be equal to the 2011 and 2012 reduction rates per category. The weighted-average reduction and the percentage of insurable earnings covered by a wage-loss replacement plan are assumed to remain unchanged in 2012 and 2013. Implicitly, this means that the distribution of insurable earnings per category and the proportion of insurable earnings that is covered by a WLR plan are assumed to remain stable. Therefore, the employer premium reduction due to WLR plans for 2012 and 2013 is expected to be equal to 0.19% of each year's projected insurable earnings.

Table 42 shows the estimated premium reduction due to qualified WLR plans for 2011 to 2013.

Table 42 - Wage-Loss Premium Reduction Estimates (Thousands)			
Year	Insurable Earnings (IE)	Premium Reduction (% of IE)	Premium Reduction
2011	$488,916,826	0.19%	$929,627
2012	$510,502,500	0.19%	$970,671
2013	$532,095,367	0.19%	$1,011,727

C. Expenditures

EI expenditures include Part I and Part II (Employment Benefits and Support Measures) benefit payments, administration costs and doubtful debts. EI benefits also include temporary spending initiatives, such as pilot-projects and special measures such as those announced in Budget 2009 as part of Canada's Economic Action Plan in response to the global economic downturn.

EI benefits paid under Part I of the EI Act, include regular benefits, which provide temporary financial assistance for unemployed persons, fishing benefits for self-employed fishers and work-sharing benefits for workers willing to work a temporarily reduced work-week to avoid lay-offs. Part I benefits also include special benefits for those who are sick, pregnant or caring for a newborn or adopted child, or caring for a seriously ill family member.

To project EI expenditures, in addition to demographic and economic forecasts, a number of assumptions are required, namely average weekly benefits, beneficiary-to-unemployed ratio and week weight. Additional information such as pilot-projects, special measures and new program changes are also required. Those three assumptions and additional information are discussed below, followed by discussions on regular, fishing, work-sharing and special benefits. Benefit repayments, part II benefits, administration costs and bad debt expenditures are also discussed in this section.

Although penalties and interest on overdue accounts receivable are considered revenues, for the purposes of the break-even rate calculation they are included as credits on the expenditures side of the equation. The assumptions underlying their projections are described at the end of this section.

1. Average Weekly Benefits

The average weekly benefits ("AWB") rate is equal to benefit payments divided by the number of benefit weeks paid for each Part I benefit type. The increase in AWB affects employment insurance expenditures directly through a corresponding increase/decrease in Part I expenditures.

Until April 6, 2013, weekly benefit payments are equal to 55% of the insurable earnings of a claimant in the last 26 weeks divided by the greater of the number of weeks worked or a minimum divisor between 14 and 22 determined by the regional unemployment rate.

Starting April 7, 2013, benefit payments are equal to 55% of the claimant's variable best weeks over the qualifying period (generally 52 weeks). The number of best weeks taken into account is determined by the regional unemployment rate and varies from 14 to 22 insurable earnings weeks. The maximum amount payable is determined by the MIE. For 2013, the maximum weekly benefit is 55% of the $47,400 annual MIE divided by 52, or $501.

The increase in expected AWB following the change in benefits calculation (Variable Best Weeks) is reflected separately in the total expected benefits and was provided by HRSDC. As such, the AWB methodology is not affected by the Variable Best Weeks.

The AWB is determined by the sum of the change in the MIE and the average weekly earnings, weighted by the proportion of claimants with insurable earnings above and below the annual MIE and the prior year AWB for claimants with insurable earnings above and below the annual MIE.

$$\mathbf{AWB_T = AWB_{above(T-1)} \times (\%_{above(T)}) \times \frac{MIE_T}{MIE_{T-1}} + AWB_{below(T-1)} \times (\%_{below(T)}) \times \frac{AWE_T}{AWE_{T-1}}}$$

$$\mathbf{AWB_{growth} = AWB_T / AWB_{T-1} - 1}$$

Where: AWB = average weekly benefits;
AWB_{above} = AWB for claimants with insurable earnings above the MIE;
AWB_{below} = AWB for claimants with insurable earnings below the MIE;
MIE = maximum insurable earnings;
AWE = average weekly earnings;
$\%_{above}$ = percentage of claimants with insurable earnings above the MIE; and
$\%_{below}$ = percentage of claimants with insurable earnings below the MIE.

The percentage of claimants with earnings above the annual MIE is based on the distribution of claimants by earnings range provided by HRSDC. From July 1996 to the end of 2006, the MIE was constant at $39,000 and the proportion of claimants with earnings above the MIE increased from below 25% to 40% in 2006. This increase was mainly due to the increase in earnings combined with the constant MIE.

Since 2007, the MIE is increasing in line with the average weekly earnings. The proportion of regular claimants with earnings above the MIE has been rising, except for a significant reduction in 2010. According to the 2011 Monitoring and Assessment Report produced by the Canada Employment Insurance Commission, this decrease is mainly due to two factors: first, a decrease in the average insurable hours of regular claimants and second, a higher proportion of first-time regular benefits claimants which tend to have lower average weekly regular benefits than frequent claimants.

The proportion of claimants with earnings above the MIE is assumed to return linearly to its pre-recession average (2007 and 2008) by 2015.

Table 43 - Percentage of Claims above the MIE	
Year	**% Above MIE**
2007	41.6%
2008	43.3%
2009	44.0%
2010	40.1%
2011	40.5%
Average 2007-2008	**42.5%**
2012	41.0%
2013	41.5%

The proportion of claimants with earnings above the MIE in 2012 and 2013 is assumed to be 41.0% and 41.5% respectively.

The 2011 AWB for claimants with insurable earnings above and below the MIE was $467.50 and $275.43, respectively.

Based on the growth in average weekly earnings and the MIE, and on the proportion of claimants with earnings above the MIE, the annual average weekly benefit growth rates for all benefit types are forecasted at 3.5% and 3.2% for 2012 and 2013, respectively.

Table 44 - Average Weekly Benefit Growth Factors			
	Actual 2011	**Forecast 2012**	**Forecast 2013**
Average Weekly Earnings	$874.50	$896.25	$917.75
% Change	2.5%	2.5%	2.4%
MIE	$44,200	$45,900	$47,400
% Change	2.3%	3.8%	3.3%
Proportion Above MIE	40.5%	41.0%	41.5%
Proportion Below MIE	59.5%	59.0%	58.5%
AWB Growth	**2.6%**	**3.5%**	**3.2%**

2. Beneficiary-to-Unemployed Ratio

Beneficiaries, as reported by Statistics Canada, refers to the number of active regular claimants in a given month who received EI benefits during the reference week of the labour force survey, usually the week containing the 15th day of the month. The beneficiary-to-unemployed ("B/U") ratio represents the proportion of unemployed persons in a given period who are receiving EI regular benefits.

For the purposes of forecasting regular benefit payments, historical B/U ratios are calculated based on the number of beneficiaries and the number of unemployed as reported by Statistics Canada by age group and gender for the 1998-2011 period.

In general, younger age-groups have lower B/U ratios than older age-groups. Similarly, women of all ages have lower B/U ratios than men. In addition, the proportion of older workers in the labour force is slowly increasing, creating upward pressure on the overall B/U ratio.

From 1998 to 2008, B/U ratios were fairly stable, fluctuating between 45.8% and 48.4% over the 11-year period. The downturn that occurred at the end of 2008 had a direct impact on the overall B/U ratio which increased by 5 percentage points from 2008 to 2009. This increase is mainly attributable to the following factors[6]:

- There was a significant change in the composition of the unemployed population that led to an increase in eligibility rates and overall access to the EI program. The number of valid job separations, increased due to layoffs and the number of unemployed who quit their job without just cause decreased, leading to an increase in the proportion of unemployed with enough hours to access EI benefits.
- The automatic responsiveness of the EI program through the variable entrance requirement, based on the regional unemployment rate, reduced eligibility requirements for most EI economic regions.

The overall B/U ratio decreased slightly in 2010 mainly due to a partial return of the composition of the unemployed population to pre-recession level[7]. The B/U ratios would have been even lower in 2010 if not for special measures introduced by the Government.

In 2011, the overall B/U ratio decreased significantly most likely due to the phasing out of special measures, the automatic responsiveness of the EI program to lower unemployment rates, and the continued change in the composition of the unemployed population. A further explanation for the decrease in the B/U ratio is the difficulty re-qualifying for EI benefits during a period of modest economic growth for individuals that received benefits in 2009 or 2010.

For 2012, actual data for the first three months of the year show a continued decline in the B/U ratios. However, as the ratios are already much lower than during pre-recession years and since no significant changes to the program affecting the B/U ratio have occurred, it is assumed that the decline in the B/U ratios will stop and that, starting with the remaining nine months of 2012, the B/U ratio for each age-group and gender will revert back to its pre-recession mean over two and a half years.

As show in table 45, to determine the overall B/U ratio for 2012 and 2013, the assumed B/U ratios for each age-group are then combined with the projected population of unemployed to determine the resulting B/U ratios for "All ages" groups (italic numbers). The effect of the aging of the labour force will eventually yield to B/U ratios for "All ages" groups higher than the pre-recession average.

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[6] Monitoring and Assessment Report 2010
[7] Monitoring and Assessment Report 2011

Table 45 - Historical and Projected Beneficiary-to-Unemployed Ratio (Regular Benefits)									
	Both sexes	Males				Females			
Calendar Year	All ages	All ages	Under 25 years	25 to 54 years	55 and over	All ages	Under 25 years	25 to 54 years	55 and over
2004	46.0%	49.6%	21.9%	62.1%	65.9%	41.6%	12.8%	53.0%	57.7%
2005	46.3%	50.0%	22.2%	61.5%	71.5%	41.7%	12.9%	52.0%	59.1%
2006	46.9%	51.6%	22.7%	63.8%	69.2%	41.2%	11.6%	52.8%	58.2%
2007	46.7%	50.4%	22.2%	61.4%	70.4%	42.0%	10.8%	55.0%	58.8%
2008	45.8%	49.3%	20.5%	61.4%	68.2%	41.3%	10.2%	54.2%	56.8%
2009	50.8%	54.3%	25.1%	65.8%	69.7%	45.5%	13.1%	57.5%	64.0%
2010	48.4%	51.8%	22.4%	62.5%	70.0%	43.8%	12.5%	53.1%	68.5%
2011	43.6%	47.7%	20.2%	58.3%	63.9%	38.6%	10.4%	47.9%	56.5%
Average 2004-2008	**46.4%**	**50.2%**	**21.9%**	**62.0%**	**69.1%**	**41.6%**	**11.6%**	**53.4%**	**58.1%**
2012	*43.0%*	*47.0%*	20.1%	56.5%	63.3%	*37.9%*	10.3%	47.3%	52.1%
2013	*45.7%*	*49.5%*	21.2%	59.5%	66.5%	*41.0%*	11.3%	51.1%	56.1%

The expected aggregate B/U ratios for years 2012 and 2013 are 43.0% and 45.7% respectively.

3. Week Weight

EI expenditures are reported in the EI Operating Account on an accrual basis, that is, they are recorded in the period for which they should have been paid, without regards to the delay in processing the payment. For example, if a claimant is eligible to receive benefits starting the first week of December 2011, but receives his first benefit payment only in February 2012, the portion of the benefits that relates to December will be recorded in the EI Operating Account for the year 2011.

Furthermore, EI benefits are paid on a weekly basis, but only weekdays that belong to a particular period are reported in that period. For example, December 31, 2012 is a Monday and for every benefit week that should have been paid for the week of December 31, 2012, one day will be reported in calendar year 2012 and four will be reported in calendar year 2013.

The week weight affects Part I expenditures as benefits are payable for every weekday of the year, regardless of Holidays. The number of workdays in a year ranges from 260 days to 262 days. Therefore, to enhance the accuracy of EI benefit projections, an adjustment to projected benefits is included to reflect the number of days benefits are paid in any year. The number of workdays for years 2011, 2012 and 2013 are 260, 261 and 261 respectively. The week weight for years 2011, 2012 and 2013 is therefore 52.0, 52.2 and 52.2 respectively.

4. Pilot-Projects, Special Measures and New Program Changes

EI pilot projects allow the Government to test whether possible changes to the EI program would make it more consistent with "current industry employment practices, trends or patterns or would improve service to the public".

Three pilot-projects will have a spending impact in 2013:

- The Extended EI Benefits pilot-project, introduced in September 2010 for 21 EI economic regions, provides claimants with five additional weeks of EI regular benefits, up to a 45-week maximum. This pilot project will run until September 15, 2012 or will conclude earlier in regions where the unemployment rate is less than 8% for 12 consecutive periods. Based on this condition, the pilot-project ended in the EI economic region of St. John's, Chicoutimi – Jonquière and Sudbury, but remains in place for 18 EI economic regions.
- The pilot project that calculates benefits based on the best 14 weeks of insurable earnings was extended to April 6, 2013, for 25 economic regions.
- A new national three-year Working While on Claim pilot project was announced in Budget 2012 by the Government of Canada. Under this new pilot project, which came into effect on August 5, 2012, claimants are able to keep 50 cents of every dollar earned while on claim, up to a maximum of 90% of the weekly insurable earnings used in the calculation of the EI benefit amount.

The remaining costs of a few other special measures and pilot projects that terminated before 2013 are included in the projection of the 2012 expenditures. In addition, the temporary Hiring credit for Small Business that was announced in Budget 2011 has been extended by one year; providing a credit of up to $1,000 against a small employer's increase in its 2012 EI premiums over those paid in 2011. For the purpose of this report, the costs related to this temporary hiring credit are considered as a reduction to the 2012 revenues.

The Government also announced in Budget 2012 two new permanent changes to the EI program:

- A new approach to the way in which EI benefits are to be calculated effective April 7, 2013, the variable best weeks. Under the variable best weeks, EI benefits will be calculated based on the highest weeks of insurable earnings during the qualifying period, generally 52 weeks. The number of weeks used for calculating benefit rates will range from 14 to 22, depending on the unemployment rate in the claimant's EI economic region. It is estimated that additional program costs of $87 million will be incurred in 2013. Of the $87 million, 7% is assumed to be for increase in MPA benefits, the remaining 93% is included in regular benefits.

- The Connecting Canadians to Available Jobs initiative involves an investment to better connect unemployed Canadians with jobs that match their skills and are in their local area. The associated changes to the EI program are intended to better encourage and support Canadians to find work. Enhanced definitions of what constitutes a reasonable job search and suitable employment are expected to come into force in early 2013 and will apply to Canadians receiving EI regular and fishing benefits and not to individuals receiving EI special benefits (sickness, MPA and compassionate care benefits). It is estimated that additional program savings of $33 million will be realized in 2013.

5. Regular Benefits

EI regular benefits provide temporary income-support to eligible insured persons who have lost their jobs through no fault of their own, such as due to shortage of work, or seasonal or mass lay-offs, and are available to work.

Regular benefit payments are equal to the average weekly benefits rate multiplied by the number of weeks paid, as determined by the beneficiary-to-unemployed ratio multiplied by the week weight and the number of unemployed.

$$\textbf{Regular Benefits} = \underbrace{\mathbf{B/U} \;\mathbf{x}\; \mathbf{WW} \;\mathbf{x}\; \mathbf{UN}}_{\text{Number of weeks paid}} \;\mathbf{x}\; \underbrace{\mathbf{AWB}}_{\text{Average weekly benefits rate}}$$

Where: B/U = beneficiary-to-unemployed ratio;
WW = week weight;
UN = number of unemployed; and
AWB = average weekly benefits.

For projection purposes, the above formula is modified such that the increase in each variable is applied to the previous year's EI regular benefits paid. As the actual regular benefit expenditures in the base-year include expenditures attributed to pilot-projects and special measures, they are first subtracted before the growth factors are applied.

The base year on which the projected growth factors are applied is 2011, that is, the latest year of known actual regular EI income benefits. Regular benefits are therefore projected as follows, starting from the base year.

$$\text{Regular Benefits}_T = \underbrace{\frac{UR_T}{UR_{T-1}} \times \frac{LF_T}{LF_{T-1}}}_{\text{Yearly growth in unemployed, that is, in potential claimants}} \times \underbrace{\frac{WW_T}{WW_{T-1}} \times \frac{AWB_T}{AWB_{T-1}}}_{\text{Yearly growth in average benefits}} \times \underbrace{\frac{B/U_T}{B/U_{T-1}}}_{\text{Yearly growth in the ratio of unemployed receiving benefits}} \times \text{Regular Benefits}_{T-1}$$

Where: UR = unemployment rate;
LF = labour force;
WW = week weight;
AWB = average weekly benefits; and
B/U = beneficiary-to-unemployed ratio.

Pilot-projects, special measures and the impact of new permanent changes to the EI program (e.g. variable best weeks) are then added to the regular benefits projection as shown in table 46.

Table 46 - Regular Benefits (Millions)			
	Actual 2011	Forecast 2012	Forecast 2013
Regular Benefits (Base)	$10,414	$10,581	$11,516
Pilot-Projects/Transitional Measures	$561	$523	$289
Special Measures	$639	$12	$0
Connecting Canadians with Available Jobs	$0	$0	($33)
Variable Best Weeks	$0	$0	$81
Total Regular Benefits	**$11,614**	**$11,116**	**$11,853**

6. Fishing Benefits

As with regular benefits, fishing benefits are equal to the number of benefit weeks multiplied by the average weekly benefits rate. Fishing benefits can be projected from the base-year using the expected change in the number of benefit weeks and average weekly benefits. However, as the number of fishing claimants and the average duration of fishing claims are relatively stable, only the expected change in average weekly benefits is used in forecasting fishing benefits.

$$FB_T = \underbrace{(WW_T/WW_{T-1}) \times (AWB_T/AWB_{T-1})}_{\text{Yearly increase in average benefits}} \times \underbrace{FB_{T-1}}_{\text{Prior year's benefits}}$$

Where: FB = fishing benefits;
WW = week weight; and
AWB = average weekly benefits.

Table 47 - Fishing Benefits (Millions)			
	Actual 2011	Forecast 2012	Forecast 2013
Total Fishing Benefits	**$264**	**$274**	**$283**

7. Work-Sharing Benefits

To avoid temporary lay-offs due to a reduction in the normal level of business activity caused by factors that are beyond the control of the employer, employers and employees can enter into a work-sharing agreement with the EI Commission through Service Canada to provide EI income benefits to eligible workers willing to work a temporarily reduced work-week. This enables employers to retain staff and adjust their work activity during temporary work shortages, as well as avoid the expenses of hiring and training new staff once business levels return to normal. Employees are able to retain their skills and jobs while receiving EI benefits for the days that they do not work.

Due to the economic downturn resulting in a greater demand for work-sharing agreements, as well as temporary measures lowering eligibility criteria for new agreements and extending duration, work-sharing benefit expenditures increased significantly in 2009 from 2008. As the Canadian economy recovered, benefits began to decline in 2010.

Work-sharing benefits for 2012 and 2013 are projected using the 2011 base work-sharing expenditures, multiplied by the expected change in the population of potential claimants and the average weekly benefits rate.

$$\mathbf{WSB_T} = \underbrace{\mathbf{(PW_T/PW_{T-1})}}_{\text{Change in population of potential claimants}} \ \mathbf{x}\ \underbrace{\mathbf{(WW_T/WW_{T-1})\ x\ (AWB_T/AWB_{T-1})}}_{\text{Yearly increase in average benefits}} \ \mathbf{x}\ \underbrace{\mathbf{WSB_{T-1}}}_{\text{Prior year's benefits}}$$

Where: WSB = work-sharing benefits;
PW = paid workers;
WW = week weight; and
AWB = average weekly benefits.

The 2012 forecast is based on 2011 base work-sharing expenditures projected to 2012, and the estimated costs of the special measures, as provided by HRSDC.

Table 48 - Work-Sharing Benefits (Millions)			
	Actual 2011	Forecast 2012	Forecast 2013
Work-Sharing Benefits (Base)	$22	$23	$25
Special Measures	$19	$6	$0
Total Work-Sharing Benefits	**$41**	**$29**	**$25**

8. Special Benefits

Special benefits include MPA benefits, for those who are pregnant or caring for a newborn or adopted child, sickness benefits for those who are unable to work due to sickness, injury or quarantine, and compassionate care benefits for those who take a temporary leave from work to give care or support to a family member who is gravely ill at risk of dying within 26 weeks.

Salaried

Special benefits for salaried employees are forecasted using the expected change in the population of potential claimants and in the average weekly benefits applied to year 2011.

$$SB_T = \underbrace{(PW_T/PW_{T-1})}_{\text{Change in population of potential claimants}} \times \underbrace{(WW_T/WW_{T-1}) \times (AWB_T/AWB_{T-1})}_{\text{Yearly increase in average benefits}} \times \underbrace{SB_{T-1}}_{\text{Prior year's benefits}}$$

Where: SB = special benefits;
PW = paid workers;
WW = week weight; and
AWB = average weekly benefits.

Self-employed

Starting January 31, 2010, self-employed persons can enter into a voluntary agreement with the EI Commission through Service Canada to participate in the EI program. Those who registered before April 1, 2010 can make a claim for benefits as early as January 1, 2011, otherwise they are required to register at least one year prior to claiming benefits.

The expected overall cost of total self-employed special benefits for 2012 and 2013 was provided by HRSDC on July 31, 2012. The split between MPA, Sickness and Compassionate benefits is required for purposes of the calculation of the MPA rate.

HRSDC reported expected total payments of $8 million in 2012 and $11 million in 2013. Self-employed benefits are known only for year 2011. As such, the split between MPA, sickness and compassionate care benefits for years 2012 and 2013 is assumed to be the same as for year 2011.

Based on the above, it is expected that in 2013 an additional $10.2 million will be paid in MPA benefits, $0.8 million in sickness benefits and $6 thousands in compassionate care benefits due to self-employed participants who enrolled in the EI program.

Table 49 - Special Benefits			
	Actual	Forecast	Forecast
	2011	2012	2013
Salaried Employees (Millions)			
MPA Benefits	$3,131	$3,297	$3,449
Sickness Benefits	$1,099	$1,157	$1,209
Compassionate Care Benefits	$11	$12	$12
Self-Employed (Thousands)			
MPA Benefits	$4,646	$7,405	$10,182
Sickness Benefits	$371	$591	$812
Compassionate Care Benefits	$3	$4	$6
Sub-total	$5,019	$8,000	$11,000
Total (Millions)			
MPA Benefits	$3,135	$3,304	$3,459
Sickness Benefits	$1,099	$1,158	$1,209
Compassionate Care Benefits	$11	$12	$12
Total Special Benefits	**$4,246**	**$4,474**	**$4,680**

Forecast benefits for 2013 include the expected increase in benefits due to changes related to the variable best weeks.

9. Benefit Repayments

Benefit repayments, as reported in the EI Operating Account, include an estimate for the current tax-year, based on regular and fishing benefit payments, and a reconciliation between actual and estimated benefit repayments for the previous tax-year.

The estimate for the forecast 2012 prior-year actual is based on the actual first 7 months of benefit repayments and the historical average completion ratio after 7 months. The current year forecast is projected from the prior year based on the expected increase/decrease in regular and fishing benefits.

Table 50 - EI Benefit Repayments (Millions)			
	Actual	Forecast	Forecast
	2011	2012	2013
Prior-Year Actual	$217	$218	$209
Prior-Year Forecast	($227)	($253)	($209)
Sub-Total (Adjustment)	($10)	($35)	$0
Current-Year Forecast	$253	$209	$223
BNOP Repayment	($5)	($5)	($5)
Total	**$238**	**$170**	**$218**

10. EI Part II Benefits

The programs delivered under Part II of the EI Act are called Employment Benefits and Support Measures (EBSM). The expected annual estimates for EBSM are provided by HRSDC on a fiscal-year basis and included in the calendar-year expenditures for 2013 based on 25% of the current fiscal-year (2012-2013) and 75% of the next fiscal-year (2013-2014).

Table 51 - Employment Benefits and Support Measures (Millions)			
	Actual 2011-2012	Forecast 2012-2013	Forecast 2013-2014
EBSM (Fiscal-Year)	$2,082	$2,116	$2,086
	Actual 2011	Forecast 2012	Forecast 2013
EBSM (Calendar-Year)	**$2,243**	**$2,107**	**$2,093**

11. Administration Costs

As with Part II benefits, the expected annual estimates for EI administration costs are provided by HRSDC on a fiscal-year basis and included in the calendar-year expenditures for 2013 based on 25% of the current fiscal-year (2012-2013) and 75% of the next fiscal-year (2013-2014).

Table 52 - Administration Costs (Millions)			
	Actual 2011-2012	Forecast 2012-2013	Forecast 2013-2014
Administration Costs (Fiscal-Year)	$1,907	$1,803	$1,703
	Actual 2011	Forecast 2012	Forecast 2013
Administration Costs (Calendar-Year)	**$1,990**	**$1,829**	**$1,728**

As mentioned previously, the calculation of the MPA reduction related to the savings to the EI program due to the Quebec Parental Insurance Plan includes the variable administration costs (“VAC”). The VAC represents the direct operating costs incurred by the EI program associated with the administration of MPA benefits outside Quebec.

These costs represent the savings to Canada if it ceased to provide EI MPA benefits. The responsibility of determining the VAC each year lies with HRSDC. It should be noted that under the Canada-Quebec Final Agreement, Canada provided assurance that the VAC multiplied by the ratio of the insurable earnings in Quebec to the insurable earnings outside Quebec would not be less than $5 million. The 2012 and 2013 VAC are projected from actual costs incurred in 2011 as a constant percentage of MPA benefits and, when applicable, increased to reflect the minimum under the Canada-Quebec Final Agreement.

Table 53 - Variable Administrative Costs (Millions)			
	Actual 2011	Forecast 2012	Forecast 2013
Variable Administration Costs	**$17**	**$17**	**$17**

12. Bad Debt

Bad debt expense relates to overpayments and penalties owed and are equal to the amount written off during the year and the change in the annual allowance for doubtful debts. The allowance is calculated on the outstanding balance in the accounts at the end of the fiscal-year and is based on the collection policy, the age of the accounts and the amounts written off.

The calendar-year bad debt expense included in the closing balance of the EI Operating Account as of December 31, 2011 was equal to 25% of the 2010-2011 expense and 75% of the 2011-2012 expense.

The bad debt allowance and the write-offs are forecasted from the base year using a moving-average based on a seven-year economic cycle.

Table 54 - Bad Debt Expense (Millions)			
	Actual 2011-2012	Forecast 2012-2013	Forecast 2013-2014
Allowance for Doubtful Accounts (Prior Year)	$372	$432	$437
Write-Offs	($62)	($62)	($58)
Net Allowance (Prior Year)	$309	$370	$379
Allowance for Doubtful Accounts (Current Year)	$432	$437	$447
Net Allowance (Prior Year)	($309)	($370)	($379)
Bad Debt Expense (Fiscal-Year)	$123	$67	$68
	Actual 2011	Forecast 2012	Forecast 2013
Bad Debt Expense (Calendar-Year)	**$103**	**$81**	**$68**

13. Penalties

The Commission may impose a penalty on a claimant, any person acting on behalf of a claimant or an employer under sections 38 and 39 of the EI Act should it become aware that they knowingly provided false or misleading information.

Penalties are correlated with benefit overpayments and are forecasted from the base year using the expected annual change in Part I benefits.

Table 55 - Penalties (Millions)			
	Actual 2011	Forecast 2012	Forecast 2013
Penalties	**$52**	**$51**	**$54**

14. Interest

Interest is charged on outstanding EI debts caused through misrepresentation. This includes overpayments and penalties. The rate of interest charged to EI claimants, employers or third parties on outstanding debts is equal to 3% above the average Bank of Canada discount rate from the previous month, calculated daily and compounded monthly[8].

On July 17, 2012, the Bank of Canada announced that it would maintain the target for the overnight rate at 1.00%. The corresponding discount rate is 1.25%. The Bank of Canada has maintained the rate at this level since September 8, 2010.

The forecasted interest rate to be charged on overdue accounts receivable is based on a consensus of the expectations of private forecasters on the Bank of Canada's key interest-rate policy decisions to be made between now and the end of 2013. The consensus of private forecasters is that the Bank of Canada will hold off on any rate increase until late 2013 or early 2014.

As the interest earned is correlated to the amount of outstanding benefit overpayments, it is forecasted from the base year using the expected annual change in Part I benefits and the 12-month average of the interest rate.

Table 56 - Interest on Overdue Accounts Receivable (Millions)

	Actual 2011	Forecast 2012	Forecast 2013
Average Interest Rate	4.25%	4.25%	4.50%
Interest	**$11**	**$11**	**$12**

[8] Interest rates can be found at http://www.tpsgc-pwgsc.gc.ca/recgen/txt/71-eng.html