



Office of the Superintendent of  
Financial Institutions Canada

Bureau du surintendant des  
institutions financières Canada

Office of the Chief Actuary

Bureau de l'actuaire en chef



# ACTUARIAL REPORT

on the  
**CANADA  
STUDENT  
LOANS  
PROGRAM**

as at 31 July 2014

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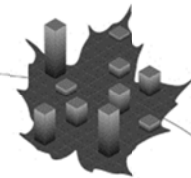
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The Honourable Pierre Poilievre, P.C., M.P.  
Minister of Employment and Social Development  
House of Commons  
Ottawa, Canada  
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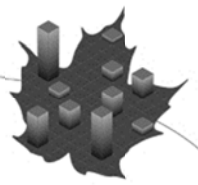
Dear Minister:

In accordance with section 19.1 of the *Canada Student Financial Assistance Act*, which provides that a report shall be prepared on financial assistance provided under this Act, I am pleased to submit the Actuarial Report on the Canada Student Loans Program, prepared as at 31 July 2014.

Yours sincerely,

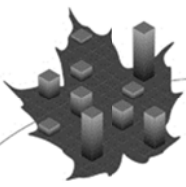
Jean-Claude Ménard, F.S.A., F.C.I.A.  
Chief Actuary  
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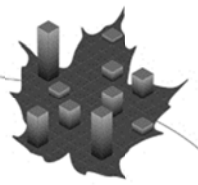


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## **I. Executive Summary**

Effective 1 August 2000, the Government redesigned the delivery of the Canada Student Loans Program (CSLP) from one delivered by chartered banks to one directly financed by the Government. As part of this redesign, the Office of the Chief Actuary was given the mandate to conduct an actuarial review to provide a precise assessment of the current costs of the CSLP, a long-term (25 years) forecast of these costs, as well as a portfolio projection. The results are presented on a loan year basis from 1 August to 31 July.

### **A. Purpose of the Report**

Section 19.1 of the *Canada Student Financial Assistance Act* provides that the Chief Actuary of the Office of the Superintendent of Financial Institutions shall prepare a report on the financial assistance provided under this Act no later than three years apart. This is the fifth statutory actuarial report on the CSLP, prepared as at 31 July 2014. As provided in subsection 19.1(3), the report includes a forecast of the costs and revenues of the Program for the next 25 years (through loan year 2038-39). The purpose of the actuarial review of the CSLP is to provide an evaluation of the Program's overall financial costs and increase the level of information provided to the Minister of Employment and Social Development (ESDC), Parliament and the public.

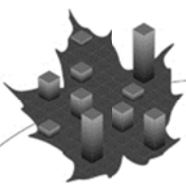
This actuarial report shows estimates of:

- projections of the number of students receiving a loan under the CSLP and the amount of new loans issued;
- projections of the portfolio of loans in-study, loans in repayment and loans in default;
- projections of the allowances under the direct loan regime in effect since August 2000; and
- projections of revenues and expenses by type of regime and the resulting net cost.

### **B. Scope of the Report**

This valuation report is based on the Program provisions as described in Appendix 1. After a short discussion of the best-estimate assumptions in section A of the Main Report, section B presents projections of new loans issued, the number of students eligible to receive a loan, and the average amount of new loans issued. Section C includes projections of the portfolio by type of regime. Section D contains projections for the operation of the Program, such as revenues and expenses for all three regimes. These are followed by a conclusion of the actuarial review and the actuarial opinion regarding this review.

The various appendices provide supplemental information on Program provisions and data used, a reconciliation of the portfolio, a description of assumptions and methods employed as well as the results of the sensitivity tests conducted.

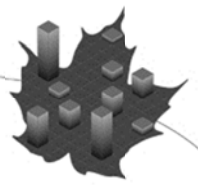


### C. Main Findings

The following summarizes the main findings of this actuarial report. The results are presented on a loan year basis from 1 August to 31 July. Comparisons with the previous report refer to the previous statutory report, prepared as at 31 July 2011.

- In 2013-14, \$2,721 million in new loans were issued to 498,000 students. New loans issued are projected to increase to \$2,735 million in 2014-15 and to reach \$4,682 million at the end of the projection period in 2038-39.
- In 2013-14, \$715 million in grants were disbursed to 367,000 students under the Canada Student Grants Program (CSGP). The amount of grants is projected to increase to \$720 million in 2014-15 and to reach \$1,029 million in 2038-39.
- The direct loan portfolio increases from \$16.1 billion as at 31 July 2014 to \$31.8 billion by the end of the projection period. The \$19 billion limit on the aggregate amount of outstanding loans was projected to be reached in the first half of the 2016-17 loan year. However, in May 2015, the limit was increased to \$24 billion.
- The total net cost (expenses less revenues) of the Government's involvement in the CSLP is expected to grow from \$1.2 billion in 2013-14 to \$2.8 billion in 2038-39. This represents an average annual increase of 3.4%. Grants disbursed in 2013-14 represent 58% of the Program's net cost.
- Recent experience shows lower defaults and higher recoveries than expected. Consequently, the future default rate, net of recoveries, decreases from 11.8% of consolidations in the previous report to 10.2%.
- Three allowances are accounted for to cover the future risk of loss associated with the Program:
  - The allowance for bad debt – principal covers the risk of future default, net of recoveries. It corresponds to \$2,739 million as at 31 July 2014, which is lower than the \$3,063 million projected in the previous report.
  - The allowance for bad debt – interest covers the risk that the interest accrued on defaulted loans will never be recovered. It corresponds to \$228 million as at 31 July 2014, which is lower than the \$247 million projected in the previous report.
  - The allowance for the Repayment Assistant Plan (RAP) – principal recognizes that part of the loan principal of borrowers benefiting from RAP-Stage 2 and RAP-PD will be paid by the Government. It corresponds to \$636 million as at 31 July 2014, which is lower than the \$700 million projected in the previous report.
  - Overall, there is a reduction of around \$410 million for the three allowances as at 31 July 2014 compared with the projections in the previous report.





## II. Main Report

The Canada Student Loans Program (CSLP) has been in effect since 1964 and provides Canadians with financial assistance to pursue a post-secondary education. On 1 August 2000, the Government redesigned the delivery of the Program to disburse loans directly to students. The Office of the Chief Actuary was given the mandate to provide an assessment of the current costs of the CSLP, a long-term (25 years) forecast of these costs, and a portfolio projection. The results are presented on a loan year basis from 1 August to 31 July.

Section A of the report provides a brief discussion of assumptions that reflect the actuary's best judgement; these assumptions are referred to in this report as the "best-estimate" assumptions.

The projection of loans issued to eligible students for each loan year is presented in section B. This includes a projection of the population in order to determine the future number of students enrolled in post-secondary education and thus eligible to qualify for a loan under the CSLP. A long-term demographic and economic context of the aging of the population and the anticipated labour shortage serve as a basis for the examination of key factors that affect eligibility. Such factors include the evolution of the projected student population, the participation of youth in the labour force and the enrolment rate in post-secondary institutions.

The projection of the loan portfolio for each regime (guaranteed, risk-shared, and direct) is provided in section C and the forecast of the CSLP's net cost is presented in section D. The government has been incurring higher public debt charges since the implementation of the direct loan arrangement. The costs related to direct loans include the interest subsidy on in-study loans, the interest relief from the Repayment Assistance Plan (RAP), the provisions for RAP (principal) and bad debt (principal and interest), the Canada Student Grants Program (CSGP), the alternative payments, loan forgiveness and administrative expenses. The costs are reduced by an estimate of the net interest revenues coming from student interest payments, RAP interest payments and the net interest accrued during the grace period and on defaulted loans.

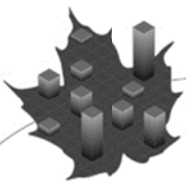
The actuarial estimates in this report are based on the current provisions of the Program as described in Appendix 1. The other appendices contain detailed descriptions of the data, assumptions, methodology, and sensitivity tests conducted. These tests examine the impact of changes in assumptions such as the loan ceiling, interest rates and net default rates.

### A. Best-estimate Assumptions

Several economic and demographic assumptions are needed to determine future long term costs of the CSLP. The projections included in this report cover a period of 25 years and the assumptions are determined by putting as much emphasis on historical trends as on short-term experience. These assumptions reflect the actuary's best judgement and are referred to as "best-estimate" assumptions. Some of these assumptions are based on the most recent actuarial reports prepared by the Office of the Chief Actuary, adjusted to reflect loan year periods and current economic and demographic experience. The assumptions were chosen to form a coherent whole, taking into account certain interrelationships between them. The following sections present the assumptions used as well as their future evolution.

#### 1. Demographic Assumptions

Demographic projections are based on the population projected in the 26<sup>th</sup> Actuarial Report on the Canada Pension Plan as at 31 December 2012. More specifically, it starts with the Canadian and Québec populations on 1 July 2012, to which future fertility, mortality and migration



assumptions are applied. The population of Canada is adjusted to exclude the non-participating province of Québec as well as the Northwest Territories and Nunavut. The CPP population projections are essential in determining the future number of students expected to pursue a post-secondary education.

## 2. Economic Assumptions

The main economic assumptions related to the CSLP are the evolution of the labour force, inflation, tuition fees, wage increases, as well as the cost of borrowing for both students and the Government.

### *Evolution of the Labour Force*

The “baby-boom” generation has and continues to exert a major influence on various aspects of society. It represents the large cohort born between the mid-1940s and the mid-1960s. This generation has exerted the strongest single influence on Canadian demographics over the last several decades. The aging of this generation will have significant influences over the next 25 years, such as slowing down the natural population growth and changing the composition of the labour force.

The entry of the “baby-boom” generation into the labour market created an abundance of workers, thus increasing the unemployment rate and influencing the transition from school to work during the last 20 years. In the 1990s, poor labour market conditions meant that youths aged 15-24 were less likely to find work and thus, more likely to be in school than youths of previous decades.

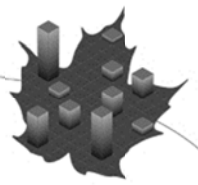
During the last two decades, poor labour market conditions increased the school-to-work transition period. It has been difficult for a great number of youths to find work. One of the key elements underlying the best-estimate economic assumptions relates to the expected labour shortage. This shortage will result from the aging of the population, the retirement of the “baby-boom” generation and the impact of these on the labour force growth and distribution.

However, the recent economic downturn, as evidenced by the high unemployment rates and contraction of the economy, had an impact on the labour market. The youth unemployment rate (ages 15-24) for Canada excluding Québec reached an all-time high of 15.5% in loan year 2009-10 before starting to decrease to reach a level of 13.6% in loan year 2013-14. These recent trends may have had an influence on students’ decision to pursue a post-secondary education.

### *Inflation, Tuition Fees and Wage Increases*

Price increases, as measured by changes in the Consumer Price Index, tend to fluctuate from year to year. In 2011, the Bank of Canada and the Government renewed their commitment to keep inflation between 1% and 3% until the end of 2016, targeting the 2% midpoint of the range. Because of weaker energy prices, the Bank of Canada expects inflation to remain below the 2% target for most of 2015, after which it should move back up to target. Therefore, price increase rates of 1.2% and 1.5% are assumed for loan years 2014-15 and 2015-16 respectively. Beginning in 2016-17, the rate is expected to settle at its ultimate level of 2.0%.

Student expenses are used in the need assessment process to determine the maximum loan amount that can be issued. These expenses include food, shelter, transportation and clothing, all of which tend to vary with consumer prices. As a result, the future anticipated rate of inflation is used to project these expenses.



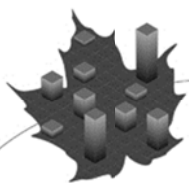
Tuition fees (including compulsory fees) have been treated separately from other expenses in the past since their evolution is, in part, a result of government policies. Further analysis was performed this year and it was determined that tuition and compulsory fees vary according to a different scale so the methodology was improved to project each one of them on a separate scale.

Based on stated intentions in provincial budgets and actual tuition increases as reported in news releases, the tuition increase is estimated to be 3.2% for loan year 2014-2015 and 2.8% for loan years 2015-16 to 2016-17. In the past, government budgetary cost pressures caused tuition fees to rise more quickly than inflation. Similar budgetary pressures are expected in the future due to the aging of the population. Thus, tuition fees are indexed at the rate of inflation plus 2.0% for the long-term, in accordance with the experience observed over the last 5 years. This assumption is revised downward from inflation plus 2.5% used in the previous statutory report. As with compulsory fees, an analysis of the available data revealed that they have been increasing at an average annual rate of 6.2%. This trend is expected to continue in the future so compulsory fees are projected to grow at a rate of 6.2%.

Future student resources, including student earnings and parental contributions, are influenced by increases in the average annual earnings. Increases in average earnings are related to changes in the labour market supply. Therefore, an increase in productivity and a decline in the labour force growth rate are assumed to force a relatively higher real wage growth. The real wage growth is projected to decrease from 1.1% in 2014-15 to 0.8% in 2015-16 before increasing again from 2016-17 onward, reaching 1.2% in 2019-20. It then remains at that level for the rest of the projection period.

#### *Cost of Borrowing*

Since August 2000, borrowers are indebted to the Government of Canada and, as a result, the Government bears the interest risk associated with the cost of borrowing for the entire duration of the loans. In general, a loan's duration is a combination of three periods. The first one is the study period when the student is in school and receives an interest subsidy; this period lasts approximately three years. The following period generally covers the six months after the end of studies (the grace period) when interest accrues but no payment is required. The third and final period is the one where the student is expected to repay the loan; a normal repayment period lasts nine and a half years. The historical 10-year Government of Canada bond yield, net of inflation, is used as a benchmark to calculate the real cost of borrowing for the Government. The average federal bond yield for the 2013-14 loan year is lower than what was expected in the previous report as at 31 July 2011. It continued to show a decrease during the 2014-15 loan year, but the trend is expected to reverse starting in the 2015-16 loan year. Thus, the Government's cost of borrowing is estimated to be 1.8% for the 2014-15 loan year and is anticipated to gradually increase to reach an ultimate rate of 4.4% in loan year 2021-22. The Government's cost of borrowing is the sum of the real Government's cost of borrowing and the rate of inflation, as summarized in Table 1.



**Table 1 Borrowing Cost**

<b>Loan Year</b>	<b>Inflation (%)</b>	<b>Government's Real Cost of Borrowing (%)</b>	<b>Government's Cost of Borrowing (%)</b>	<b>Prime Rate (%)</b>	<b>Student's Cost of Borrowing (%)</b>
	(1)	(2)	(1) + (2)	(3)	(3) + 250 bps
2014-15	1.2	0.6	1.8	2.3	4.8
2015-16	1.5	0.6	2.1	2.6	5.1
2016-17	2.0	0.8	2.8	3.3	5.8
2017-18	2.0	1.4	3.4	3.8	6.3
2018-19	2.0	1.8	3.8	4.2	6.7
2019-20	2.0	2.1	4.1	4.4	6.9
2020-21	2.0	2.3	4.3	4.6	7.1
2021-22 +	2.0	2.4	4.4	4.7	7.2

The average prime rate for loan year 2014-15 is 2.3% and is expected to increase to 2.6% in loan year 2015-16 based on the expected gradual recovery of the economy. The prime rate is expected to continue increasing gradually to an ultimate rate of 4.7% in loan year 2021-22. The student's cost of borrowing, used to calculate interest revenue, is the sum of the prime rate and a spread of 250 basis points. The student's cost of borrowing is 4.8% in loan year 2014-15 and is expected to increase to an ultimate rate of 7.2% by loan year 2021-22.

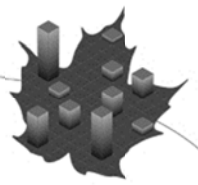
**3. Provision Assumptions**

Since August 2000, the CSLP has been delivered and financed directly by the Government. Three allowances exist to cover future costs: bad debt – principal, bad debt – interest and Repayment Assistance Plan (RAP) – principal. The RAP came into effect in August 2009, replacing the former Debt Reduction in Repayment (DRR) and Interest Relief (IR) measures.

*Default and Recovery Rate Assumptions*

In previous reports, the future default and recovery rate assumptions were based on net defaults (after recalls and rehabilitations). Rehabilitations have increased since 2009-10 as borrowers meeting the rehabilitation criteria started being eligible for the RAP. In addition, the rehabilitation requirements were changed in March 2011 requiring that borrowers repay all outstanding interest and make the equivalent of two monthly payments on the defaulted loans. Before March 2011, the equivalent of six monthly payments was required in addition to interest accrued. In this report, the impact of recalls and rehabilitations is considered separately. Therefore, the future default and recovery rate assumptions are based on gross defaults (before recalls and rehabilitations).

- The future gross default rate assumption is 16.8% of future consolidations.
- The recalls and rehabilitations represent 8.7% of gross defaults in the long-term, which decreases the default rate to 15.3% [16.8% x (1 – 8.7%)]. This rate is lower than the 16.0% used in the previous statutory report.
- The future recovery rate assumption corresponds to 30.6% of gross defaults (before recalls and rehabilitations). The recovery rate used in the previous statutory report was 26.0% of net defaults (after recalls and rehabilitations). Part of the increase observed in recoveries is attributable to the payments made by borrowers in default in order to rehabilitate their student loans.
- The resulting future net default rate decreases from 11.8% [16.0% x (1 – 26.0%)] in the previous statutory report to 10.2% [16.8% x (1 – 8.7% – 30.6%)].



### *Allowance for Bad Debt – Principal*

The allowance for bad debt – principal is based on a prospective approach that uses a snapshot of the portfolio at a specific point in time to determine the amount of the allowance at that time. The calculation of the allowance is separated into three components according to the status of the loan; that is whether the loan is in-study, in repayment (according to the number of years since consolidation) or in default (according to the number of years since default). Future assumed rates of default and recovery are applied to these portfolio amounts to determine the allowance that must be set aside to cover future write-offs.

To determine the allowance on the balance of loans in-study, the future net default rate of 10.2% by consolidation cohort needs to be adjusted in order to reflect the variation between loans at issuance and loans at consolidation. A small upward adjustment of 0.4% is required to reflect the interest accrued during the 6-month grace period that is capitalized into loans at consolidation. Another adjustment is required to reflect future prepayments (payments received from students prior to consolidation). Based on the experience, prepayments represent approximately 15% of loans in-study, resulting in a provision rate for loans in-study of 9.0%  $[(10.2\% + 0.4\%) \times 85.0\%]$ .

To determine the allowance on the balance of loans in repayment, future defaults are projected according to the number of years since consolidation. The recovery rate assumption is then applied to determine the portion of projected defaulted loans that will not be recovered. This result corresponds to the allowance on the balance of loans in repayment. The future recovery rate is 30.6% for each gross default cohort; hence, it is assumed that 69.4%  $(1 - 30.6\%)$  of the projected gross defaulted loans (before recalls and rehabilitations) will not be recovered. The resulting provision rate on outstanding loans in repayment for the 2014-15 loan year is 5.9%. This is lower than the provision rate of 9.0% for loans in-study since the portfolio in repayment includes cohorts of loans for which some defaults and partial reimbursements have already occurred resulting in a lower inherent risk of loss for the remaining loans.

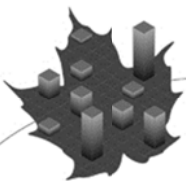
The last allowance to determine is the one on the balance of loans in default that will not be recovered. The resulting provision rate on outstanding loans in default for the 2014-15 loan year is 80.7%. This is higher than the non-recovery rate of 69.4% since the portfolio in default includes cohorts of loans that have been transferred in default for a certain number of years and for which some recoveries have already occurred. Thus, the remaining loans have aged and have an increased risk of loss.

In summary, the provision rates for loan year 2014-15 are: 9.0% for loans in-study, 5.9% for loans in repayment and 80.7% for loans in default.

The level of the total allowance is determined at the end of the loan year. The annual expense for bad debt – principal is equal to the difference between the total allowance at the end of a year and the total allowance at the end of the previous year net of write-offs that have occurred during the year.

### *Allowance for Bad Debt – Interest*

The allowance for bad debt – interest is based on the account's recoverable status and its age since default. The interest accrued on defaulted loans is considered a revenue until the loan reaches the "non-recoverable" status. To lessen the effect of changing this revenue to a loss, an allowance is created based on the outstanding interest at the end of each year. The provision rate is 26.7% of interest accrued in the first year after loans are transferred in default. It increases in each of the four subsequent years before decreasing in the sixth and seventh years when a large



portion of interest is transferred to the “non-recoverable” status because of the six-year limitation period (statute of limitations). The provision rate increases each year thereafter. The provision rate for the allowance on non-recoverable accounts is 100%. Under this methodology, the increasing provision rate reflects the fact that the difficulty of recovering defaults increases as the time since default increases. The annual expense for bad debt – interest is equal to the difference between the total allowance at the end of a year and the total allowance at the end of the previous year net of write-offs that have occurred during the year.

The provision rates for bad debt – interest are revised downward in this report to reflect to recent experience, especially the higher recovery rate. The set of provision rates used to determine the allowance on recoverable accounts in the 2014-15 loan year is shown in Table 2.

#### *Allowance for Repayment Assistance Plan – Principal*

The RAP consists of two stages to help student borrowers fully repay their student loan within fifteen years (or ten years for borrowers with permanent disabilities). A borrower must first spend five years in Stage 1 over a ten-year period. The Government covers the monthly interest amount owed that the borrower’s affordable payment does not cover. Stage 2 begins once the borrower has completed Stage 1, or has been in repayment for ten years following the end of the study period. The Government continues to cover the interest, as in Stage 1, and also begins to cover a portion of the student loan principal amount (i.e. the difference between the required and affordable payment). Borrowers with a permanent disability proceed directly to Stage 2, on approval of their RAP-PD application.

The RAP – principal provision covers future costs related to RAP-Stage 2 and RAP-PD, which corresponds to the portion of the loan principal paid off by the Government. As with the provision for bad debt – principal, the methodology to determine the provision rates and allowance for the RAP – principal is based on a prospective approach that uses a snapshot of the portfolio at a particular point in time to determine the amount of the allowance at that time. The calculation of the allowance is separated into three components according to the status of the loan; that is whether the loan is in-study, in repayment (excluding loans in the RAP) or in the RAP (considering the current stage). The provision rates are set based on current and future RAP utilization rates at each stage. Three distinct provision rates, depending on the status of the loan at a given time, will be used to determine the required allowance. The provision rates for loan year 2014-15 are: 3.5% for loans in-study, 0.9% for loans in repayment (net of loans in the RAP), and 15.6% for loans in the RAP (all stages combined).

The annual expense for the RAP – principal provision is equal to the difference between the total allowance at the end of a year and the total allowance at the end of the previous year net of the current year’s expenses.

The RAP is a program that was introduced in 2009 and still has limited experience. The related projection of costs and underlying assumptions may be revised in the future as experience emerges and the provision rates will be updated accordingly. As with the former Interest Relief measure, a modest provision for the RAP – interest is determined by ESDC for accounting purposes to take into account the timing of the interest accrued.

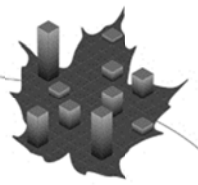


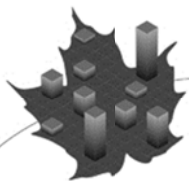
Table 2 shows the provision rates used to determine the allowances in loan year 2014-15 for Public Accounts purposes. The provision rates for future loan years evolve with the aging of the loan cohorts.

**Table 2 Provision and Allowance Assumptions**

Type of Provision	Assumptions	
		(%)
<b>Bad Debt – Principal</b>		
On the outstanding balance of loans:		
In-Study		9.0
In Repayment		5.9
In Default		80.7
<b>Repayment Assistance Plan – Principal</b>		
On the outstanding balance of loans:		
In-Study		3.5
In Repayment (net of loans in RAP)		0.9
In the Repayment Assistance Plan (all stages combined)		15.6
<hr/>		
	<b>Year Since</b>	
<b>Bad Debt – Interest</b>	<b>Default</b>	(%)
On outstanding recoverable interest	1 <sup>st</sup>	26.7
	2 <sup>nd</sup>	37.6
	3 <sup>rd</sup>	48.0
	4 <sup>th</sup>	57.9
	5 <sup>th</sup>	68.3
	6 <sup>th</sup>	60.3
	7 <sup>th</sup>	55.4
	8 <sup>th</sup>	57.5
	9 <sup>th</sup>	60.7
	10 <sup>th</sup>	63.0
	11 <sup>th</sup>	66.3
	12 <sup>th</sup>	71.0
	13 <sup>th</sup>	77.5
	14 <sup>th</sup>	86.9
	15 <sup>th</sup>	100.0

Note: The calculation of the allowance is separated into three components according to the status of the loan:

• In-Study:	Loans for students currently enrolled in a post-secondary institution and for those who have terminated their studies within the last 6 months (6-month grace period).
• In Repayment:	Loans for borrowers in the repayment period, including delinquent loans and loans approved or waiting for the RAP. [In the calculation of the provision for the RAP – principal, they are further split, with loans in the RAP being considered together as a subgroup.]
• In Default:	Loans for which no payments have been made for at least 9 months but for which the government might be able to recover money.



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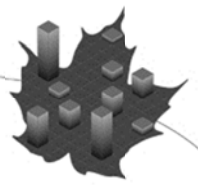
as at 31 July 2014

Table 3 contains a summary of the best-estimate assumptions used for this report.

**Table 3 Best-estimate Assumptions**

1.	Total fertility rate for Canada	1.65 per woman	
2.	Mortality	Canadian Human Mortality Database	
3.	Net migration rate	0.6% of population for 2017+	
4.	Youth participation rate (participating provinces/territory, ages 15-29)	70.8% (2014-15)	
		72.3% (2015-16)	
		72.9% (2016-17)	
		•	
		•	
		76.1% (2038-39)	
5.	Real wage increases	1.0% (2014-15)	
		0.8% (2015-16)	
		0.9% (2016-17)	
		1.0% (2017-18)	
		1.1% (2018-19)	
		1.2% (2019-20+)	
6.	Inflation	1.2% (2014-15)	
		1.5% (2015-16)	
		2.0% (2016-17+)	
7.	Tuition fee increases	3.2% (2014-15)	
		2.8% (2015-16)	
		2.8% (2016-17)	
		3.0% (2017-18)	
		•	
		CPI + 2.0% (2021-22+)	
8.	Government's cost of borrowing	1.8% (2014-15)	
		•	
		•	
		4.4% (2021-22+)	
9.	Student's cost borrowing	4.8% (2014-15)	
		•	
		•	
		7.2% (2021-22+)	
10.	Provision rate for Bad Debt – Principal (2014-15)	9.0%	of the portfolio in-study
		5.9%	of the portfolio in repayment
		80.7%	of the portfolio in default
11.	Provision rate for RAP – Principal (2014-15)	3.5%	of the portfolio in-study
		0.9%	of the portfolio in repayment (net of loans in RAP)
		15.6%	of the portfolio in the RAP
12.	Provision rate for Bad Debt – Interest	26.7%	(Interest on loans in default for less than a year)
		•	
		•	
		•	
		60.3%	(Interest on loans in default for 5 to 6 years)
		•	
		•	
		100.0%	(Interest on loans in default for 14 to 15 years)





## B. Projection of Total Loans Issued

The purpose of this section is to discuss the projection of the total amount of loans issued by the CSLP. The first step is to project full-time enrolment in post-secondary institutions. The future number of students participating in the CSLP is determined using a projection of the loan uptake rate. Finally, the average assessed need of a CSLP Student is projected net of grants and capped according to the loan limit. The total amount of loans issued is then calculated by multiplying the average capped net need with the number of students in the CSLP.

### 1. Projection of Full-time Post-secondary Enrolment

The projection of full-time students in post-secondary institutions must be determined first since the demand for the CSLP is linked to the number of students enrolled in post-secondary institutions. Demographic projections are used to determine the progression of full-time students attending post-secondary institutions.

#### *Demographic Projections*

Demographic projections are based on the population projected in the 26<sup>th</sup> Actuarial Report on the Canada Pension Plan as at 31 December 2012, adjusted to take into account the most recent population estimates and experience. The population of Canada less Québec, Northwest Territories, and Nunavut is used to project the number of students enrolled in post-secondary institutions.

The population aged 15-29 is expected to increase from 5,479,000 in 2013-14 to 5,487,000 in 2014-15 before decreasing for the following twelve years of the projection, bringing it to 5,092,000 in 2026-27. In the following twelve years, the population aged 15-29 is expected to increase and reach 5,744,000 by 2038-39. Overall, as Table 4 shows, an increase of 265,000 is expected in the population aged 15-29 over the 25-year projection period.

#### *Post-secondary Enrolment*

The number of students enrolled full-time in post-secondary institutions is based on both the evolution of the population in labour force (persons who are employed or looking for employment) and the population not in labour force. The individuals who are not participating in the labour force may be more inclined to pursue a post-secondary education; however, due to economic pressures, many students are working part-time or looking for employment during the course of their post-secondary education and are thus part of the labour force population. Historically, since 2000-01, on average 45% of students enrolled full-time in post-secondary institutions were participating in the labour force while 55% were not participating in the labour force. As described in Appendix 4, post-secondary enrolment has been projected separately according to labour force status. Chart 1 shows both the historical and the projected post-secondary enrolment by labour force status for students aged 15-29.

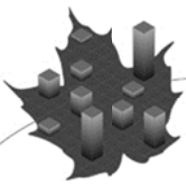
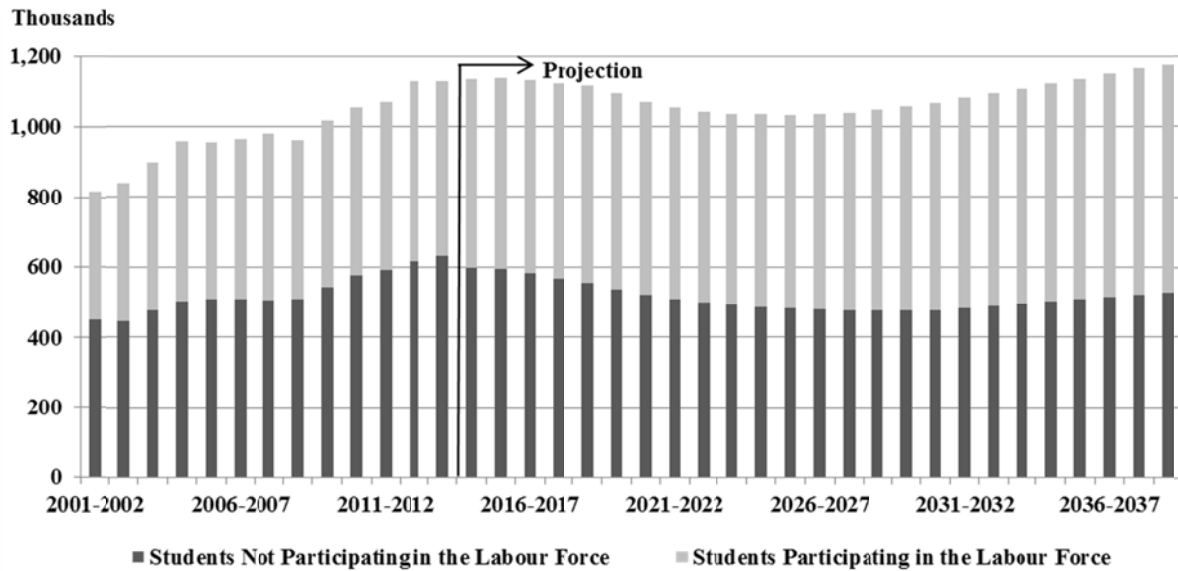


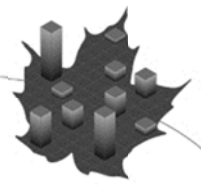
Chart 1 Evolution of Enrolment in Post-Secondary Institutions by Labour Force Status



Enrolment in post-secondary institutions also varies according to the student’s age group, gender and whether the student is in college or university. As a result, in addition to the labour force status populations, enrolment is separated into these groups for projection purposes.

Non-permanent residents are excluded from the projection since they are not eligible for loans.

Enrolment data from Statistics Canada’s Labour Force Survey is used as it permits to determine the proportion of full-time students in post-secondary institutions that are in the labour force population and has up-to-date data available. Table 4 shows the evolution of the population aged 15-29, along with the number of students enrolled full-time in a post-secondary institution (age group 15-29 and total). The students aged 15-29 are used for illustrative purposes as they represent more than 85% of the total post-secondary enrolment and better demonstrate the movement of this population across time. Total full-time enrolment in post-secondary institutions (all ages) is also presented in Table 4. Projections are based on data up to January 2015.



**Table 4 Population and Post-Secondary Enrolment<sup>1</sup>**

<b>Loan Year</b>	<b>Population of Canada Less Québec, Nunavut, and NWT (15-29)</b> (thousands)	<b>Students Enrolled Full-Time (15-29)</b> (thousands)	<b>Students Enrolled Full-Time (Total)</b> (thousands)	<b>Increase</b> (thousands)	<b>Increase</b> (%)
2013-14	5,479	1,128	1,267		
2014-15	5,487	1,136	1,303	36.5	2.9
2015-16	5,478	1,141	1,302	-0.9	-0.1
2016-17	5,451	1,136	1,301	-1.4	-0.1
2017-18	5,415	1,127	1,296	-5.4	-0.4
2018-19	5,379	1,116	1,289	-6.4	-0.5
2019-20	5,336	1,095	1,268	-21.0	-1.6
2020-21	5,280	1,072	1,247	-21.6	-1.7
2021-22	5,230	1,055	1,230	-17.0	-1.4
2022-23	5,189	1,044	1,219	-10.5	-0.9
2023-24	5,158	1,038	1,214	-5.6	-0.5
2024-25	5,131	1,036	1,211	-2.4	-0.2
2025-26	5,107	1,034	1,209	-1.8	-0.1
2026-27	5,092	1,036	1,210	0.9	0.1
2027-28	5,098	1,041	1,214	4.0	0.3
2028-29	5,126	1,049	1,221	7.2	0.6
2029-30	5,171	1,058	1,229	8.0	0.7
2030-31	5,223	1,069	1,239	9.6	0.8
2031-32	5,288	1,083	1,253	14.4	1.2
2032-33	5,358	1,096	1,267	13.6	1.1
2033-34	5,430	1,108	1,280	13.2	1.0
2034-35	5,498	1,122	1,294	14.1	1.1
2035-36	5,567	1,136	1,309	15.0	1.2
2036-37	5,634	1,151	1,325	15.8	1.2
2037-38	5,693	1,166	1,341	15.5	1.2
2038-39	5,744	1,178	1,354	12.9	1.0

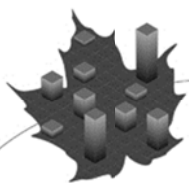
The future population enrolled full-time in a post-secondary institution is determined by multiplying a projected enrolment rate for each future year to its corresponding projected population. Students enrolled full-time are projected to increase by 36,000 (1,267,000 to 1,303,000) during the first year of the projection period. They then start decreasing until loan year 2025-2026 before increasing again until the end of the projection period.

## 2. Student Need

Not everyone enrolled in a post-secondary institution is eligible to participate in the CSLP. The need assessment process determines whether students are eligible for a loan, and if so, the amount they are eligible to receive. The need is defined as the excess of expenses over resources, if positive. The expenses assessed include tuition fees, compulsory fees, books, shelter, food and transportation. Sometimes, a student's need is completely fulfilled by a grant and no loan is issued. The methodology was improved to take this into consideration and to project the student's need net of grants. In addition, tuition and compulsory fees are projected separately since they did not vary with the same scale in the past. Future distributions of student need are projected using the CSLP need assessment data provided by Employment and Social Development Canada (ESDC).

For projection purposes, students' needs are modelled using the need assessment data file for loan year 2012-13. Students were previously separated into three groups based on their living

<sup>1</sup> Full-time enrolment in post-secondary institutions in Canada, excluding Québec.



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arrangement. In order to use the same basis as enrolment data, the methodology was revised this year and students are now separated into three groups based on the type of educational institution they are attending (college, university or private). The results are aggregated using a weighted average based on the number of students.

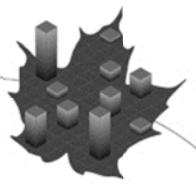
**Table 5 Student Need**

Loan Year	Resources (\$)	Tuition <sup>1</sup> (\$)	Other Expenses (\$)	Total Expenses (\$)	Average Student Need (\$)	Average Grant for Net Need Calculation <sup>2</sup> (\$)	Average Student Net Need (\$)	Average Student Net Need Increase (\$)
	(1)	(2)	(3)	(4) = (2) + (3)	(5) = (4) - (1)	(6)	(7) = (5) - (6)	
2013-14	4,600	6,900	9,800	16,700	12,100	1,300	10,800	
2014-15	4,600	7,300	9,900	17,200	12,600	1,300	11,300	500
2015-16	4,700	7,600	10,000	17,600	12,900	1,300	11,600	300
2016-17	4,800	7,900	10,200	18,000	13,200	1,300	11,900	300
2017-18	4,900	8,100	10,400	18,500	13,600	1,300	12,300	400
2018-19	5,100	8,500	10,600	19,000	13,900	1,300	12,600	300
2019-20	5,200	8,800	10,800	19,600	14,400	1,300	13,100	500
2020-21	5,400	9,100	11,000	20,100	14,700	1,300	13,400	300
2021-22	5,600	9,500	11,200	20,700	15,100	1,300	13,800	400
2022-23	5,700	9,900	11,500	21,400	15,700	1,300	14,400	600
2023-24	5,900	10,300	11,700	22,000	16,100	1,300	14,800	400
2024-25	6,100	10,800	11,900	22,700	16,600	1,300	15,300	500
2025-26	6,300	11,200	12,200	23,400	17,100	1,300	15,800	500
2026-27	6,500	11,700	12,400	24,100	17,600	1,300	16,300	500
2027-28	6,700	12,200	12,600	24,900	18,200	1,400	16,800	500
2028-29	6,900	12,800	12,900	25,600	18,700	1,400	17,300	500
2029-30	7,200	13,300	13,100	26,500	19,300	1,400	17,900	600
2030-31	7,400	13,900	13,400	27,300	19,900	1,400	18,500	600
2031-32	7,600	14,500	13,700	28,200	20,600	1,400	19,200	700
2032-33	7,900	15,100	13,900	29,100	21,200	1,400	19,800	600
2033-34	8,100	15,800	14,200	30,000	21,900	1,400	20,500	700
2034-35	8,400	16,500	14,500	31,000	22,600	1,400	21,200	700
2035-36	8,700	17,200	14,800	32,000	23,300	1,400	21,900	700
2036-37	8,900	17,900	15,100	33,000	24,100	1,400	22,700	800
2037-38	9,200	18,700	15,400	34,100	24,900	1,400	23,500	800
2038-39	9,500	19,500	15,700	35,200	25,700	1,400	24,300	800

Table 5 summarizes the three main elements of student need, as well as the average student need, average grant used for the net need calculation and average student net need (net of grant). The average resources and expenses specific to the students receiving a loan are considered. Resources are lower compared with the previous statutory report due to the increase in in-study income exemption from \$50 per week to \$100 per week since August 2012 as well as the elimination of the value of student-owned vehicles from the CSLP assessment process starting in August 2014. Tuition is lower compared with the previous statutory report because it is no longer annualized but rather reflects the average length of the study period of those students receiving a loan. In addition, the tuition increase assumption has been revised downward in this report.

<sup>1</sup> Tuition reported here represents the average tuition and compulsory fees for those students who applied for a loan and had a need of at least \$1. The annualized tuition and compulsory fees amount for a regular study period of 34 weeks (two full semesters) would be \$7,600 for the 2013-2014 loan year. Even though tuition and compulsory fees were projected together, they are then added up for consistency and comparison purposes.

<sup>2</sup> This average grant is strictly used for the purpose of calculating the net need, so included in the calculation are all students receiving a loan (including the 148,000 with a grant of \$0). The real average grant (paid only to grant recipients) would be \$1,946.



Tuition fees are the primary source of increases in student need and are ultimately indexed at 2.0% above inflation. Tuition has been, on average, 1.7% above inflation over the last ten years and 2.5% above inflation over the last fifteen years. Other expenses, which include books, shelter, food and transportation, are indexed at the rate of inflation.

Table 5 shows average tuition fees rising from \$6,900 in 2013-14 to \$19,500 in 2038-39. In fact, tuition fees rise from 150% of a student's available resources in 2013-14 to 205% in 2038-39.

**Chart 2 CSLP University Students Projected Net Need Curve**

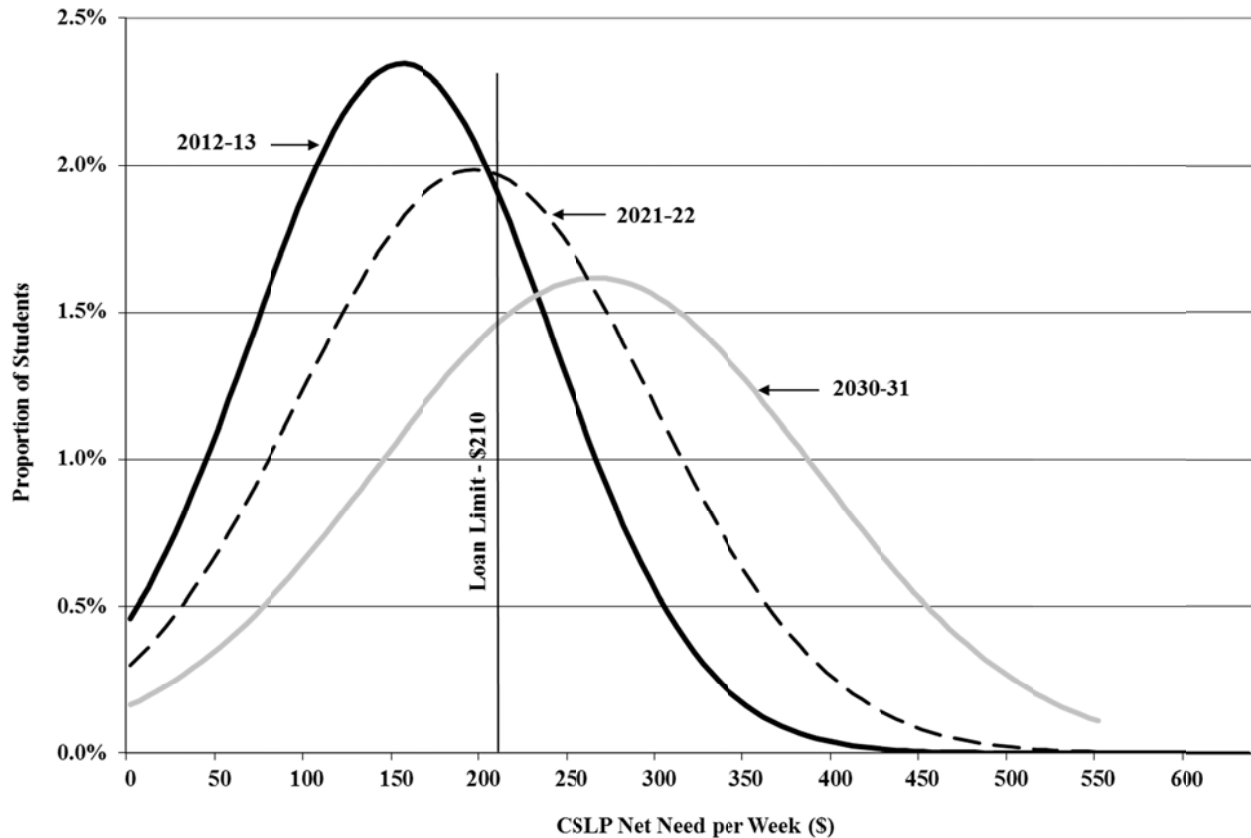
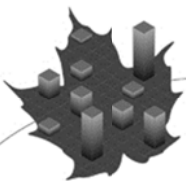


Chart 2 is a projection of the CSLP student net need curves for university students, for three specific years during the twenty-five year projection period. The vertical line at \$210 in Chart 2 represents the current loan limit. Any borrower whose net need falls to the right of this line will receive a loan equal to the limit. Those whose net need does not exceed the loan limit are eligible to receive a loan amount equal to their entire net need. The effect a constant loan limit has on new loans issued is apparent since the area to the right of the vertical line, which corresponds to the proportion of students receiving a loan equal to the limit, increases through time.

Net needs increase since expenses are assumed to increase faster than resources. It is anticipated that as the student net need increases, newly eligible participants will enter to the left of the peak. New participants will enter the CSLP because their previously negative net need became positive or their net need increased enough that it became worthwhile to take a loan. It is expected that as their net need increases, participants will move towards the right of the peak.



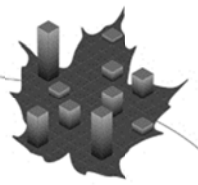
**3. Number of Students in the Canada Student Loans Program (CSLP)**

The projected number of students in the CSLP is based on the expected future enrolment, as well as the future loan uptake rate. Table 6 shows the evolution of loan recipients over the 25-year projection period. An increase in the loan uptake rate is expected as tuition fees and other expenses grow at a faster rate than resources.

The product of the number of students enrolled full-time and the CSLP loan uptake rate gives the number of students in the CSLP. Table 6 shows that the loan uptake rate is expected to increase from 39% in 2013-14 to 51% in 2038-39, adding 185,000 students to the Program. Thus, the number of students in the Program is projected to increase from 498,000 in 2013-14 to 683,000 in 2038-39. The number of students in the CSLP shown in Table 6 represents those who receive a Canada Student Loan in each loan year; it does not include the small proportion of students that only receives a grant under the Canada Student Grants Program because their assessed need was lower than the maximum amount of grant they were eligible for, and the grant therefore covered their total need (no loan was issued). According to the ESDC data file, the total number of students who received a grant in the 2013-14 loan year is 367,473. The majority of grant recipients (95%) received both a loan and a grant.

**Table 6 Loan Recipients**

<b>Loan Year</b>	<b>Students Enrolled Full-Time (thousands)</b>	<b>Loan Uptake Rate (%)</b>	<b>Students in CSLP (thousands)</b>	<b>Annual Increase in CSLP Students (thousands)</b>	<b>Annual Increase in CSLP Students (%)</b>
	(1)	(2)	(1) x (2)		
2013-14	1,267	39	498		
2014-15	1,303	38	497	-1	-0.1
2015-16	1,302	39	502	5	1.1
2016-17	1,301	39	508	6	1.1
2017-18	1,296	40	512	4	0.8
2018-19	1,289	40	516	4	0.7
2019-20	1,268	41	514	-2	-0.3
2020-21	1,247	41	512	-2	-0.4
2021-22	1,230	42	512	0	-0.1
2022-23	1,219	42	514	2	0.4
2023-24	1,214	43	518	4	0.8
2024-25	1,211	43	523	5	1.0
2025-26	1,209	44	529	6	1.1
2026-27	1,210	44	535	7	1.3
2027-28	1,214	45	543	8	1.5
2028-29	1,221	45	553	10	1.8
2029-30	1,229	46	563	10	1.8
2030-31	1,239	46	574	11	1.9
2031-32	1,253	47	587	13	2.3
2032-33	1,267	47	600	13	2.2
2033-34	1,280	48	613	13	2.2
2034-35	1,294	48	627	13	2.2
2035-36	1,309	49	641	14	2.2
2036-37	1,325	50	655	15	2.3
2037-38	1,341	50	670	15	2.2
2038-39	1,354	51	683	14	2.0



Even though the projection shows an increase in the number of students enrolled full-time between 2013-14 and 2014-15, it is expected that the number of students in the CSLP will see a small decrease in 2014-15. The following items explain part of this change:

- observable data to date for loan year 2014-15 shows that the increase in enrolment occurs mainly among students participating in the labour force (i.e. those less likely to apply for or to be eligible for a loan);
- observable data to date for loan year 2014-15 shows an overall decrease in enrolment among students not participating in the labour force (i.e. those most likely to need a loan); and
- the effect of programs such as the Canada Student Grants Program and the 30% Off Ontario Tuition grant has probably tapered off and no longer generates a year-over-year influx of students.

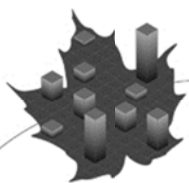
#### 4. New Loans Issued

This section focuses on the determination of the amount of new loans issued in each loan year. The three factors primarily responsible for the evolution of new loans issued are student need, the amount of grants disbursed under the CSGP, and the percentage of students reaching the loan limit.

Firstly, an increasing student need will put growing pressure on new loans issued as more students become eligible for, and take a loan, while those who were previously eligible become eligible for a larger loan. Table 7 shows that the average student need increases from \$12,137 in 2013-14 to \$25,677 in 2038-39. Although an increasing student need causes more students to become eligible to receive a loan, loans to newly eligible individuals are smaller in size and therefore slow the growth of the average loan size. This indirectly contributes to moderating the average loan growth over the 25-year projection period.

Secondly, the CSGP introduced in loan year 2009-10 alleviates the financial need of many students, thus reducing the amount of loans issued by the Program for the remainder of the projection period. The amount of grants disbursed is projected to grow from \$715 million in 2013-14 to \$1,029 million in 2038-39 (see Table 15). The CSGP is described in Appendix 1. The monthly grant payments for students from low- and middle-income families are set in the *Canada Student Financial Assistance Regulations* and are assumed to remain constant for the entire projection period. However, due to an expected change in the student population mix, the average grant is expected to increase slightly over time. A sensitivity test that indexes the grant amount to inflation is presented in Appendix 5.

Thirdly, a constant loan limit (currently \$210 per week) restricts the growth of new loans issued. Indeed, as student needs increase over time and the loan limit remains constant, the percentage of students at the loan limit grows. In 2013-14, the percentage of students at the loan limit is 35.7% and Table 7 shows that this percentage is projected to increase to 81.8% in 2038-39. These students are not eligible for a further increase in loan size despite increasing cost pressures. This situation is illustrated in Chart 2; it shows that over the projection period, an increasing proportion of students have needs that equal or exceed the loan limit.



**Table 7 Increase in New Loans Issued**

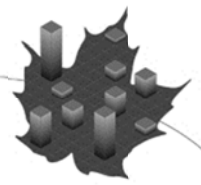
Loan Year	Average Student Need (\$)	Increase (%)	% of Students at Limit	New Loans Issued (\$ million)	Increase (%)	Students in CSLP (thousands)	Increase (%)	Average Loan Size (\$)	Increase (%)
				(1)		(2)		(1) / (2)	
2013-14	12,137		35.7	2,721		498		5,468	
2014-15	12,621	4.0	36.8	2,735	0.5	497	-0.1	5,504	0.7
2015-16	12,917	2.3	38.5	2,800	2.4	502	1.1	5,572	1.2
2016-17	13,260	2.7	40.6	2,870	2.5	508	1.1	5,649	1.4
2017-18	13,604	2.6	42.6	2,931	2.1	512	0.8	5,721	1.3
2018-19	13,970	2.7	44.7	2,989	2.0	516	0.7	5,794	1.3
2019-20	14,345	2.7	46.7	3,015	0.9	514	-0.3	5,863	1.2
2020-21	14,745	2.8	48.9	3,039	0.8	512	-0.4	5,933	1.2
2021-22	15,178	2.9	51.1	3,072	1.1	512	-0.1	6,003	1.2
2022-23	15,627	3.0	53.4	3,120	1.6	514	0.4	6,072	1.1
2023-24	16,094	3.0	55.6	3,178	1.9	518	0.8	6,139	1.1
2024-25	16,578	3.0	57.7	3,245	2.1	523	1.0	6,203	1.0
2025-26	17,080	3.0	59.9	3,312	2.1	529	1.1	6,265	1.0
2026-27	17,602	3.1	61.9	3,386	2.2	535	1.3	6,324	0.9
2027-28	18,143	3.1	64.0	3,468	2.4	543	1.5	6,381	0.9
2028-29	18,706	3.1	65.9	3,559	2.6	553	1.8	6,435	0.9
2029-30	19,289	3.1	67.8	3,653	2.6	563	1.8	6,487	0.8
2030-31	19,895	3.1	69.7	3,752	2.7	574	1.9	6,537	0.8
2031-32	20,524	3.2	71.4	3,866	3.0	587	2.3	6,584	0.7
2032-33	21,178	3.2	73.1	3,978	2.9	600	2.2	6,628	0.7
2033-34	21,857	3.2	74.7	4,090	2.8	613	2.2	6,671	0.6
2034-35	22,562	3.2	76.3	4,205	2.8	627	2.2	6,711	0.6
2035-36	23,296	3.3	77.8	4,324	2.8	641	2.2	6,749	0.6
2036-37	24,059	3.3	79.2	4,446	2.8	655	2.3	6,784	0.5
2037-38	24,853	3.3	80.5	4,568	2.7	670	2.2	6,818	0.5
2038-39	25,677	3.3	81.8	4,682	2.5	683	2.0	6,850	0.5

Table 7 shows the annual increase in new loans issued over the 25-year projection period. Overall, the total new loans issued increase from \$2,721 million in 2013-14 to \$4,682 million in 2038-39, resulting in an average annual increase of 2.2%. This average annual increase can be attributed to two factors: an average annual increase in the number of students in the CSLP of 1.3% and an average annual increase in the average loan size of 0.9% over the 25-year projection period. The average loan size is calculated as the ratio of new loans issued over the number of students in the CSLP. The growth rate of the average loan size is moderated due to the constant loan limit.

New loans issued are driven by an increasing number of students becoming eligible for a loan as a result of the increasing student need. The average loan size is more mildly affected since the loan limit is capped over the 25-year period. Any significant increase in the limit would have a major impact on the long-term growth rate of new loans issued.

A sensitivity test demonstrating the effect of annually indexing the limit to the rate of inflation is included in Appendix 5. This scenario demonstrates that the growth rate of new loans issued is significantly higher when the loan limit is increased to better reflect increasing student needs.





## C. Portfolio Projections

This section presents projections of the portfolio for all three regimes described in Appendix 1. The amounts for loans in-study represent loans issued to students still in the post-secondary educational system. Interest on loans in-study is fully subsidized by the Government for students in the CSLP. Loans in repayment consist of loans consolidated by students with financial institutions (or the Government) that are still outstanding.

### 1. Guaranteed and Risk-Shared Regimes

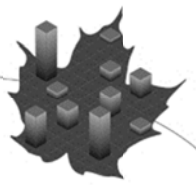
The guaranteed and risk-shared regimes apply to loans issued before August 2000. Some loans in these regimes are still outstanding since there are still students under these regimes attending post-secondary institutions or repaying their loans. Table 8 presents the projections of the loans, separately for the guaranteed and risk-shared regimes, as well as the projection of defaulted risk-shared loans bought back by the Government (principal only). The projection of risk-shared impaired loans purchased by the Government is necessary to determine when the limit on the aggregate amount of outstanding loans prescribed through the *Canada Student Financial Assistance Regulations* will be reached, as presented in Table 14. The guaranteed and risk-shared regimes are gradually being phased out.

At the end of loan year 2013-14, the sum of all loans in default coming from the guaranteed and risk-shared regimes that are owned by the Government amounts to approximately \$450 million (principal and interest) but is subject to possible future recoveries. The guaranteed loans in default are not included in the projection of the guaranteed portfolio in Table 8. The Government sets up a separate allowance in the Public Accounts for those loan guarantees, as well as for risk-shared defaulted loans bought back by the Government. This provision calculation is not included in this report.

**Table 8 Guaranteed and Risk-Shared Regimes Portfolio**

As at July 31	Guaranteed			Risk-Shared			
	Loans In-Study	Loans in Repayment	Total	Loans In-Study	Loans in Repayment	Defaulted Loans (bought back by the Government)	Total
	(with financial institutions)			(with financial institutions)			
	(\$ million)			(\$ million)			
2014	1	9	10	12	1,142	108	1,262
2015	1	6	7	8	975	93	1,076
2016	1	4	5	5	821	76	903
2017	-	3	3	3	692	62	757
2018	-	2	2	1	547	51	600
2019	-	2	2	1	433	42	475
2020	-	1	1	-	308	32	340
2021	-	1	1	-	218	24	243
2022	-	-	-	-	151	19	169
2023	-	-	-	-	98	14	112
2024	-	-	-	-	56	11	66
2025	-	-	-	-	30	8	38
2026	-	-	-	-	15	6	21
2027	-	-	-	-	6	5	11
2028	-	-	-	-	3	3	6
2029	-	-	-	-	1	3	4
2030	-	-	-	-	1	1	2
2031	-	-	-	-	1	1	2
2032	-	-	-	-	-	-	-





As at 31 July 2014, the outstanding direct loan portfolio is \$16.1 billion and is retrospectively derived from the experience during loan years 2000-01 to 2013-14 as follow:

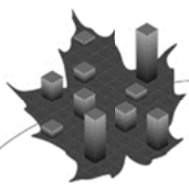
• New loans Issued	\$27.9 billion
• Plus the interest accrued during the grace period	\$ 0.8 billion
• Minus repayments <sup>1</sup>	\$12.0 billion
• Minus loans forgiven and debt reductions in repayment <sup>2</sup>	\$ 0.2 billion
• Minus defaulted loans written-off	\$ 0.4 billion
	\$16.1 billion

The outstanding direct loans portfolio increases rapidly to reach \$20.0 billion within the next five years. By the end of loan year 2038-39, the portfolio reaches \$31.8 billion.

In the previous statutory report, the expected total direct loan portfolio as at 31 July 2014 was \$15.8 billion. The actual portfolio is 2% higher than projected, at \$16.1 billion. A reconciliation of the portfolio is presented in Appendix 3.

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<sup>1</sup> Either prepayments while in-study, normal and accelerated payments while in repayment or recoveries while in default.  
<sup>2</sup> Under the former Debt Reduction in Repayment (DRR) or the new Repayment Assistance Plan (RAP) measures.



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*Allowance for Bad Debt – Principal:* Table 10 provides the details of the calculations for the projection of the defaulted loans portfolio and the allowance for bad debt – principal under the direct loan regime.

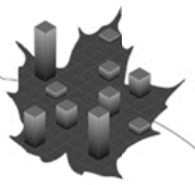
**Table 10 Defaulted Loans and Allowance for Bad Debt – Principal**

Loan Year	Defaulted Loans Portfolio					Allowance for Bad Debt – Principal			
	Balance 1 August	Defaulted Loans	Collected Loans	Write- offs	Balance 31 July	Allowance 1 August	Write- offs	Allowance 31 July	Yearly Expense
	(\$ million)					(\$ million)			
	(1)	(2)	(3)	(4)	(1+2) - (3+4)	(1)	(2)	(3)	(3) - (1 - 2)
2013-14	1,890	321	113	-	2,099	2,713	-	2,739	26
2014-15	2,099	328	113	218	2,095	2,739	218	2,766	246
2015-16	2,095	339	114	183	2,138	2,766	183	2,836	253
2016-17	2,138	348	115	187	2,184	2,836	187	2,909	260
2017-18	2,184	357	115	194	2,231	2,909	194	2,980	265
2018-19	2,231	365	116	199	2,281	2,980	199	3,052	271
2019-20	2,281	373	118	205	2,332	3,052	205	3,121	274
2020-21	2,332	382	119	209	2,385	3,121	209	3,187	276
2021-22	2,385	389	121	213	2,440	3,187	213	3,253	279
2022-23	2,440	396	124	218	2,495	3,253	218	3,318	283
2023-24	2,495	402	126	223	2,548	3,318	223	3,384	289
2024-25	2,548	409	128	228	2,600	3,384	228	3,450	295
2025-26	2,600	416	131	234	2,651	3,450	234	3,516	301
2026-27	2,651	423	133	240	2,701	3,516	240	3,571	295
2027-28	2,701	431	135	246	2,750	3,571	246	3,640	315
2028-29	2,750	439	138	251	2,800	3,640	251	3,711	323
2029-30	2,800	448	140	256	2,852	3,711	256	3,786	331
2030-31	2,852	458	143	261	2,906	3,786	261	3,865	340
2031-32	2,906	469	146	266	2,964	3,865	266	3,950	351
2032-33	2,964	480	149	270	3,025	3,950	270	4,040	361
2033-34	3,025	493	152	275	3,091	4,040	275	4,136	371
2034-35	3,091	506	155	280	3,161	4,136	280	4,237	381
2035-36	3,161	520	159	285	3,237	4,237	285	4,344	392
2036-37	3,237	534	163	291	3,317	4,344	291	4,456	403
2037-38	3,317	549	167	297	3,401	4,456	297	4,573	414
2038-39	3,401	564	171	304	3,490	4,573	304	4,694	425

The balance of loans in default (principal only) was \$1,890 million at the beginning of the 2013-14 loan year and increased to \$2,099 million as at 31 July 2014. The defaulted loans portfolio is projected to reach \$3,490 million at the end of the projection period.

As shown in Table 10, there were no write-offs in 2013-14. The amount of write-offs in 2014-15 is \$218 million and includes all the non-recoverable loans that had reached the statute of limitations between June 2012 and June 2014. These write-offs were approved by the House of Commons on 24 March 2015. The decision to write off particular loans is part of a multi-step process inevitably resulting in some volatility in the actual amount written-off from year to year.

The allowance for bad debt – principal covers the risk of future defaults, net of recoveries. It corresponds to \$2,739 million as at 31 July 2014, which is lower than the \$3,063 million projected in the previous statutory report. This reduction is attributable to a lower future default rate and a higher future recovery rate combined with the projection of expected student payments while in school (prepayments that reduce the future risk of loss). For loan year 2013-14, the yearly expense for the allowance for bad debt – principal is \$26 million and corresponds to the difference between the new allowance of \$2,739 million and the total allowance of \$2,713 million at the end of the 2012-13 loan year.



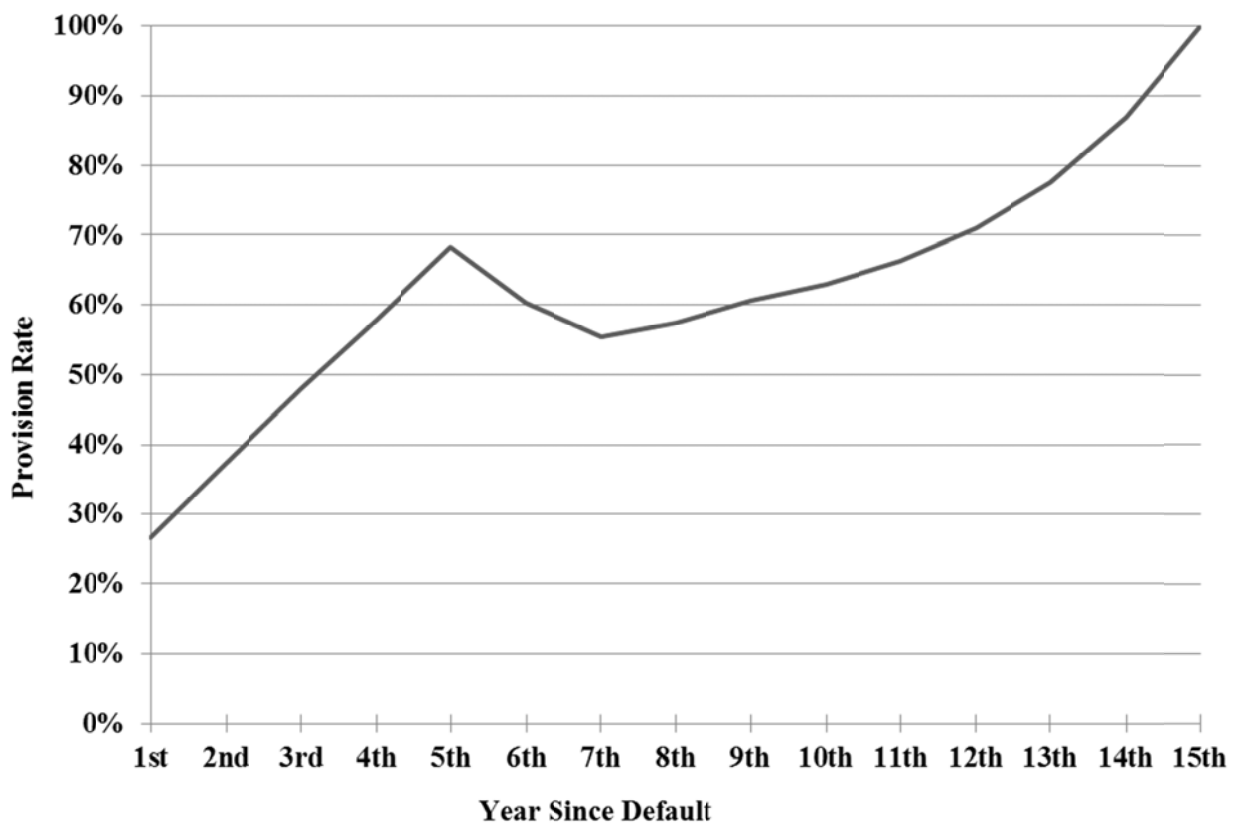
For Public Accounts purposes, ESDC should determine the allowance as at 31 March 2015 using the outstanding balance of portfolio and the corresponding provision rates for loan year 2014-15 according to the status of the loans as follows:

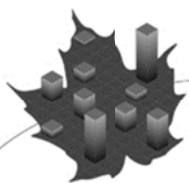
- 9.0% of the outstanding balance of loans in-study;
- 5.9% of the outstanding balance of loans in repayment; and
- 80.7% of the outstanding balance of loans in default.

The resulting allowance as at 31 March 2015 is \$2,746 million. The allowance can be determined at any month end through the loan year by using the outstanding balance of loans at that time and the above-mentioned provision rates.

*Allowance for Bad Debt – Interest:* In accordance with the collection practice, interest accrues on defaulted loans until they reach a “non-recoverable” status. A provision is set to cover the risk that such accrued interest will never be recovered. The methodology used is the same as in the previous statutory report. Provision rates are modified to take into account the recent experience. Chart 3 represents the set of provision rates according to the year since default.

**Chart 3 Provision Rates for Allowance for Bad Debt – Interest**





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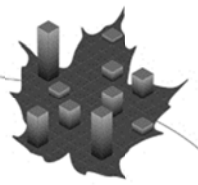
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**Table 11 Interest on Defaulted Loans and Allowance for Bad Debt – Interest**

Loan Year	Interest on Defaulted Loans					Allowance for Bad Debt – Interest				
	Balance August 1	Interest Transferred in Default	Interest Accrued	Interest Collected	Write-offs	Balance July 31	Allowance August 1	Write-offs	Allowance July 31	Yearly expense
	(1)	(2)	(3)	(4)	(5)	(1+2+3) - (4+5)	(1)	(2)	(3)	(3) - (1-2)
			(\$ million)					(\$ million)		
2013-14	279	15	98	62	-	331	182	-	228	46
2014-15	331	13	93	61	68	307	228	68	206	46
2015-16	307	14	100	63	51	307	206	51	205	50
2016-17	307	17	118	68	44	329	205	44	219	59
2017-18	329	19	132	75	44	361	219	44	241	65
2018-19	361	20	141	81	49	392	241	49	262	70
2019-20	392	21	150	87	53	424	262	53	283	74
2020-21	424	23	159	93	55	457	283	55	307	79
2021-22	457	23	165	99	59	487	307	59	329	82
2022-23	487	24	168	102	66	511	329	66	347	83
2023-24	511	24	172	106	70	531	347	70	362	85
2024-25	531	25	176	108	74	549	362	74	375	87
2025-26	549	25	179	111	77	564	375	77	387	89
2026-27	564	25	182	113	81	578	387	81	397	91
2027-28	578	26	186	116	84	590	397	84	405	92
2028-29	590	26	189	118	86	602	405	86	414	94
2029-30	602	27	192	120	87	614	414	87	422	96
2030-31	614	28	196	122	89	626	422	89	430	98
2031-32	626	28	200	125	91	638	430	91	438	99
2032-33	638	29	204	127	93	650	438	93	447	101
2033-34	650	30	209	130	95	664	447	95	456	104
2034-35	664	30	213	133	96	678	456	96	465	106
2035-36	678	31	218	136	98	693	465	98	475	108
2036-37	693	32	224	140	100	708	475	100	485	111
2037-38	708	33	229	143	102	725	485	102	497	114
2038-39	725	34	235	147	104	743	497	104	509	116

The projection of the balance of interest on defaulted loans is presented in Table 11. When the loan is transferred to the Government after nine months without a payment, it comes with an interest portion, representing generally a little more than nine months of interest accrued on the defaulted principal transferred. Table 11 shows that \$15 million of unpaid interest was returned to the Government in loan year 2013-14 along with the newly defaulted principal portion of the loans. An additional amount of \$98 million in interest was accrued during loan year 2013-14 on the principal balance of the recoverable defaulted loans portfolio at the beginning of the loan year. When some payments are recovered by the Canada Revenue Agency from borrowers in default, payments are first applied to interest. As such, an amount of \$62 million was recovered in loan year 2013-14. Finally, when a loan meets certain criteria and has exceeded the limitation period, the interest amounts are also considered for write-off. No interests were written off in loan year 2013-14. As shown in Table 11, the balance of interest in default was \$279 million at the beginning of loan year 2013-14 and increased to \$331 million as at 31 July 2014. The balance of interests in default is projected to increase to \$743 million by the end of the projection period.

The allowance for bad debt – interest on recoverable accounts is determined using the outstanding interest and a variable provision rate for each year since default. The provision rate is set at 26.7% of interest accrued in the first year after loans are transferred in default. The provision rate generally increases afterwards as shown in Chart 3.



The allowance for bad debt – interest corresponds to \$228 million as at 31 July 2014, which is lower than the \$247 million projected in the previous statutory report mainly due to higher than expected recovery rates. For loan year 2013-14, the yearly expense of \$46 million corresponds to the difference between the allowance of \$228 million as at 31 July 2014 and the total allowance at the end of loan year 2012-13, which was previously established at \$182 million.

For Public Accounts purposes, ESDC should determine the allowance as at 31 March 2015 using the outstanding balance of accrued interest on recoverable defaulted loans according to the age since default and the corresponding provision rate shown in Table 2. The resulting allowance as at 31 March 2015 is \$195 million.

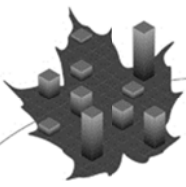
*Allowance for Repayment Assistance Plan– Principal:* Table 12 provides the details of the calculation for the projection of the allowance for the Repayment Assistance Plan (RAP) under the direct loan regime.

**Table 12 Allowance for Repayment Assistance Plan – Principal**

Loan Year	Allowance 1 August (\$ million)	RAP Expenses (\$ million)	Allowance 31 July (\$ million)	Yearly Expense (\$ million)
	(1)	(2)	(3)	(3) - (1-2)
2013-14	599	32	636	69
2014-15	636	42	692	98
2015-16	692	48	738	95
2016-17	738	55	782	99
2017-18	782	62	824	103
2018-19	824	68	862	106
2019-20	862	73	896	107
2020-21	896	78	925	106
2021-22	925	83	948	107
2022-23	948	87	970	108
2023-24	970	90	989	110
2024-25	989	93	1,008	112
2025-26	1,008	96	1,027	115
2026-27	1,027	99	1,047	118
2027-28	1,047	101	1,070	124
2028-29	1,070	103	1,090	124
2029-30	1,090	105	1,112	127
2030-31	1,112	107	1,135	130
2031-32	1,135	109	1,161	134
2032-33	1,161	111	1,189	138
2033-34	1,189	113	1,218	142
2034-35	1,218	115	1,250	146
2035-36	1,250	117	1,283	150
2036-37	1,283	120	1,318	154
2037-38	1,318	123	1,353	159
2038-39	1,353	126	1,390	163

Effective August 2009, the RAP replaced the Interest Relief (IR) and Debt Reduction in Repayment (DRR) measures. Table 12 shows the projection of the allowance for the principal portion of the required payment paid by the Government under Stage 2, including the RAP for borrowers with permanent disabilities (RAP-PD). For the RAP – interest, a provision is determined by ESDC for accounting purposes to take into account the timing of the interest accrued.

In this report, the experience data is used to project the expected expenses under the RAP-Stage 2 and the RAP-PD separately. As with the allowance for bad debt – principal, the methodology used to determine the provision rate for the RAP – principal is based on a snapshot



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of the portfolio at a given time and takes into account the status of the loans along with the corresponding level of risk for each status. The assumptions for the RAP utilization are presented in Appendix 4. The change in methodology and the updated assumptions result in a lower allowance compared with the previous statutory report. As shown in Table 12, the allowance for RAP – principal is \$636 million as at 31 July 2014, which is lower than the \$700 million projected in the previous statutory report. For the 2013-14 loan year, the yearly expense for the allowance for RAP – principal is \$69 million; it corresponds to the difference between the new allowance of \$636 million and the allowance of \$599 million at the end of the 2012-13 loan year, net of the portion of loans paid by the Government under the RAP-Stage 2 and RAP-PD, which totalled \$32 million in the 2013-14 loan year [ $\$69\text{M} = \$636\text{M} - (\$599\text{M} - \$32\text{M})$ ].

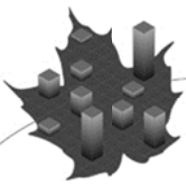
For the Public Accounts purpose, the allowance as at 31 March 2015 should be determined using the outstanding balance of portfolio and the corresponding provision rates according to the status of the loans as follows:

- 3.5% of balance of loans in-study;
- 0.9% of balance of loans in repayment (reduced by loans in the RAP – all stages); and
- 15.6% of balance of loans in the RAP (all stages).

The resulting allowance as at 31 March 2015 is \$727 million. Compared with loans in-study, the portfolio of loans in repayment includes cohorts of loans for which partial reimbursements have already occurred, as well as some defaults and utilization of the RAP assistance measure, resulting in a lower risk for the remaining loans and consequently a lower required provision rate. The highest risk related to the RAP is for the portfolio of loans already in the RAP. The provision rate for the portfolio of loans in the RAP (Stages 1, 2 and PD) is 15.6% for the 2014-15 loan year. As the RAP is still relatively new, the provision rates may require further adjustments in the future as experience emerges.







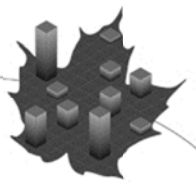
### 3. Limit on the Aggregate Amount of Outstanding Loans

The *Canada Student Financial Assistance Regulations* (CSFAR) impose a limit on the aggregate amount of outstanding loans in the CSLP. As of the date of this report (31 July 2014), the limit was set at \$19 billion (increased from the previous \$15 billion ceiling through an amendment to the CSFAR in March 2012). However, in May 2015, the limit was increased to \$24 billion.

Table 14 presents the projection of the aggregate amount of outstanding loans. The aggregate amount of outstanding direct loans includes the principal portion of all direct loans disbursed and not yet repaid, which consists of the total principal amount of loans in study, loans in repayment, and defaulted loans. The aggregate amount of outstanding risk-shared loans includes the principal portion of risk-shared student loans bought back by the Government from financial institutions. Collection activities are performed on these risk-shared loans by the Government.

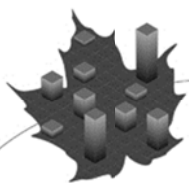
In comparison with Table 9, which shows the projection of the direct loan portfolio at the end of loan years, Table 14 presents the estimated peak of the portfolio during the loan year. Monthly fluctuations throughout the year cause the aggregate amount of loans to be lower both at the beginning and at the end of the loan year; the peak occurs in the middle of the loan year and is approximately 4% higher than the aggregate amount at the end of the loan year. Table 9 shows that, as at 31 July 2014, the aggregate amount of outstanding direct loans was \$16.1 billion. Table 14 shows that the highest aggregate amount of outstanding direct loans during loan year 2013-14 was \$16.7 billion (in January 2014).

In the previous statutory report, the projection showed that the \$19 billion limit would be reached in January 2021. Many assumptions underlie this projection, such as post-secondary enrolment projections, student need increase, repayment patterns, and expected write-offs. In order for the projections to be realized exactly as expected, future experience would need to develop exactly as predicted and the Program's provisions would need to remain unchanged. The experience in the loan years between statutory reports (2011-12 to 2013-14) was different than expected, especially for loans issued that were higher than expected. In addition, the population projection was updated based on the 26<sup>th</sup> Actuarial Report on the Canada Pension Plan as at 31 December 2012, the enrolment rate was updated based on the most recent trend observed, and modifications made by the Government to the need assessment process were considered. As a result, the current projections show that the \$19 billion limit would have been reached earlier. As shown in Table 14, the total portfolio will reach \$18.6 billion in January 2016 and \$19.4 billion in January 2017. Had the limit not been increased from \$19 billion to \$24 billion in May 2015, it would have been reached in the first half loan year 2016-17. However, according to the projections, the new limit of \$24 billion should only be reached in loan year 2024-25.



**Table 14 Aggregate Amount of Outstanding Student Loans**

Loan Year	Estimated Peak During the Loan Year (January)		Total
	Direct Loans	Risk-Shared Loans	
	(\$ million)	(\$ million)	(\$ million)
2013-14	16,660	119	16,778
2014-15	17,774	102	17,875
2015-16	18,477	86	18,564
2016-17	19,324	71	19,394
2017-18	20,142	58	20,200
2018-19	20,913	47	20,960
2019-20	21,603	38	21,641
2020-21	22,211	29	22,240
2021-22	22,749	22	22,771
2022-23	23,233	17	23,250
2023-24	23,679	13	23,692
2024-25	24,116	10	24,126
2025-26	24,563	7	24,571
2026-27	25,022	5	25,028
2027-28	25,504	4	25,508
2028-29	26,019	3	26,022
2029-30	26,569	2	26,571
2030-31	27,155	1	27,156
2031-32	27,791	-	27,791
2032-33	28,473	-	28,473
2033-34	29,195	-	29,195
2034-35	29,955	-	29,955
2035-36	30,751	-	30,751
2036-37	31,582	-	31,582
2037-38	32,443	-	32,443
2038-39	33,323	-	33,323



## D. Projection of the Net Cost of the Program

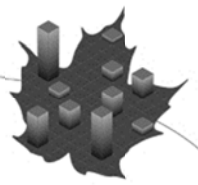
### 1. Student Related Expenses

The primary expense of the CSLP is the cost of supporting students during their study and repayment periods. This expense includes the interest subsidy, which corresponds to the cost of borrowing incurred by the Government while borrowers are in school, the interest portion of the Repayment Assistance Plan (RAP), the provision or expenses for the RAP – principal under the different regimes and the Canada Student Grants Program (CSGP). The CSGP was implemented in August 2009 and provides non-repayable assistance to targeted groups of students, including students from low- and middle-income families, students with permanent disabilities, and students with children under the age of 12.

**Table 15 Student Related Expenses**

Loan Year	Direct Loan			Risk-Shared and Guaranteed Loans		Canada Student Grants Program	Total
	Interest Subsidy	RAP – Interest	Provision RAP – Principal	Interest Subsidy	RAP – Interest and Principal		
		(\$ million)		(\$ million)		(\$ million)	(\$ million)
2013-14	164.8	135.3	69.0	0.4	11.1	715.2	1,095.9
2014-15	121.2	131.2	97.8	0.3	10.0	719.9	1,080.3
2015-16	145.6	148.5	94.5	0.2	8.6	729.0	1,126.4
2016-17	204.8	180.3	98.9	0.1	7.2	738.4	1,229.6
2017-18	254.3	208.0	103.3	0.1	6.1	745.6	1,317.5
2018-19	288.3	228.2	106.4	-	4.8	752.3	1,380.1
2019-20	317.2	245.8	107.5	-	3.8	751.5	1,425.7
2020-21	340.3	262.2	106.3	-	2.7	749.9	1,461.5
2021-22	350.3	271.7	106.7	-	1.9	750.7	1,481.3
2022-23	355.2	277.9	108.0	-	1.3	755.1	1,497.5
2023-24	360.8	283.3	109.8	-	0.9	762.3	1,517.1
2024-25	367.1	288.6	112.5	-	0.5	771.4	1,540.0
2025-26	373.9	293.8	115.2	-	0.3	780.8	1,564.0
2026-27	381.3	299.0	117.8	-	0.1	792.0	1,590.3
2027-28	389.3	305.1	124.4	-	0.1	805.2	1,624.1
2028-29	398.3	310.8	123.9	-	-	820.6	1,653.6
2029-30	407.9	316.8	126.7	-	-	836.8	1,688.2
2030-31	418.2	323.4	130.3	-	-	854.1	1,725.9
2031-32	429.4	330.5	134.4	-	-	875.0	1,769.2
2032-33	441.3	338.2	138.3	-	-	895.6	1,813.5
2033-34	453.7	346.6	142.3	-	-	916.3	1,858.8
2034-35	466.4	355.5	146.2	-	-	937.8	1,905.8
2035-36	479.5	364.9	150.2	-	-	960.2	1,954.8
2036-37	493.0	374.7	154.4	-	-	983.6	2,005.7
2037-38	506.8	385.0	158.7	-	-	1,007.1	2,057.5
2038-39	520.4	395.6	162.7	-	-	1,029.0	2,107.6

In loan year 2013-14, a total of \$715 million was disbursed under the CSGP. The total amount of grants is projected to increase to \$1,029 million at the end of the projection period. Monthly grant amounts are set in the *Canada Student Financial Assistance Regulations* and are assumed to remain constant for the entire projection period for the purpose of this evaluation.



## 2. Program Risk Expenses

Another expense for the Government is the risk involved in disbursing loans to students. Included in this section are the risk of loan default, the risk of loans being forgiven upon a student's death or severe permanent disability and the risk of loans being forgiven for family physicians and nurses practicing in under-served rural or remote communities.

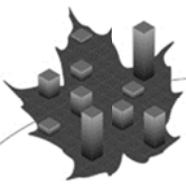
**Table 16 Risks to the Government**

Loan Year	Direct Loan		Risk-Shared	Guaranteed	Loans Forgiven (\$ million)	Total (\$ million)
	Provision for Bad Debt		Risk Premium, Put-Backs & Refunds to FIs (\$ million)	Claims for Defaulted Loans (\$ million)		
	Principal	Interest				
	(\$ million)					
2013-14	25.9	46.2	2.1	1.2	18.2	93.5
2014-15	245.9	45.8	1.6	0.8	24.1	318.2
2015-16	252.5	50.0	1.4	0.5	30.8	335.2
2016-17	259.6	58.7	1.3	0.4	37.7	357.7
2017-18	265.4	65.3	1.1	0.3	41.4	373.5
2018-19	271.1	69.9	0.9	0.2	43.2	385.2
2019-20	273.7	74.2	0.7	0.1	44.3	393.0
2020-21	275.8	78.8	0.5	0.1	45.2	400.4
2021-22	278.9	81.6	0.3	0.1	45.8	406.6
2022-23	283.2	83.5	0.2	-	46.4	413.3
2023-24	288.5	85.4	0.2	-	46.9	421.0
2024-25	294.6	87.2	0.1	-	47.3	429.1
2025-26	300.7	88.9	0.1	-	47.6	437.3
2026-27	294.9	90.6	-	-	47.9	433.5
2027-28	314.6	92.2	-	-	48.5	455.3
2028-29	322.8	93.9	-	-	49.2	466.0
2029-30	331.3	95.7	-	-	50.3	477.3
2030-31	340.3	97.5	-	-	51.7	489.5
2031-32	350.6	99.4	-	-	53.6	503.5
2032-33	360.7	101.4	-	-	55.6	517.7
2033-34	370.9	103.5	-	-	57.8	532.2
2034-35	381.3	105.8	-	-	60.2	547.3
2035-36	392.1	108.2	-	-	62.7	563.0
2036-37	403.2	110.8	-	-	65.3	579.3
2037-38	414.2	113.6	-	-	68.0	595.8
2038-39	424.6	116.5	-	-	70.9	611.9

Under the direct loan regime, the provisions for bad debt (principal and interest) represent the cost of the risk to the Government of being involved directly in the disbursement of loans to students.

Under the risk-shared regime, the risk premium represents the amount paid to lending institutions by the Government based on the value of loans consolidated for repayment in a year. Also included are put-back fees and refunds to financial institutions for loans bought back by the Government.

Put-back fees exist only in the risk-shared arrangement as a way to transfer some of the risk back to the Government. According to the agreement, the Government is only obligated to buy back loans in default for at least 12 months and up to a maximum of 3% of the total loans in repayment with the financial institution each year. Financial institutions decide whether to sell defaulted loans, and if so, which ones to sell. The Government pays a put-back fee of five cents on the dollar for these loans.



The entire amount of recoveries on student loans bought back in the risk-shared regime is considered revenue in Table 18. According to the agreement, amounts recovered from income tax refunds are shared with the financial institutions. The participating financial institutions receive a refund of 75% of the amount recovered from income tax refunds in excess of the put-back fees.

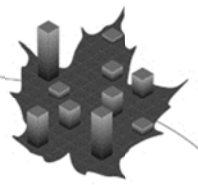
For the guaranteed regime, defaulted loans are included in claims paid as a statutory expense since the Government bears the entire risk of defaulted loans under this regime. In the Public Accounts, guaranteed loans are classified as assets for which provisions for loan guarantees and loans in default are set up.

Loans forgiven correspond to loans that are forgiven (principal only) following the death or severe permanent disability of a borrower during the period of study, repayment, or even after the loan has been transferred to default status. As of August 2009, loans forgiven for disability are limited to borrowers who, due to their severe permanent disability, are unable to pay their loans and will never be able to repay them. Borrowers with a permanent disability who do not qualify for loans forgiveness could be eligible for the RAP for Borrowers with Permanent Disabilities (RAP-PD). Experience has shown a decrease in loan forgiveness and an increase in RAP-PD. Loans forgiven shown in Table 16 also include the projection of forgiveness of a portion of loans for family physicians and nurses who practice in under-served rural or remote communities. This new measure was implemented on 1 January 2013.

### **3. Other Expenses**

Alternative payments are made directly to Québec, the Northwest Territories, and Nunavut, which do not participate in the CSLP.

The administrative expenses include the fees paid to the participating provinces and Yukon Territory as well as general administrative fees. Fees are paid to the participating provinces and Yukon Territory to administer certain aspects of the CSLP. The general administrative fees represent the expenses incurred by the departments involved and fees paid to service providers. The Canada Revenue Agency (CRA) is responsible for all collection activities on defaulted loans and a cost is included in the projected general administrative fees for this purpose.

**Table 17 Summary of Expenses**

Loan Year	Student Related Expenses	Risks to the Government	Alternative Payments <sup>1</sup>	Administrative Expenses		Total Expenses
				Fees Paid to Provinces	General	
	(\$ million)	(\$ million)	(\$ million)	(\$ million)		(\$ million)
2013-14	1,095.9	93.5	277.7	28.9	136.3	1,632.3
2014-15	1,080.3	318.2	315.2	29.5	138.4	1,881.7
2015-16	1,126.4	335.2	299.4	30.2	141.3	1,932.5
2016-17	1,229.6	357.7	313.2	31.1	143.9	2,075.5
2017-18	1,317.5	373.5	338.0	32.0	148.2	2,209.2
2018-19	1,380.1	385.2	357.2	33.0	152.8	2,308.3
2019-20	1,425.7	393.0	369.8	34.0	157.6	2,380.2
2020-21	1,461.5	400.4	379.6	35.1	162.7	2,439.4
2021-22	1,481.3	406.6	387.6	36.3	167.9	2,479.8
2022-23	1,497.5	413.3	390.9	37.4	173.4	2,512.4
2023-24	1,517.1	421.0	393.1	38.6	178.9	2,548.7
2024-25	1,540.0	429.1	398.2	39.9	184.7	2,592.0
2025-26	1,564.0	437.3	406.8	41.2	190.7	2,639.9
2026-27	1,590.3	433.5	417.0	42.5	196.8	2,680.1
2027-28	1,624.1	455.3	428.8	43.9	203.2	2,755.2
2028-29	1,653.6	466.0	442.7	45.3	209.7	2,817.2
2029-30	1,688.2	477.3	458.0	46.7	216.5	2,886.7
2030-31	1,725.9	489.5	475.1	48.3	223.5	2,962.3
2031-32	1,769.2	503.5	492.1	49.8	230.7	3,045.3
2032-33	1,813.5	517.7	508.2	51.4	238.1	3,128.9
2033-34	1,858.8	532.2	522.1	53.1	245.8	3,211.8
2034-35	1,905.8	547.3	534.4	54.8	253.7	3,296.0
2035-36	1,954.8	563.0	545.3	56.5	261.9	3,381.4
2036-37	2,005.7	579.3	556.1	58.4	270.3	3,469.8
2037-38	2,057.5	595.8	566.0	60.3	279.0	3,558.6
2038-39	2,107.6	611.9	575.9	62.2	288.0	3,645.8

As shown in Table 17, total expenses associated with the Program increase from \$1.6 billion in 2013-14 to \$3.6 billion in 2038-39. On average, total expenses increase at a rate of 3.3% per year from 2013-14 to 2038-39.

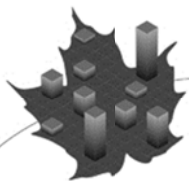
#### 4. Total Revenue

As shown in Table 18, revenues for the direct loan regime come from the interest earned from student loans in repayment, which includes the interest accrued during the six-month grace period following the study end date, the interest accrued on defaulted loans and the interest portion of the RAP. This interest earned is net of interest on loans forgiven. The revenues are reduced by the Government's cost of borrowing for loans in repayment and in default (only for the interest accrued expected to be recovered). The difference results in net interest revenues. It is worth noting that the interest on defaulted direct loans is accrued until the status of the loans becomes "non-recoverable".

Under the guaranteed and risk-shared regimes, there is no interest earned by the Government since students in good-standing pay interest directly to financial institutions. The only source of revenue from these regimes comes from recoveries of principal and interest from defaulted loans owned by the Government.

On average, total revenues increase at a rate of 3.0% per year between 2013-14 and 2038-39.

<sup>1</sup> The calculation of alternative payments is based on expenses and revenues for a given loan year and the payment is accounted for in the following loan year.



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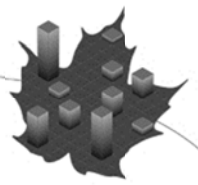
## CANADA STUDENT LOANS PROGRAM

as at 31 July 2014

**Table 18 Total Revenue**

Loan Year	Direct Loan			Risk-Shared	Guaranteed	Total Revenues
	Student Interest Earned	Borrowing Cost	Net Interest Revenues	Principal and Interest from Recovery	Principal and Interest from Recovery	
	(\$ million)		(\$ million)	(\$ million)	(\$ million)	(\$ million)
2013-14	590.9	-205.0	386.0	6.4	13.7	406.0
2014-15	557.3	-158.2	399.1	5.5	11.5	416.2
2015-16	623.4	-198.2	425.2	4.8	9.4	439.4
2016-17	750.7	-288.5	462.2	4.5	7.4	474.2
2017-18	862.6	-369.2	493.4	3.7	4.3	501.3
2018-19	944.5	-428.7	515.8	3.0	3.1	522.0
2019-20	1,018.1	-482.0	536.1	2.5	2.2	540.8
2020-21	1,087.8	-527.9	559.9	1.9	1.5	563.3
2021-22	1,129.0	-552.1	576.9	1.0	0.6	578.5
2022-23	1,155.8	-565.6	590.2	0.7	0.4	591.4
2023-24	1,179.1	-576.8	602.3	0.6	0.1	603.0
2024-25	1,201.3	-587.5	613.8	0.4	0.1	614.3
2025-26	1,223.4	-598.1	625.4	0.3	-	625.7
2026-27	1,245.6	-608.6	637.0	0.1	-	637.1
2027-28	1,268.6	-619.6	649.0	0.1	-	649.1
2028-29	1,292.8	-631.1	661.7	-	-	661.7
2029-30	1,318.6	-643.4	675.2	-	-	675.2
2030-31	1,346.2	-656.6	689.6	-	-	689.6
2031-32	1,375.9	-670.9	705.0	-	-	705.0
2032-33	1,408.0	-686.4	721.6	-	-	721.6
2033-34	1,442.5	-703.1	739.4	-	-	739.4
2034-35	1,479.0	-720.9	758.1	-	-	758.1
2035-36	1,517.6	-739.8	777.8	-	-	777.8
2036-37	1,558.0	-759.5	798.5	-	-	798.5
2037-38	1,600.2	-780.2	820.0	-	-	820.0
2038-39	1,643.9	-801.5	842.4	-	-	842.4





## 5. Net Cost of the Program

Table 19 shows total expenses, total revenues, and the total net cost of the Program in current dollars for the 25-year projection period, while Table 20 shows the same statistics expressed in 2014 constant dollars. The expenses and revenues shown correspond to values presented earlier in this report.

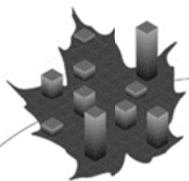
**Table 19 Net Annual Cost of the Program**

Loan Year	All Regimes			Net Cost of the Program	
	Total Expenses	Total Revenues	Total Net Cost of the Program	Direct Loan	Risk-Shared & Guaranteed
	(\$ million)		(\$ million)	(\$ million)	
2013-14	1,632.3	406.0	1,226.3	1,230.6	-4.3
2014-15	1,881.7	416.2	1,465.5	1,469.0	-3.5
2015-16	1,932.5	439.4	1,493.0	1,495.9	-2.8
2016-17	2,075.5	474.2	1,601.4	1,603.7	-2.4
2017-18	2,209.2	501.3	1,707.8	1,707.9	0.0
2018-19	2,308.3	522.0	1,786.3	1,786.2	0.1
2019-20	2,380.2	540.8	1,839.5	1,839.2	0.3
2020-21	2,439.4	563.3	1,876.1	1,875.9	0.2
2021-22	2,479.8	578.5	1,901.3	1,900.5	0.8
2022-23	2,512.4	591.4	1,921.1	1,920.6	0.5
2023-24	2,548.7	603.0	1,945.7	1,945.3	0.4
2024-25	2,592.0	614.3	1,977.7	1,977.6	0.1
2025-26	2,639.9	625.7	2,014.2	2,014.2	0.0
2026-27	2,680.1	637.1	2,043.0	2,042.9	0.1
2027-28	2,755.2	649.1	2,106.1	2,106.1	-
2028-29	2,817.2	661.7	2,155.5	2,155.5	-
2029-30	2,886.7	675.2	2,211.5	2,211.5	-
2030-31	2,962.3	689.6	2,272.6	2,272.6	-
2031-32	3,045.3	705.0	2,340.4	2,340.4	-
2032-33	3,128.9	721.6	2,407.3	2,407.3	-
2033-34	3,211.8	739.4	2,472.5	2,472.5	-
2034-35	3,296.0	758.1	2,537.8	2,537.8	-
2035-36	3,381.4	777.8	2,603.6	2,603.6	-
2036-37	3,469.8	798.5	2,671.3	2,671.3	-
2037-38	3,558.6	820.0	2,738.5	2,738.5	-
2038-39	3,645.8	842.4	2,803.4	2,803.4	-

As shown in Table 19, the initial net annual cost for the direct loan regime is \$1.2 billion for loan year 2013-14 and reaches \$2.8 billion in loan year 2038-39. This represents an annual average increase of 3.3% for the entire projection period.

It is important to specify that this net cost includes grants disbursed under the CSGP. The amount of grants disbursed is \$715 million in 2013-14, representing 58% of the net cost in 2013-14. Moreover, the net cost also includes yearly expenses to account for provisions which recognize in advance the risk of future losses associated with student loans.

In 2014 constant dollars (Table 20), the cost of the direct loan regime increases, on average, by 1.4% a year from \$1.2 billion at the beginning to \$1.7 billion at the end of the projection period.



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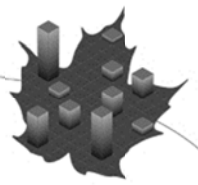
## CANADA STUDENT LOANS PROGRAM

as at 31 July 2014

**Table 20 Net Annual Cost of the Program (in millions of 2014 constant dollars)<sup>1</sup>**

Loan Year	All Regimes		Total Net Cost of the Program	Net Cost of the Program	
	Total Expenses	Total Revenues		Direct Loan	Risk-Shared & Guaranteed
	(\$ million)		(\$ million)	(\$ million)	
2013-14	1,632.3	406.0	1,226.3	1,230.6	-4.3
2014-15	1,859.3	411.2	1,448.1	1,451.5	-3.5
2015-16	1,881.4	427.8	1,453.6	1,456.3	-2.8
2016-17	1,981.4	452.7	1,528.7	1,531.0	-2.3
2017-18	2,067.6	469.2	1,598.4	1,598.4	0.0
2018-19	2,118.0	479.0	1,639.0	1,638.9	0.1
2019-20	2,141.2	486.4	1,654.7	1,654.5	0.2
2020-21	2,151.3	496.8	1,654.6	1,654.4	0.1
2021-22	2,144.1	500.2	1,643.9	1,643.2	0.7
2022-23	2,129.8	501.3	1,628.5	1,628.1	0.4
2023-24	2,118.1	501.1	1,617.0	1,616.6	0.3
2024-25	2,111.9	500.5	1,611.4	1,611.3	0.1
2025-26	2,108.7	499.8	1,608.9	1,608.9	-
2026-27	2,098.9	498.9	1,599.9	1,599.9	-
2027-28	2,115.4	498.4	1,617.0	1,617.0	-
2028-29	2,120.6	498.1	1,622.5	1,622.5	-
2029-30	2,130.3	498.3	1,632.0	1,632.0	-
2030-31	2,143.2	498.9	1,644.2	1,644.2	-
2031-32	2,160.1	500.0	1,660.0	1,660.0	-
2032-33	2,175.8	501.8	1,674.0	1,674.0	-
2033-34	2,189.7	504.1	1,685.6	1,685.6	-
2034-35	2,203.0	506.7	1,696.3	1,696.3	-
2035-36	2,215.8	509.7	1,706.1	1,706.1	-
2036-37	2,229.1	513.0	1,716.2	1,716.2	-
2037-38	2,241.3	516.5	1,724.8	1,724.8	-
2038-39	2,251.2	520.1	1,731.1	1,731.1	-

<sup>1</sup> For a given year, the value in 2014 constant dollars is equal to the corresponding value divided by the cumulative index of the Consumer Price Index (CPI) for that year.



### III. Conclusion

The Canada Student Loans Program (CSLP) promotes accessibility to post-secondary education for those with demonstrated financial need by providing loans and grants, thereby encouraging successful and timely completion of post-secondary education. In accordance with section 19.1 of the *Canada Student Financial Assistance Act* (CSFAA), the Chief Actuary of the Office of the Superintendent of Financial Institutions shall prepare a report on the financial assistance provided under this Act no later than three years apart. The most recent statutory Actuarial Report on the CSLP was prepared as at 31 July 2011. This report is prepared as at 31 July 2014.

During the 2013-14 loan year, 498,000 students received a loan for a total amount of new loans issued of \$2,721 million. The amount of new loans issued is projected to increase from \$2,735 million in 2014-15 to \$4,682 million in 2038-39. During the 2013-14 loan year, 367,000 students received a grant under the Canada Student Grants Program (CSGP) for a total of \$715 million. The amount of grants disbursed is projected to increase from \$720 million in 2014-15 to \$1,029 million in 2038-39.

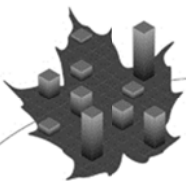
The direct loan portfolio increases from \$16.1 billion in 2013-14 to \$31.8 billion in 2038-39. According to the projections, had the \$19 billion limit on the aggregate amount of direct outstanding loans not been increased to \$24 billion in May 2015, it would have likely been reached in the first half of the 2016-17 loan year. The total net cost of the Government's involvement in the CSLP, which is the difference between expenses and revenues, is expected to grow from \$1.2 billion in 2013-14 to \$2.8 billion at the end of the projection period.

Recent experience shows lower defaults and higher recoveries than expected. Consequently, the future default rate, net of recoveries, decreases from 11.8% of consolidations in the previous statutory report to 10.2%. The allowance for bad debt – principal covers the risk of future default, net of recoveries. It corresponds to \$2,739 million as at 31 July 2014, which is lower than the \$3,063 million projected in the previous statutory report.

The allowance for bad debt – interest covers the risk that the interest accrued on defaulted loans will never be recovered. It corresponds to \$228 million as at 31 July 2014, which is lower than the \$247 million projected in the previous statutory report.

The allowance for the Repayment Assistant Plan (RAP) – Principal recognizes that part of the loan principal of students benefiting from RAP-Stage 2 and RAP PD-will be paid by the Government. It corresponds to \$636 million as at 31 July 2014, which is lower than the \$700 million projected in the previous statutory report.

Overall, there is a reduction of around \$410 million for the three allowances as at 31 July 2014 compared with the projections in the previous statutory report.



## ACTUARIAL REPORT

### CANADA STUDENT LOANS PROGRAM

as at 31 July 2014

#### IV. Actuarial Opinion

In compliance with the standards of practice of the Canadian Institute of Actuaries, we are hereby giving the opinion that,

- the data on which this report is based are sufficient and reliable;
- the demographic and economic assumptions used are, in aggregate, appropriate; and
- the valuation conforms with the requirements of the Public Sector Accounting Handbook of the Chartered Professional Accountants Canada.

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

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Jean-Claude Ménard, F.S.A., F.C.I.A.  
Chief Actuary

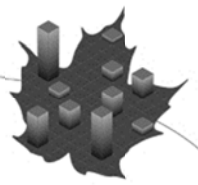
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Michel Millette, F.S.A., F.C.I.A.  
Senior Actuary

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Annie St-Jacques, F.S.A., F.C.I.A.  
Actuary

Ottawa, Canada  
26 June 2015



## Appendix 1 – Summary of Program Provisions

The Canada Student Loans Program (CSLP) came into force on 28 July 1964 to provide Canadians equal opportunity to study beyond the secondary level and to encourage successful and timely completion of post-secondary education. The Government became involved to assist students with the financing of post-secondary education. The CSLP is meant to supplement resources available to students from their own earnings, their families, and other student awards.

Historically, two successive acts were established to assist qualifying students. The first one was the *Canada Student Loans Act* (CSLA) that applied to loan years preceding August 1995. It was replaced by the *Canada Student Financial Assistance Act* (CSFAA) for loan years starting after July 1995. Under both acts, the Minister of Employment and Social Development was given permission to provide loans to eligible students under the CSLP.

### 1. Eligibility Criteria

In order to be eligible for a student loan, a student must be a Canadian citizen, permanent resident or protected person within the meaning of the *Immigration and Refugee Protection Act*, and must demonstrate the need for financial assistance. A student must also fulfill a series of criteria (scholastic standard and financial) to be considered for a loan. Each year, upon application to their province of residence, loans are available to full-time students regardless of age, and since 1983, loans are also available to part-time students.

Budget 2011 expanded eligibility for full- and part-time post-secondary students. The in-study income exemption for full-time students was doubled (from \$50 per week to \$100 per week), whereas the income eligibility threshold for part-time students for a Canada Student Loan and a Canada Student Grant was increased. These enhancements have been in force in all participating provinces and territory since August 2012.

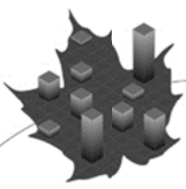
Budget 2014 proposed to eliminate the value of student-owned vehicles from the CSLP assessment process to better reflect the needs of students who commute or work while studying. Most jurisdictions will implement the change beginning in the 2014-15 loan year.

Budget 2015 proposes to reduce the expected parental contribution and to eliminate students' in-study income from the need assessment process. These changes, expected to start in loan year 2016-17, are not considered in the projections shown in this report.

A multi-year student financial assistance agreement was implemented in all jurisdictions starting in the 2013-14 loan year. It is referred to as a Master Student Financial Assistance Agreement (MSFAA) and replaces the former single-year student loan agreement. By signing an MSFAA, a borrower also agrees to repayment terms that will apply to their loans when they leave their studies.

### 2. Partnerships

Since the Program's inception in 1964, the Minister has delegated powers, under both appropriate acts, to the participating provinces/territory to administer the CSLP. The participating provinces have their own student financial assistance programs that complement the CSLP. On behalf of the Government of Canada, the provinces and territory determine whether students require financial assistance as well as their eligibility for the CSLP. Provincial/territorial authorities determine the students' required financial needs based on the difference between their expected expenses and available resources. In general, for each school year, the CSLP covers around 60% of the assessed need up to a maximum of \$210 per week. The participating



provinces complement the CSLP by providing the remaining 40% of the assessed need up to the province's weekly loan limit. The amount of money students may borrow depends on their individual circumstances.

The National Student Loans Service Centre (NSLSC) was established on 1 March 2001 to assist students with questions related to the CSLP. Once students qualify for a loan, they obtain their loans from the Government of Canada. The NSLSC receives and processes all applicable documentation from the loans' disbursement to their consolidation and repayment. It also keeps the students informed of all available options to assist in repaying the loan.

The type of financial arrangement has varied through time and legislation. The following describes these different arrangements and who bears the risk associated with default.

- **Guaranteed Loan Regime:** Student loans provided by lenders (financial institutions) under the *Canada Student Loans Act* prior to August 1995 were fully guaranteed by the Government to the lenders. The Government reimbursed lenders for the outstanding principal, accrued interest, and costs in the event of default or death of the borrower. Therefore, the Government bore all the risk involved with guaranteed loans.
- **Risk-Shared Loan Regime:** Between August 1995 and July 2000, student loans continued to be disbursed, serviced and collected by financial institutions; however, the loans were no longer fully guaranteed by the Government. Instead, the *Canada Student Financial Assistance Act* permitted the Government to pay financial institutions a risk premium of five per cent of the value of loans that consolidated each loan year. Under this financial arrangement, the Government was not at risk except for the payment of the risk premium. Financial institutions could also decide to sell a certain amount of defaulted loans and the Government had to pay a put-back fee of five cents on the dollar for these loans. Finally, the agreement provided that part of the recoveries be shared with financial institutions.
- **Direct Loan Regime:** The direct loan arrangement came into force, effective 1 August 2000, following the restructuring of the delivery of the Program and the amendments made to the *Canada Student Financial Assistance Act* and Regulations. Under this regime, the Government issues loans directly to students and bears all the risk involved.

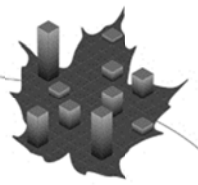
The Government of Canada currently has integration agreements in place with five provinces: Ontario (August 2001), Saskatchewan (August 2001), Newfoundland and Labrador (April 2004), New Brunswick (May 2005), and British Columbia (August 2011). Students in integrated provinces benefit from having one single, integrated loan product, and are not required to manage two separate (federal and provincial) loans.

### 3. Loan Benefit

#### a) In-study Interest Subsidy

The CSLP provides an interest-free loan during the borrower's study period. The benefit takes the form of an in-study interest subsidy. During this period, the Government pays interest (Government's cost of borrowing) on the loan and no payment on the principal is required.

Before 2012, interest accrued on loans for part-time students while they were studying; however, payments (both principal and interest) could be deferred until six months following the completion of their studies. Further to Budget 2011, the Act was amended to eliminate the in-



study interest on Canada student loans for part-time students, aligning part-time and full-time loans. This change came into force on 1 January 2012.

Since June 2008, members of the Reserve Force who interrupt their program of study to serve on a designated operation are considered full-time students until the last day of the month in which their service ends and, as such, benefit from an extended in-study interest-free period.

#### b) Loan Consolidation

At the end of the study period, during the six-month grace period, all loans previously received by a student are added together and consolidated. During this period, interest accrues on the loan(s) but no payment is required. With the implementation of the MSFAA, the *Canada Student Financial Assistance Regulations* were amended to remove the regulatory requirement that borrowers sign a consolidation agreement. Repayment terms are part of the MSFAA and a repayment letter is sent to borrowers upon leaving their studies. The letter provides information on their CSL balance, repayment options and available repayment assistance measures. Since July 1995, the interest rate used to calculate the monthly payment is equal to the prime rate plus 250 basis points for most students.

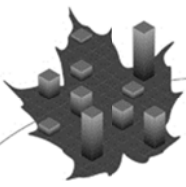
Students must provide their financial institution or the NSLSC with a proof of enrolment for each study period in which they are enrolled even if they are not applying for a new loan. This prevents an automatic consolidation from occurring while they are still in school and it prevents interest from accruing on the loan.

#### c) Repayment Assistance

In 1983, the Government introduced a repayment assistance measure in the form of an Interest Relief to assist students experiencing financial difficulty repaying their loan. The Government assumed the responsibility for making interest payments on the outstanding loan and no principal payments were required. This measure was improved over time. Between 1998 and 2009, a borrower in financial difficulty could be awarded a total of 30 months of Interest Relief during the repayment period. If the borrower was still within the first five year period after the end of studies when the 30 months ended, he could be awarded an additional 24 months of interest relief. In determining eligibility for Interest Relief, a borrower's monthly family income had to fall below an established income threshold in relation to the required monthly payment on the loan.

In 1998, the Government introduced the Debt Reduction in Repayment (DRR) measure to help students who remained in financial difficulty after all possible Interest Relief measures had been exhausted. Between 2005 and 2009, the principal loan reductions corresponded to two reductions of up to \$10,000 each and a third reduction of up to \$6,000. To determine whether the previous reduction had resulted in a manageable debt level, twelve months had to have elapsed between each reduction.

Starting with the 2009-10 loan year, the Repayment Assistance Plan (RAP) replaces the Interest Relief and DRR measures. The RAP is designed to make it easier for borrowers to manage their debt by calculating affordable payments (\$0 for those under the established minimum income threshold, or from 1% to 20% of family income for those above the established minimum income threshold) based on family income and family size. Borrowers are deemed eligible for the RAP for a six-month period if their affordable payment is less than their required monthly payment. The RAP is composed of two stages to help borrowers fully repay their loan within 15 years of leaving school (or 10 years for borrowers with a permanent disability).



Under Stage 1, the required monthly payment is determined by amortizing a borrower's outstanding principal amount over a period that ends 120 months after he ceased to be a student. The borrower's monthly affordable payment, if any, goes directly towards the loan principal, while the Government covers the interest amount not covered by the affordable payment. The principal portion of the loan not covered by the affordable payment is deferred similar to the former Interest Relief measure. Stage 1 can last for a maximum of five years in cumulative six-month periods.

Stage 2 is available to borrowers who continue to experience financial difficulty after Stage 1 has been exhausted and to those whose loan has been in repayment for more than 10 years. Under Stage 2, the required payment is calculated by reamortizing the outstanding principal between the start date of Stage 2 and the date corresponding to 15 years after the borrower left school (10 years for borrowers with a permanent disability). The Government covers both the required principal amount and the interest amount not covered by the borrower's affordable payment such that the student loan is repaid in full within 15 years (10 years for borrowers with a permanent disability) of the borrower leaving school.

Borrowers with a permanent disability who are not eligible for loan forgiveness have access to the RAP-PD. Additional expenses related to costs that permanently disabled borrowers face are taken into account in the income calculation and the borrower proceeds directly to Stage 2 of the RAP.

#### d) Loan Forgiveness

The Minister has the authority, upon application and qualification, to forgive the loan in the event of a borrower's severe permanent disability or death while in school or during the repayment period. Effective 1 August 2009, in order for a borrower's loan to be forgiven due to a permanent disability, the Minister must be satisfied that the borrower's condition respects the definition of "severe permanent disability", is unable to repay the student loan, and will never be able to repay it.

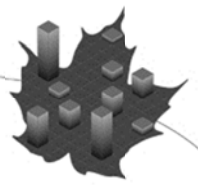
Effective 1 January 2013, a portion of student loans allocated to family physicians (including residents in family medicine programs), nurses and nurse practitioners who work during a year in an under-served rural or remote community can be forgiven for that year. Qualifying family physicians are eligible for up to \$8,000 of loan forgiveness per year to a maximum of \$40,000 over five years. Qualifying nurses are eligible for up to \$4,000 (of loan forgiveness) per year to a maximum of \$20,000 over five years. Qualifying participants who started their current employment in under-served communities on or after 1 July 2011, and who complete a year of work (starting on or after 1 April 2012), are eligible for loan forgiveness.

#### **4. Canada Student Grants Program (CSGP)**

Canada Study Grants were introduced in 1995 as non-repayable grants administered by the participating provinces on the Government's behalf. These grants were taxable and assisted students with permanent disabilities, high-need part-time students, women pursuing certain doctoral studies, and students with dependents. Canada Access Grants were then introduced in the 2005-06 loan year and included grants for students from low-income families as well as grants for students with permanent disabilities.

The CSGP that was implemented in August 2009, provides non-repayable assistance to targeted groups of students, including students from low- and middle-income families, students with permanent disabilities, and students with children under the age of 12. This program includes



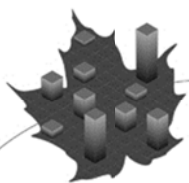


seven permanent grants as well as a temporary transition grant for former Canada Millennium Scholarship Foundation (CMSF) bursary recipients. The last transition grants were paid during loan year 2011-12.

Budget 2015 proposes to expand the eligibility for the low- and middle-income Canada Student Grants to students in educational programs with a minimum duration of 34 weeks. This change, expected to start in 2016-17, is not considered in the projections shown in this report. As of 31 July 2014, the Canada Student Grants include:

- A grant of \$250 per month of study for full-time university undergraduate or college students from low-income families. Note: to be eligible, a student's academic program must be at least two years (minimum of 60 weeks) in duration.
- A grant of \$100 per month of study for full-time university undergraduate or college students from middle-income families. Note: to be eligible, a student's academic program must be at least two years (minimum of 60 weeks) in duration.
- A grant of \$2,000 per school year for students with permanent disabilities.
- A grant of up to \$8,000 per school year to help cover exceptional education-related costs associated with a student's permanent disability.
- A grant of \$200 per month of full-time study, per dependent child under the age of 12.
- A grant of up to \$1,200 per year for part-time students from low-income families.
- A grant for part-time students with dependants of \$40 per week of study for students with one or two children under 12 years of age and \$60 per week of study for students with three or more children under 12 years of age, up to a maximum of \$1,920.

The grant amounts are stated in the *Canada Student Financial Assistance Regulations*. The low- and middle-income thresholds are based on family size and province of residence and are set out in Table 1 and Table 2 of Schedule 3 of the Regulations.



## Appendix 2 – Data

The input data required with respect to direct loans were extracted from data files provided by Employment and Social Development Canada (ESDC).

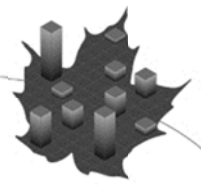
### 1. Direct Loans Issued

Table 21 presents a comparison of the data extracted from ESDC’s files on the number of students and the amount of direct loans issued for loan years 2000-01 to 2013-14 with ESDC’s publicized data. These data were found to be complete.

**Table 21 Direct Loans Issued and Number of Students**

Loan Year	Amount of Loans Issued		Number of Students	
	ESDC File	ESDC Publication	ESDC File	ESDC Publication
		(\$ million)		
2000-01	1,573	1,570	343,746	346,568
2001-02	1,507	1,512	328,671	331,541
2002-03	1,549	1,549	331,042	331,763
2003-04	1,648	1,648	342,264	342,982
2004-05	1,633	1,633	339,204	339,828
2005-06	1,936	1,939	345,549	345,765
2006-07	1,916	1,931	344,214	345,124
2007-08	2,004	2,015	353,548	354,144
2008-09	2,071	2,081	366,145	366,788
2009-10	2,088	2,088	403,566	404,432
2010-11	2,225	2,226	427,054	428,549
2011-12	2,412	2,412	450,246	450,314
2012-13	2,583	2,583	477,394	477,487
2013-14	2,721	2,721	497,636	497,725

According to the Monthly Financial Information Schedule (MFIS), the total amount of loans issued in 2013-14 rounded to the million was \$2,721, which is identical to the value calculated using the data file.



## 2. Direct Loans Consolidated

Table 22 presents the amount of consolidated direct loans, the amounts that were reversed due to a return to school and the accrued interest during the 6-month grace period according to the MFIS. It remains a challenge to reconcile the data extracted from ESDC's data file with the MFIS due to a number of factors such as the tracking of borrowers returning to school and the treatment of data for loans that were in repayment at the time of provincial and federal integration. Amounts from the MFIS were used for modelling purposes.

**Table 22 Direct Loans Consolidated**

Loan Year	Amounts from the MFIS			
	Consolidations	Reversal	Interest Accrued	Total Amount Consolidated
	(1)	(2)	(3)	(1) - (2) + (3)
			(\$ million)	
2000-01	65.7	4.1	0.7	62.2
2001-02	901.0	154.9	26.0	772.2
2002-03	1,211.9	262.7	39.6	988.8
2003-04	1,434.3	326.6	43.7	1,151.4
2004-05	1,632.6	388.4	52.6	1,296.7
2005-06	1,720.0	435.4	61.8	1,346.4
2006-07	1,936.3	499.8	82.7	1,519.3
2007-08	2,100.8	571.8	90.4	1,619.3
2008-09	2,187.5	638.2	74.8	1,624.0
2009-10	2,302.3	703.3	54.9	1,654.0
2010-11	2,464.8	762.0	65.3	1,768.1
2011-12	2,580.8	799.9	72.1	1,852.9
2012-13	2,684.9	801.3	75.0	1,958.6
2013-14	2,797.6	788.3	78.8	2,088.2

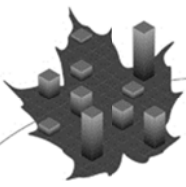
## 3. Defaults and Recoveries for Direct Loans

Table 23 shows the main items of the defaulted loans portfolio (principal only). This information is extracted from ESDC's data files.

- Defaults: amount of loans transferred to the Government in each loan year after nine months without a payment;
- Account adjustments: loans recalled and financial adjustments made by ESDC;
- Rehabilitations: amount of loans rehabilitated under certain criteria;
- Recoveries: payments recovered by the Canada Revenue Agency from borrowers in default;
- Write-offs: amounts approved for write-off when a loan meets certain criteria and has exceeded the limitation period.

Adjustments, rehabilitations, recoveries and write-offs shown in Table 23 represent the amounts recorded in each loan year, regardless of the time of default. For example, in loan year 2013-14, there were \$113.0 million in recoveries. This amount includes recoveries for loans that could have been transferred in default in any loan year from 2000-01 up to now.

Table 23 shows that the balance of the portfolio in default is \$2,098.8 million as at 31 July 2014 based on the information extracted from the data file. There is a difference between the balance determined in the DARS data file received and the balance shown in the "Detailed Age Analysis by Account Status" table provided by ESDC. As at 31 March 2015, this difference is about \$10 million (\$2,245.8 million in DARS and \$2,235.9 million in the "Detailed Age Analysis" table), which represents 0.4%.



# ACTUARIAL REPORT

## CANADA STUDENT LOANS PROGRAM

as at 31 July 2014

**Table 23 Direct Loans Default Portfolio**

Loan Year	Account				Recoveries	Write-Offs	Balance
	Defaults	Adjustments	Rehabilitated	Net Defaults			
	(\$ million)				(\$ million)		
	(1)	(2)	(3)	(4)=(1)-(2)-(3)	(5)	(6)	(7) = Previous year's balance + (4)-(5)-(6)
2000-01	5.3	-	-	5.3	0.3	-	5.0
2001-02	5.0	-	0.1	4.9	0.7	-	9.1
2002-03	244.3	0.6	17.5	226.2	23.8	-	211.6
2003-04	265.9	12.4	3.1	250.4	48.8	-	413.1
2004-05	364.4	19.0	2.2	343.2	83.0	-	673.3
2005-06	275.6	12.3	7.8	255.5	85.6	-	843.2
2006-07	257.7	8.7	5.8	243.2	83.7	0.2	1,002.5
2007-08	303.4	11.1	5.0	287.4	91.8	0.3	1,197.8
2008-09	308.3	8.7	7.0	292.6	85.4	-	1,404.9
2009-10	301.2	6.1	10.9	284.3	81.1	-	1,608.2
2010-11	335.2	6.4	18.0	310.8	92.8	-	1,826.2
2011-12	382.8	6.9	34.9	341.0	99.3	220.9	1,847.0
2012-13	353.4	5.9	31.4	316.1	105.0	167.6	1,890.5
2013-14	372.9	12.5	39.0	321.3	113.0	-	2,098.8

#### 4. Repayment Assistance Plan (RAP)

The RAP was implemented in August 2009. Detailed data files by applicant are available. The data files received were found to be complete and have been used to establish the assumptions for the utilization rates (both entrance and continuation) for each stage. Table 24 presents the RAP expenses split by stage as found in the MFIS as well as the totals obtained from the data files. Those expenses correspond to the portion of the monthly payments covered by the Government for all borrowers in the RAP.

**Table 24 Repayment Assistance Plan**

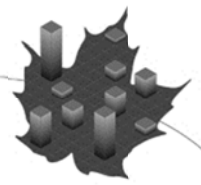
Loan Year	Principal Payments				Data Files Total
	MFIS			Total	
	Stage 2	PD	Total		
	(\$ million)				(\$ million)
2009-10	3.3 <sup>1</sup>	1.2	4.4 <sup>1</sup>	2.1	
2010-11	2.9	6.1	8.9	8.9	
2011-12	6.3	11.7	18.1	18.0	
2012-13	11.1	12.9	24.0	23.9	
2013-14	16.7	15.5	32.2	32.1	

Loan Year	Interest Payments				Data Files Total
	MFIS			Total	
	Stage 1	Stage 2	PD		
	(\$ million)				(\$ million)
2009-10	67.5 <sup>2</sup>	0.5	0.7	68.7 <sup>2</sup>	68.6 <sup>2</sup>
2010-11	82.7	1.8	3.0	87.5	87.4
2011-12	94.1	3.9	5.8	103.8	103.6
2012-13	106.1	6.5	6.1	118.7	118.4
2013-14	119.2	9.3	6.8	135.3	135.0

<sup>1</sup> Includes \$2.3 million of DRR payments approved before August 2009.

<sup>2</sup> Includes \$15.8 million of interest relief payments approved before August 2009.



## Appendix 3 – Portfolio Reconciliation

In the previous statutory report prepared as at 31 July 2011 (AR 2011), the expected total direct loans portfolio as at 31 July 2014 was projected at \$15.8 billion. The actual portfolio as at 31 July 2014 slightly differs from what was previously expected and corresponds to \$16.1 billion. Table 25 shows a reconciliation of the loan portfolio by loan status.

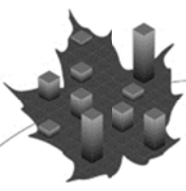
**Table 25 Reconciliation of the Direct Loans Portfolio as at 31 July 2014**

	<b>Effect on the Portfolio</b>	
<b>Loans In Study</b>		(\$ million)
Expected Loans In Study as at 31 July 2014 (AR 2011)		6,010
<i>Experience in loan years 2011-12 to 2013-14 compared with projections</i>		
Higher Loans Issued	+	347
Higher Loans Consolidated	-	9
Higher Prepayments	-	97
<b>Total Effect</b>	<b>+</b>	<b>241</b>
Actual Loans In Study as at 31 July 2014 (AR 2014)		6,251
<b>Loans In Repayment</b>		
Expected Loans In Repayment as at 31 July 2014 (AR 2011)		7,638
<i>Experience in loan years 2011-12 to 2013-14 compared with projections</i>		
Higher Loans Consolidated	+	9
Lower Interest Capitalized During Grace Period <sup>1</sup>	-	16
Lower Repayments from Students	+	68
Lower Defaults	+	115
Higher RAP-Stage 2 Payments from Government	-	8
Higher Loans Forgiven <sup>2</sup>	-	15
<b>Total Effect</b>	<b>+</b>	<b>153</b>
Actual Loans In Repayment as at 31 July 2014 (AR 2014)		7,791
<b>Loans In Default</b>		
Expected Loans In Default as at 31 July 2014 (AR 2011)		2,167
<i>Experience in loan years 2011-12 to 2013-14 compared with projections</i>		
Lower Defaults	-	115
Higher Principal Recoveries	-	31
Lower Write-Offs	+	77
<b>Total Effect</b>	<b>-</b>	<b>69</b>
Actual Loans In Default as at 31 July 2014 (AR 2014)		2,099
<b>Total Expected Portfolio as at 31 July 2014 (AR 2011)</b>		<b>15,816</b>
<b>Total Actual Portfolio as at 31 July 2014 (AR 2014)</b>		<b>16,141</b>

The actual total portfolio as at 31 July 2014 is 2% higher than expected in the previous statutory report. The main reason behind this difference is the higher than expected new loans issued. In the previous statutory report, the projected new loans issued for loan years between 2011-12 and 2013-14 summed up to \$7,370 million. The experience data shows that the actual new loans issued during this period represents \$7,717 million (4.7% more than expected for the 3-year period).

<sup>1</sup> Interest capitalized is lower because the student interest rate is lower.

<sup>2</sup> Because of new loan forgiveness for family physicians, nurses and nurse practitioners.



## **Appendix 4 – Assumptions and Methodology**

### **1. Growth of Total Loans Issued**

The growth of total loans issued is related to the number of students participating in the CSLP, the evolution of need of those CSLP students and the loan limit. The evolution of the number of CSLP students and their need is discussed below.

#### **a) Evolution of Number of CSLP Students**

The number of students in the CSLP is affected by the demographic evolution of the population, the post-secondary enrolment and the loan uptake rate.

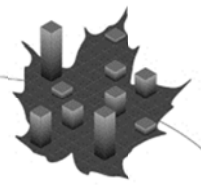
##### **i) Demographic Evolution**

The demographic evolution involves changes in the composition of the future population aged 15-29 for Canada, excluding the non-participating province of Québec, and the Northwest Territories and Nunavut. Future fertility, mortality and migration assumptions are applied to this population. The fertility, mortality and migration assumptions are based on those used in the 26<sup>th</sup> Actuarial Report on the Canada Pension Plan as at 31 December 2012.

##### **ii) Post-secondary Enrolment**

The number of students enrolled full-time in post-secondary institutions is projected separately between students that are in the labour force and students that are not in the labour force. For projection purposes, each distinct group is also divided based on the students' age group, gender and whether the students are attending university or college. For a given sub-group, a post-secondary enrolment rate is determined based on the historical post-secondary enrolment and the population of this sub-group. Each sub-group is then projected separately using the post-secondary enrolment rate and the population projection.

Table 26 presents the full-time post-secondary enrolment rate by age group, separated according to labour force status, for loan years 2013-14, 2019-20 and 2038-39. In 2013-14, 44% of students enrolled full-time in post-secondary institutions were also participating in the labour force while 56% of them were not participating in the labour force. The post-secondary enrolment rate is higher for the population not in labour force since this population is more inclined to go to school.



**Table 26 Full-time Post-Secondary Enrolment Rate by Labour Force Status**

		<b>2013-14</b>	<b>2019-20</b>	<b>Change in Enrolment</b>	<b>2038-39</b>	<b>Change in Enrolment</b>
		(1)	(2)	(2)/(1)-1	(3)	(3)/(1)-1
		(%)	(%)	(%)	(%)	(%)
<b>In Labour Force</b> (Represents 44% of total enrolment 15-29 in 2013-14)	15-19 <sup>1</sup>	16.5	19.9	20.6	19.9	20.6
	20-24	21.5	23.9	11.0	23.9	11.2
	25-29	4.1	4.4	6.5	4.4	6.8
	15-29	13.2	14.4	8.4	15.2	15.0
<b>Not In Labour Force</b> (Represents 56% of total enrolment 15-29 in 2013-14)	15-19 <sup>1</sup>	24.1	27.1	12.5	27.1	12.4
	20-24	76.3	72.4	-5.1	72.4	-5.1
	25-29	30.5	27.4	-9.9	27.4	-10.2
	15-29	39.9	39.9	0.0	38.9	-2.7
<b>Total Enrolment Over Population 15-29</b>	15-19 <sup>1</sup>	20.4	23.2	13.9	23.0	12.7
	20-24	34.7	34.4	-0.9	32.9	-5.4
	25-29	8.2	7.4	-9.0	6.8	-16.6
	15-29	21.2	20.9	-1.3	20.9	-1.3

The full-time 15-29 post-secondary enrolment rate for students in the labour force is expected to increase over the projection period (from 13.2% in 2013-14 to 15.2% in 2038-39). However, the enrolment rate for the same age group but for students not in the labour force is expected to decrease (from 39.9% in 2013-14 to 38.9% in 2038-39). The overall expected impact on the enrolment for full-time post-secondary studies for the population aged 15-29 is a slight decrease from 21.2% in 2013-14 to 20.9% in 2038-39. This is attributable to a continuing trend of transfer from the not-in-labour-force category to the in-labour-force category.

iii) Loan Uptake Rate

The loan uptake rate is projected separately for students attending college, university and private education institutions. A trend is defined for each group based on the last twelve years of history and the expected future mix of the student population.

The number of students in the CSLP is determined by multiplying the number of students enrolled full-time with the loan uptake.

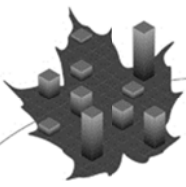
b) Evolution of CSLP Student Need

ESDC provides CSLP need assessment data for previous loan years, up to and including 2012-13. The CSLP need is determined using the following calculation:

$$\text{CSLP need} = (\text{assessed need}) \times 60\%.$$

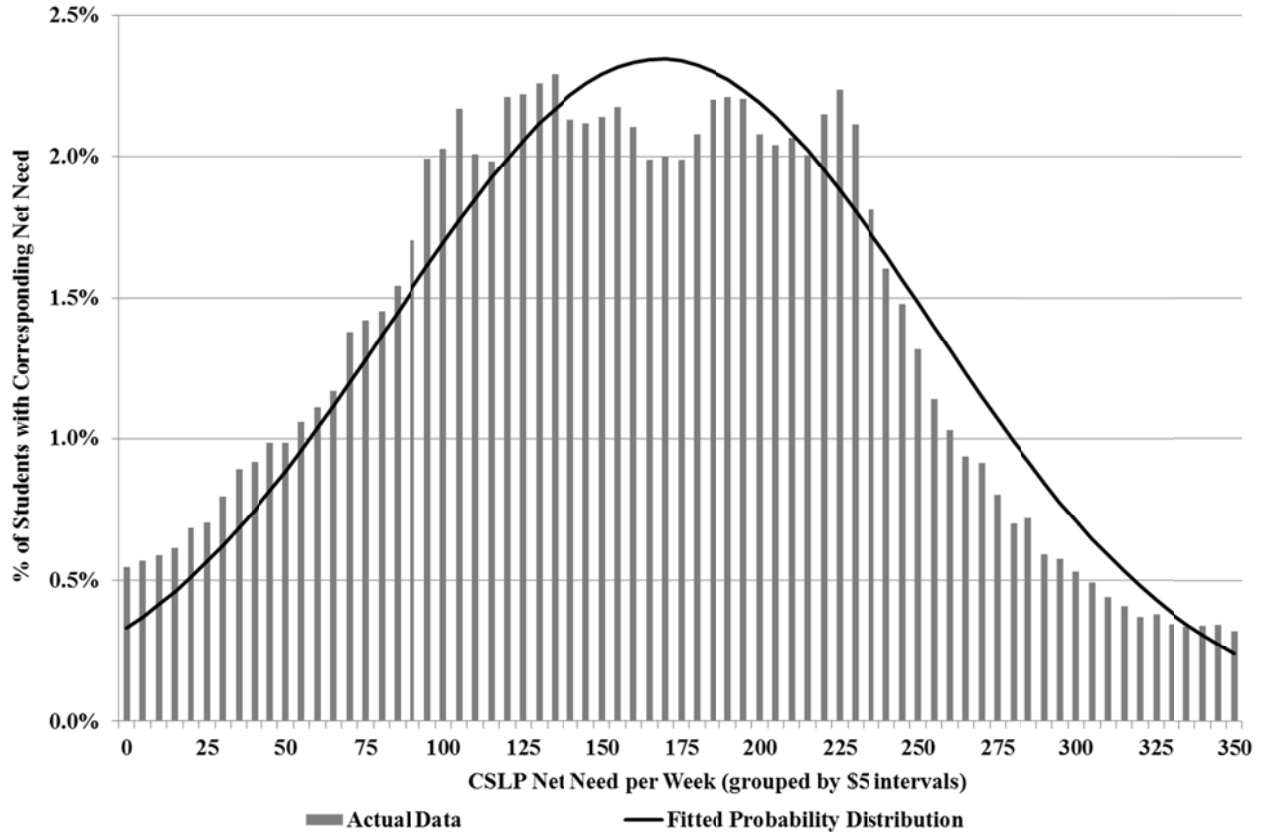
The CSLP need represents 60% of the assessed need because the CSLP generally provides 60% of the total financial assistance, while the participating province or territory of residence provides the remaining 40%. If a student is eligible for a grant, the amount received as a grant reduces the calculated CSLP need, resulting in a net need. A histogram of the CSLP net weekly need (need net of grants) was created for three distinct groups, based on the student's type of educational institution: college, university or private.

<sup>1</sup> The population aged 15-19 includes students going to high-school that are not considered in the post-secondary enrolment rate. When considering all education levels, including high-school, approximately 80% of the population 15-19 is in school.



The histogram of weekly net need was fitted with a probability distribution for each of the three groups. For illustration purposes, Chart 4 shows the probability distribution fitted to the actual CSLP student weekly net need data for university students.

**Chart 4 Actual and Fitted Net Need Distribution 2012-13 for University Students**

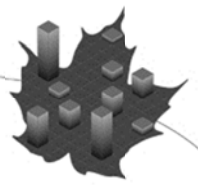


The projected annual net need increases come from the projected increases in expenses (tuition, compulsory fees and other expenses) offset by the projected increases in resources and grants. These net need increases are calculated separately for each group (college, university and private school students) and are used to adjust the parameters of the fitted probability distribution for each group in each year of the projection period. These new parameters are then used to generate the net need curves over the 25-year projection period. Table 5 of the Main Report shows the evolution of the student net need throughout the projection period.

i) Tuition

Tuition fees are, in part, determined by government policies. Thus, they are projected using provincial budgets stating the Government’s intentions, along with recent and historical experience of tuition fee increases. The short-term projected increases in tuition fees are shown in Table 27. It is assumed that the most recent provinces’ budgetary intentions will not change until 2015-16.





**Table 27 Short-term Increase of Tuition Expenses**

Province	Weight	Budget/Experience	2014-15	2015-16	2016-17
	(%)		(%)	(%)	(%)
<b>Newfoundland</b>	1.0	Tuition freeze	0.0	0.0	0.0
<b>Prince Edward Island</b>	0.6	3.0% increase, 4.0% thereafter	3.0	4.0	4.0
<b>Nova Scotia</b>	4.7	3.6% increase	3.6	3.6	3.6
<b>New Brunswick</b>	2.5	3.5% increase, 3.0% thereafter	3.5	3.0	3.0
<b>Ontario</b>	64.8	3.9% increase, 3.0% thereafter	3.9	3.0	3.0
<b>Manitoba</b>	1.7	2.6% increase, 2.0% thereafter	2.6	2.0	2.0
<b>Saskatchewan</b>	2.2	4.0% increase	4.0	4.0	4.0
<b>Alberta</b>	9.5	1.0% increase, 2.0% thereafter	1.0	2.0	2.0
<b>British Columbia</b>	13.0	2.0% increase	2.0	2.0	2.0
<b>Weighted Average</b>			<b>3.3</b>	<b>2.8</b>	<b>2.8</b>

Government budgetary cost pressures caused tuition fees to rise more quickly than inflation. Similar budgetary pressures are expected in the future due to the aging of the population. The long-term estimate of tuition is based on past increases in tuition relative to increases in the consumer price index (CPI). Over the last 10 years, tuition increases have been, on average, close to CPI plus 1.7%. The average increase is higher for the last five years and corresponds to CPI plus 2.1%. The long term tuition increase assumption is revised from CPI plus 2.5% to CPI plus 2.0% for this report. Therefore, the 2.8% tuition increase for 2016-17 is graded to reach the CPI increase plus 2.0% by 2021-22.

The starting point for the 2012-13 tuition fees is calculated from the need assessment data file and represents the average tuition fees for students who received a loan. Tuition fees were calculated for each of the three student groups (college, university and private) and a weighted average was determined based on the number of students in each group. This calculation resulted in a tuition fee estimate of \$6,087 for loan year 2012-13, which is lower than the estimate calculated in the previous statutory report because tuitions are no longer annualized but rather reflect the average length of the study period of those students receiving a loan. The estimated weighted average tuition fees for 2013-14 are \$6,259 based on an annual tuition increase of 3.3%.

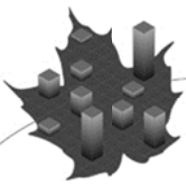
ii) Other Expenses

Other expenses are considered to be any student expense other than tuition fees. These expenses include books, shelter, food, clothing and transportation and are assessed by the participating provinces and territory. The average expense is calculated from the CSLP need assessment data file and represents the average expenses for students who receive a loan. The estimated average for other expenses is \$9,614 for loan year 2012-13 and increases to \$9,751 in loan year 2013-14 based on the CPI increase of 1.5%.

iii) Student Resources

Student resources include student earnings, parental contributions and other resources. Increased resources ultimately serve to reduce the maximum loan available to students through the need analysis. Student need is summarized in Table 5 of the Main Report.

The starting point for average resources in 2012-13 is calculated from the need assessment data file and represents the average resources for students who received a loan. As such, the estimated student average resources is \$4,456 for 2012-13. The average student resources are estimated at \$4,555 for loan year 2013-14 based on the resources increase assumption.

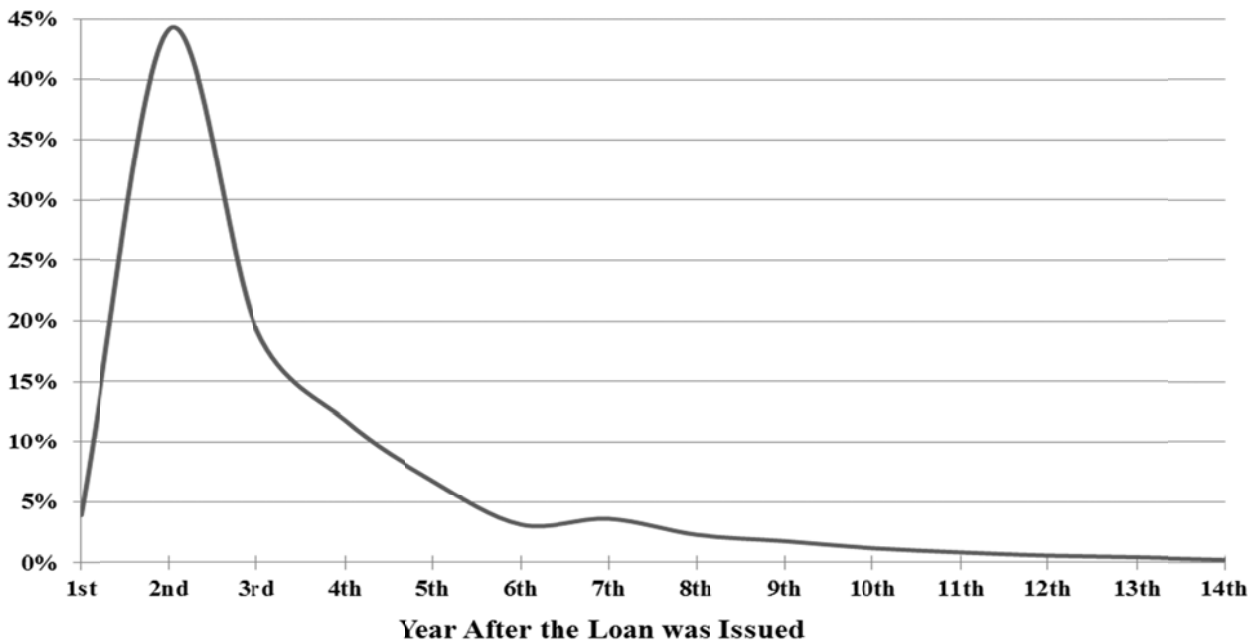


**2. Consolidation**

Under the direct loan regime, loans are assumed to consolidate according to the distribution of consolidation by year shown in Chart 5 over a period of fourteen years after a loan is issued. This distribution is built using the experience of direct loan consolidations. A constant decreasing rate is applied for the tail of the distribution.

Each year, some borrowers having previously consolidated their student loans choose to return to school. For projection purposes, the consolidated loan amounts in each future loan year are calculated net of loans for borrowers who returned to school. The assumption for borrowers returning to school is based on recent experience and is kept constant for the projection period. In this report, the assumption is 28% of consolidations.

**Chart 5 Distribution of Consolidation**



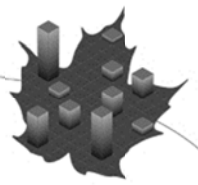
**3. Repayment Assistance Plan**

a) Repayment Assistance Plan – Stage 1

Effective August 2009, the Repayment Assistance Plan (RAP) replaces the Interest Relief and Debt Reduction in Repayment measures. The RAP consists of two stages that are described in Appendix 1. Borrowers can be enrolled in Stage 1 for up to five years over a ten-year period. Borrowers who qualify will make an affordable payment (or no payment) toward their loan principal. The Government will cover the interest amount not covered by the borrower’s affordable payment.

Table 28 shows the entrance and continuation rates of RAP-Stage 1 for the direct loan regime for consolidation cohort 2012-13 and onwards. These rates are based on both the Interest Relief and the RAP experience of direct loans.

The methodology used to calculate RAP-Stage 1 rates was changed to better reflect the continuation into the plan after the first year of entry. In previous reports, all rates were applied to the amount consolidated by each cohort. In this report, only rates on the first row of Table 28



are multiplied by the consolidated amount for each cohort; the dollars obtained for this row are those entering RAP-Stage 1 for the first time in any given year after consolidation. All other rates represent the percentage of dollars continuing from one year to the next. It is worth noting that because many borrowers complete their RAP-Stage 1 over a period longer than five years, the continuation rates do not always include the same borrowers from year to year and some borrowers may be in the program for only part of a year. The model takes all this into account by incorporating the average time spent in RAP-Stage 1 in a loan year.

Because the first year of RAP-Stage 1 (first row of Table 28) consists of a partial loan year for all of those who commence RAP-Stage 1 after the first month of a loan year, it is possible that the second year's rate be greater than the one in the first year, even though some people exit the program permanently or for a period of time (as illustrated by the 113% in Table 28). For the same reason, the 9.5 year period after consolidation covered by RAP-Stage 1 can extend over eleven different loan years. For example, someone who would consolidate on 1 July 2001 would have a potential RAP-Stage 1 period starting on 1 July 2001 (loan year 2000-2001) and ending on 1 January 2011 (loan year 2010-2011). Finally, although it would be possible for someone to enter RAP-Stage 1 in the ninth or tenth year after consolidation, the data shows that these amounts are negligible and would not have any material impact on the results so they are not included in the rate assumptions.

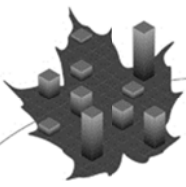
**Table 28 RAP-Stage 1 Entrance/Continuation Rates for the Direct Loan Regime**

RAP1 Loan Year	Start Year after Consolidation								
	1	2	3	4	5	6	7	8	
<b>Entrance</b>									
<b>1</b>	24.0%	2.9%	1.0%	0.5%	0.3%	0.2%	0.1%	0.1%	
<b>2</b>	113.0%	83.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	
<b>3</b>	65.0%	65.0%	65.0%	60.0%	50.0%	55.0%	55.0%	60.0%	
<b>4</b>	78.0%	80.0%	80.0%	75.0%	75.0%	70.0%	60.0%	40.0%	
<b>5</b>	80.0%	80.0%	80.0%	70.0%	80.0%	70.0%	25.0%		
<b>6</b>	60.0%	60.0%	70.0%	60.0%	55.0%	15.0%			
<b>7</b>	35.0%	40.0%	40.0%	45.0%	10.0%				
<b>8</b>	55.0%	60.0%	50.0%	15.0%					
<b>9</b>	65.0%	60.0%	20.0%						
<b>10</b>	55.0%	15.0%							
<b>11</b>	15.0%								

b) Repayment Assistance Plan – Stage 2

RAP-Stage 2 is available for borrowers who continue to experience financial difficulty. It starts once the borrower completes Stage 1 or has been in repayment for 10 years after they leave school or complete their studies. The Government will continue to cover the interest and begin to cover a portion of the principal (i.e. the difference between the affordable payment and required payment), on a monthly basis. The balance of the loan should be gradually paid off such that the student loan debt has been repaid in full within 15 years of the borrower leaving school.

The methodology used to calculate RAP-Stage 2 entrance and continuation rates was changed to better reflect the passing from RAP-Stage 1 to RAP-Stage 2 as well as the continuation in the plan. It is now assumed that as people become eligible for RAP-Stage 2 (after completing 5 years in RAP-Stage 1), they will immediately enter RAP-Stage 2. This means that a person can enter RAP-Stage 2 between the 6<sup>th</sup> year after consolidation until the 11<sup>th</sup> year after consolidation (the last possible year of eligibility in RAP-Stage 1). Although it would be possible for someone whose study period ended ten years ago or more to enter RAP-Stage 2 directly, the data shows that these amounts are negligible and would not have any material impact on the results so they



are not included in the rate assumptions for RAP-Stage 2. This also makes sense since the normal amortization period for a loan is the 9.5 year period after consolidation; in other words, if someone never enters RAP-Stage 1 and repays their loan normally, the loan should be fully repaid ten years after the end of the study period (9.5 years after consolidation). The entrance and continuation rates for RAP-Stage 2 are based on the analysis of the historical data available for each cohort of consolidation.

Table 29 displays the rates of entrance and continuation for RAP-Stage 2. For example, the first 45% displayed in the table represents borrowers who completed their RAP-Stage 1 in five consecutive years and entered RAP-Stage 2 immediately after (at the beginning of the sixth year). The rate of 45% is calculated based on borrowers in RAP-Stage 1 at their time of exit.

**Table 29 RAP-Stage 2 Entrance/Continuation Rates for the Direct Loan Regime**

RAP1 Exit Year After Consolidation	RAP2 Start Year after Consolidation					
	6	7	8	9	10	11
5	45.0%	30.0%	20.0%	20.0%	25.0%	25.0%
6		45.0%	25.0%	20.0%	20.0%	20.0%
7			20.0%	15.0%	10.0%	15.0%
8				15.0%	10.0%	10.0%
9					15.0%	10.0%
10						10.0%

RAP2 Year of Continuation	RAP2 Start Year after Consolidation					
	6	7	8	9	10	11
1	170.0%	120.0%	125.0%	130.0%	120.0%	120.0%
2+	75.0%	70.0%	70.0%	70.0%	70.0%	70.0%

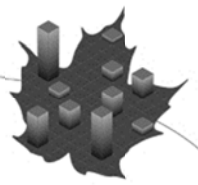
c) Repayment Assistance Plan – Permanent Disability (RAP-PD)

RAP-PD is available for borrowers with a permanent disability. A borrower who had a RAP-PD application approved is eligible to start in the RAP-PD as soon as his loan consolidates and can remain in the plan for a period of 9.5 years, when the loan is expected to have been repaid in full. Depending on his financial situation, the borrower may need to make a monthly affordable payment. As with RAP-Stage 2, this payment first covers the amount of principal due and potentially a portion of the interest. The Government covers the difference between the affordable payment and required payment, on a monthly basis.

The methodology used to calculate RAP-PD utilization rates was changed to better reflect the actual amount of dollars in the plan. Utilization rate tables were created and all utilization rates were applied to the amount consolidated by each cohort. Table 30 shows the long-term utilization rate assumptions used for RAP-PD.

**Table 30 RAP-PD Utilization Rates for the Direct Loan Regime**

RAP-PD Loan Year	Start Year after Consolidation							
	1	2	3	4	5	6	7	8
1	1.30%	0.15%	0.10%	0.10%	0.03%	0.02%	0.01%	0.01%
2	1.40%	0.20%	0.10%	0.07%	0.02%	0.01%	0.01%	0.01%
3	1.00%	0.15%	0.07%	0.05%	0.01%	0.01%	0.01%	0.01%
4	0.65%	0.10%	0.05%	0.04%	0.01%	0.01%	0.01%	0.01%
5	0.50%	0.10%	0.04%	0.03%	0.01%	0.01%	0.01%	
6	0.40%	0.10%	0.03%	0.02%	0.01%	0.01%		
7	0.30%	0.07%	0.02%	0.01%	0.01%			
8	0.20%	0.05%	0.01%	0.01%				
9	0.14%	0.04%	0.01%					
10	0.10%	0.03%						
11	0.03%							



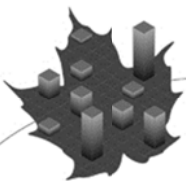
d) Provision for Repayment Assistance Plan – Principal (Stage 2 and PD)

A provision for RAP – principal (for both RAP-Stage 2 and RAP-PD) is established to cover the risk associated with this measure. The provision recognizes that part of the loan principal will be paid by the government. In this report, the payment portion to be paid by the government is estimated at 92% for RAP-Stage 2 and 93% for RAP-PD. In the previous statutory report, there was a single provision rate of 3.0%, which was applied to net loans issued. The methodology used in this report is based on a snapshot of the portfolio at a given time and results in a more precise assessment of the allowance since the status of the loans (in-study, in repayment or in RAP) is considered along with the corresponding level of risk for each status. The provision rates are determined based on the projected principal amount borne by the Government under the RAP-Stage 2 and PD, resulting from the rate assumptions described in a) to c) above. For the 2014-15 loan year, the allowance for RAP – principal is determined using the outstanding balance of portfolios and the corresponding provision rates according to the status of the loans as follows:

- 3.5% of balance of loans in-study;
- 0.9% of balance of loans in repayment (reduced by loans in RAP – all stages); and
- 15.6% of balance of loans in RAP (all stages).

In comparison with loans in-study, the portfolio of loans in repayment includes cohorts of loans for which partial reimbursements have already occurred, as well as some defaults and utilization of RAP, resulting in a lower risk for the remaining loans and consequently a lower required provision rate. The highest risk related to the RAP is obviously for the portfolio of loans already in RAP. The provision rate for the portfolio of loans in RAP (Stages 1, 2 and PD) is currently 15.6%.

It is worth noting that there is still limited experience for the RAP, so the assumptions may need to be revised as more data becomes available.

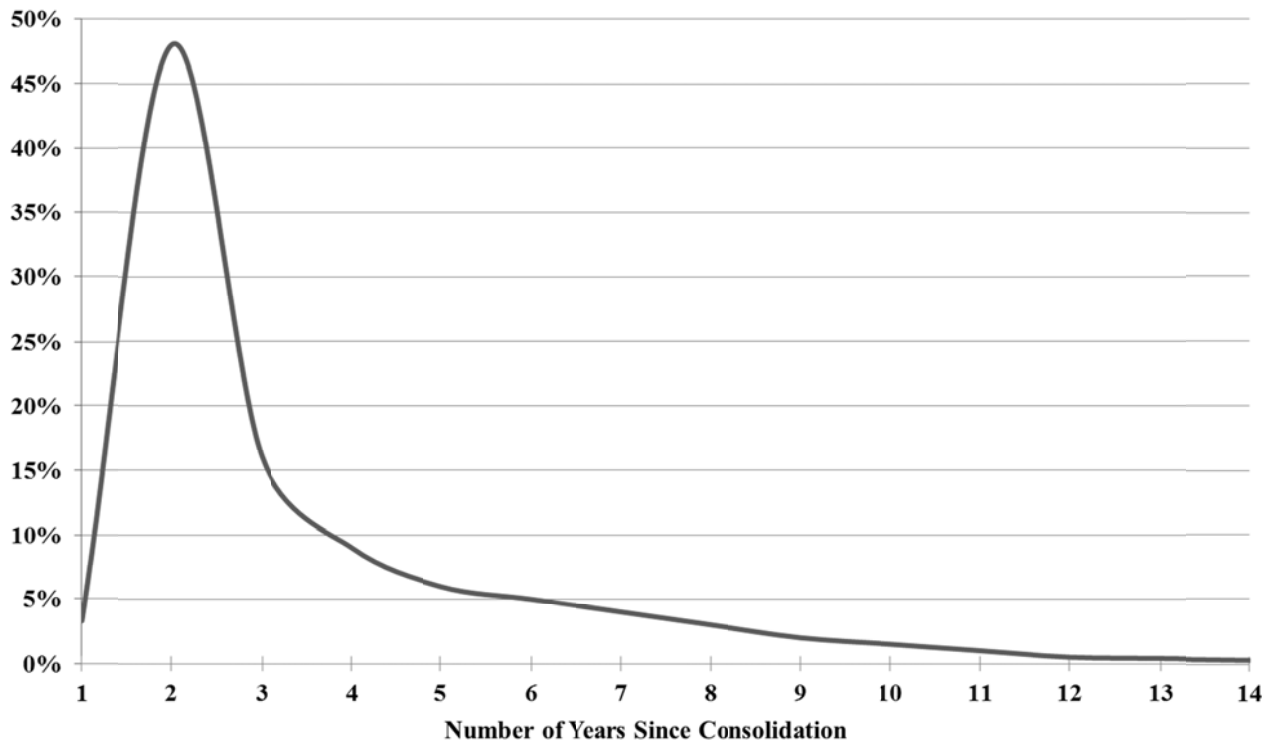


**4. Bad Debt**

a) Default Rate

The default distribution is based on direct loans experience. The average distribution is shown in Chart 6. According to this distribution, 67% of defaulted loans occurred in the first three years following consolidation and 76% occurred in the first four years.

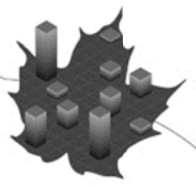
**Chart 6 Default Distribution**



The long-term assumption for the future gross default rate by consolidation cohort is 16.8%. The long-term assumption for recalls and rehabilitations represent 8.7% of gross defaults, which decreases the default rate to 15.3% [ $16.8\% \times (1 - 8.7\%)$ ]. For a given consolidation cohort, the default rate of 15.3% represents the proportion of the total amount of loans expected to default in the future (spread over fourteen years after consolidation, as per Chart 6). A portion of these defaulted loans will then be recovered by the Government.

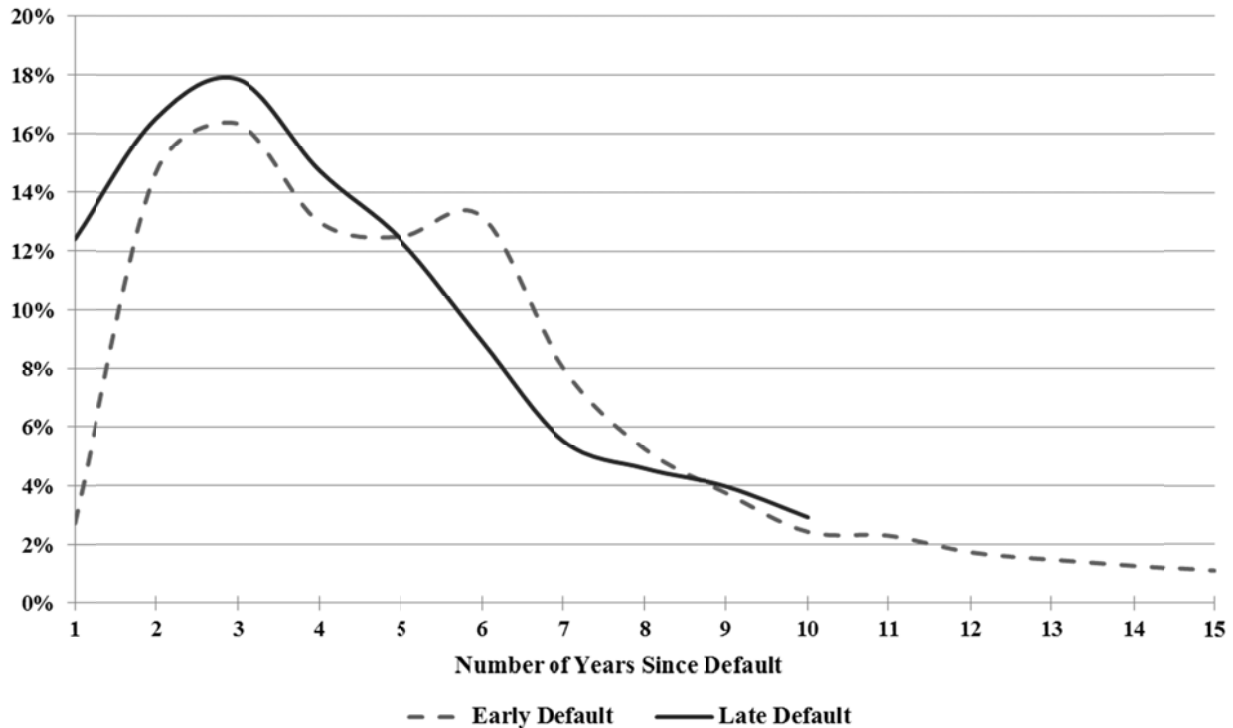
b) Recovery Rate

The assumed recovery distribution (Chart 7) is also based on direct loans experience. Six separate distribution curves were developed to extrapolate data in future years. Chart 7 shows the extreme curves. The dotted curve represents the distribution of recoveries used to extrapolate recovery amounts for defaults that occur in the first year after consolidation (early defaults). The solid curve represents the distribution of recoveries used to extrapolate recovery amounts for defaults that occur in the sixth year after consolidation and thereafter (late defaults). In the first four years after default, the recovery distribution for late defaults (solid curve) for the borrowers who have already been in the repayment period for more than five years and have reimbursed part of the loan before defaulting is higher than the recovery distribution for early defaults



(dotted curve) for the borrowers who have made no or very few payments on their loan before defaulting.

**Chart 7 Recovery Distributions Depending on Date of Default**



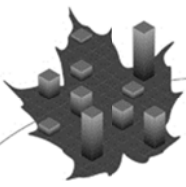
Based on the experience data, the recovery rate is lower for loans that default in the first year after consolidation compared to loans that default later after consolidation. The assumed recovery rate is 20% for defaults occurring in the first year after consolidation. This rate is assumed to increase afterward to 30% for defaults occurring in the second year after consolidation and 32% for defaults occurring in the third year following consolidation and thereafter. This set of three recovery rates remains constant over the long-term. The resulting recovery rate for an entire default cohort is 30.6% for each future default cohort.

**c) Net Default Rate**

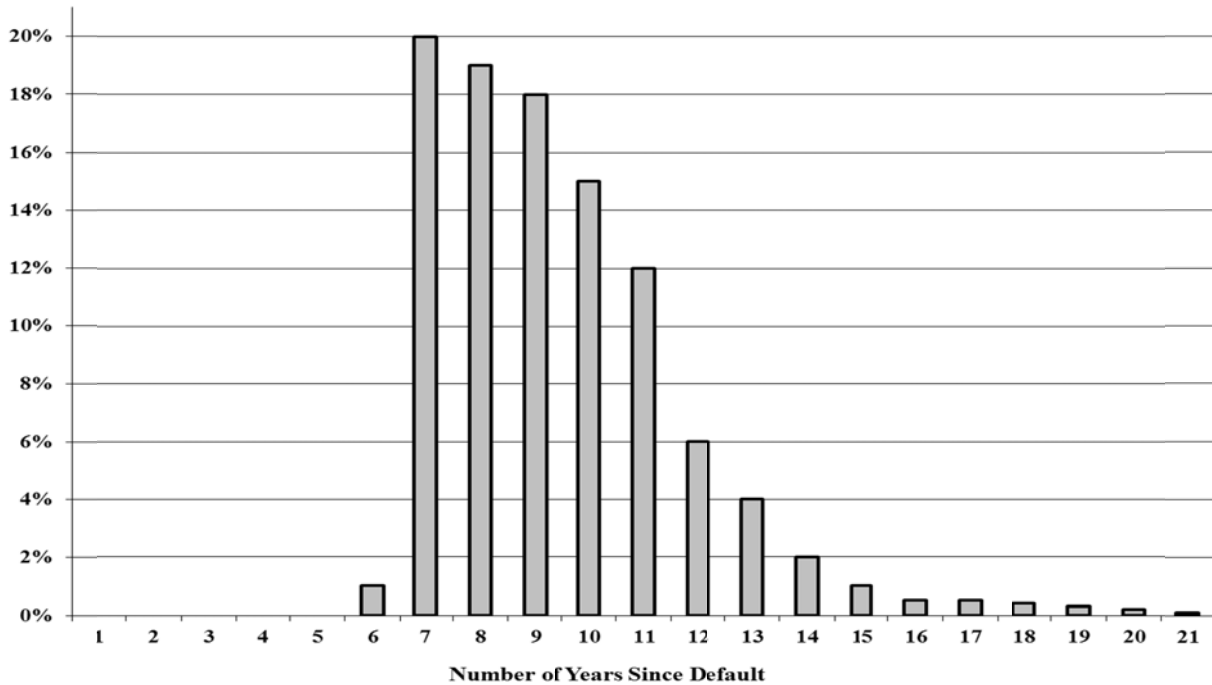
As described under section a) and b) above, the assumption for the future gross default rate is 16.8% of consolidations and is reduced to 15.3% to consider future recalls and rehabilitations which represent 8.7% of gross defaults. The assumption for the future recovery rate is 30.6% of gross defaults. The resulting long-term future net default rate is 10.2%. It corresponds to:

$$\text{Gross Default Rate} \times (1 - \text{Recalls and Rehabilitations} - \text{Recovery Rate}) = 16.8\% \times (1 - 8.7\% - 30.6\%).$$

The net default rate represents the proportion of consolidated loans that will eventually be written off for each future consolidation cohort. The amount of loans to be written-off each year is determined using an assumption regarding the time the loan is recognized as non-recoverable and has exceeded the limitation period, which consists of a 16-year distribution starting in the sixth year following default. The six year delay takes into account the limitation period as stated in section 16.1 of the *Canada Student Financial Assistance Act*. The assumed distribution is presented in Chart 8.



**Chart 8 Non-Recoverable and Limitation Period Exceeded Distribution**

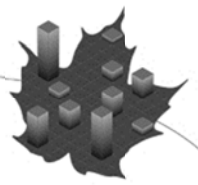


d) Bad Debt Provision – Principal

According to the accounting recommendations under Section PS 3050 Loans Receivable of the Public Sector Accounting Handbook of the Chartered Professional Accountants Canada, a provision should be determined using the best-estimate available in light of past experience, current conditions and future expectations. As described previously, the net default rate is set at 10.2%.

The calculation of the allowance is separated into three components according to the status of the loan; that is whether the loan is in-study, in repayment (according to the number of years since consolidation) or defaulted (according to the number of years since default). Future assumed rates of default and recovery are applied to these portfolio amounts to determine the allowance that must be put aside to pay future write-offs. The future net default rate of 10.2% of consolidated loans needs some adjustments in order to be applied to loans in-study. First, a small upward adjustment of 0.4% is required to account for the difference between loans at issuance and loans at consolidation resulting from interest accrued during the 6-month grace period. Second, another adjustment is required to consider that some loans are repaid while the borrower is in school or during the 6-month grace period and will never consolidate. Those prepayments are assumed to represent around 15% of future consolidated loans. Consequently, a net default rate of 10.2% of consolidated loans translates in a 9.0% rate of loans in-study [(10.2% + 0.4%) x 85.0%].



**Table 31 Provision Rate for Bad Debt – Principal**

Gross Default Rate (a)	16.8%
Rehabilitations and Recalls (b)	8.7%
Default Rate, net of Rehabilitations and Recalls (c) = (a) x (1 - b)	15.3%
Recoveries (d)	30.6%
Net Default Rate (e) = (a) x (1 - b - d)	10.2%
Adjustment: Interest accrued on loans during grace period (f)	0.4%
Adjustment: Prepayments (g)	85.0%
<b>Bad Debt Provision – Principal: Applied to Balance of Loans In-Study (e + f) x (g)</b>	<b>9.0%</b>

For loan year 2014-15, the allowance for bad debt – principal is determined using the outstanding balance of portfolio and the corresponding provision rates according to the status of the loans as follows:

- 9.0% of the outstanding balance of loans in-study;
- 5.9% of the outstanding balance of loans in repayment; and
- 80.7% of the outstanding balance of loans in default.

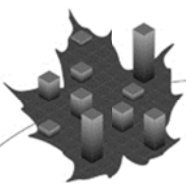
e) Bad Debt Provision – Interest

The methodology for the calculation of the provision for bad debt – interest takes into account the number of years since default. Interest on defaulted loans is accrued until the loan reaches the “non-recoverable” status. A loan reaches this status when the collection of either principal or interest is not reasonably assured. For the purpose of the projections, a loan is transferred to “non-recoverable” status according to a 16-year distribution and is then gradually written off.

Since the interest on defaulted loans is accounted for as revenue, an allowance is established to cover the risk that such accrued interest will never be recovered. The methodology involves the calculation of:

- the accrued interest in each year on defaulted loans at the student’s cost of borrowing rates,
- the projected outstanding interest at the end of each year, using non-recoverable and recovery rates, based on direct loans experience and applied to outstanding interest at the beginning of the year,
- the projected allowance at the end of each year by adding, per year since default, the product of recoverable outstanding interest accounts and the corresponding provision rate; then 100% of outstanding non-recoverable accounts is added.

The expense for a year is equal to the difference between the total allowance (on recoverable and non-recoverable accounts) at the end of the year and the allowance of the previous year net of write-offs that have occurred during the year.



A set of provision rates that vary according to the number of years since default was established. The rates shown in Table 32 have been modified from the last report to consider recent experience in interest recoveries.

**Table 32 Provision Rates for Bad Debt – Interest**

Year Since Default	Provision Rates (%)
1 <sup>st</sup>	26.7
2 <sup>nd</sup>	37.6
3 <sup>rd</sup>	48.0
4 <sup>th</sup>	57.9
5 <sup>th</sup>	68.3
6 <sup>th</sup>	60.3
7 <sup>th</sup>	55.4
8 <sup>th</sup>	57.5
9 <sup>th</sup>	60.7
10 <sup>th</sup>	63.0
11 <sup>th</sup>	66.3
12 <sup>th</sup>	71.0
13 <sup>th</sup>	77.5
14 <sup>th</sup>	86.9
15 <sup>th</sup>	100.0

**5. Other Assumptions**

a) Prepayments and Accelerated Payments for Direct Loans

The analysis of principal payments made by students revealed that some payments are received while the student is still in school or during the grace period (prepayments) and some payments are received in excess of the scheduled payments during the repayment period (accelerated payments).

i) Prepayments

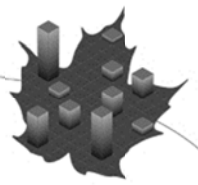
Prepayments correspond to payments applied to principal during the period of study and during the six-month grace period after the period of study end date. The amount of prepayments for loan year 2013-14 is \$362 million. Around 30% of this amount is received during the period of study and the remaining 70% is received during the grace period. Over the long-term, it is assumed that around 15% of loans issued are prepaid.

ii) Accelerated Payments

Normal principal payments received from students are calculated based on a standard 114-month repayment period. However, some students decide to pay more than the required monthly payments during the amortization period. In addition, loans with an outstanding balance smaller than \$7,000 are actually amortized over a shorter period of time as per ESDC’s guidelines. In both situations, the payment made by the student is greater than then calculated normal payment. The additional amounts paid represent the accelerated payments. Over the long-term, it is assumed that these payments add up to 20.0% of the sum of normal payments for each loan year.

b) Alternative Payments

Alternative payments are made directly to the province and territories that do not participate in the CSLP, namely Quebec, the Northwest Territories, and Nunavut. These payments are projected by multiplying the net cost of the Program by the ratio of the population aged 18-24 residing in the non-participating province and territories to the population aged 18-24 residing in the participating provinces and territory.



The expenses included in the calculation are: interest subsidies, RAP – interest expenses for risk-shared and guaranteed regimes, loans forgiven, service providers’ costs, Canada Student Grants, claims, RAP-Stage 2 payments, risk premiums, put-backs, refunds to financial institutions, direct loans’ borrowing costs for loans in good standing and default amounts for the direct loan regime. The revenues include: student interest payments, and principal and interest from recoveries. The cost of alternative payments is \$278 million for loan year 2013-14 based on expenses and revenue of loan year 2012-13 and \$315 million for loan year 2014-15 based on expenses and revenue of loan year 2013-14.

c) Administrative Expenses

ESDC provided estimates of the administrative expenses to support the CSLP for the 2014-15 to 2017-18 fiscal years. The costs have been converted to a loan year basis and the extrapolation of future years was done using wage increases. Administrative expenses include ESDC salary and non-salary resources related to the CSLP as well as expenses for service providers and collection costs.

**Table 33 Administrative Expenses**

Loan Year	Administrative Expenses
	(\$ million)
2013-14	136.3
2014-15	138.4
2015-16	141.3
2016-17	143.9
2017-18+	Increases with wages

d) Administrative Fees Paid to Provinces

For loan year 2013-14, the administrative fees paid to the participating provinces and territory were \$28.9 million. Future years were projected using wage increases.

e) Canada Student Grants Program

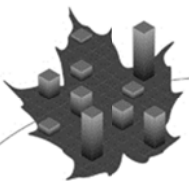
For loan year 2013-14, the actual cost of Canada Student Grants Program (CSGP) was \$715 million. The total amount of grants disbursed under the CSGP is projected to increase over the projection period based on the number of students in the CSLP.

f) Loans Forgiven

There are two categories of loans forgiven: those forgiven for severe permanent disability and death, and those forgiven for family physicians, nurses and nurse practitioners who work in an under-served rural or remote community.

Long-term rates of loans forgiven for severe permanent disability and death correspond to 0.024% of loans in study and 0.09% of loans in repayment, including loans forgiven after being transferred to default status.

Loan forgiveness for family physicians, nurses and nurse practitioners is a new program accessible to borrowers who began to work in an under-served rural or remote community on or after 1 July 2011 as a family physician, nurse or nurse practitioner. Applications under the program started being accepted as of 1 April 2013 for periods of work of one year that started on or after 1 April 2012. To be eligible for forgiveness, borrowers must have been employed for a full year (12 months) in a designated community and provided in-person services for a minimum of 400 hours (or 50 days) in that community. However, in the case of family medicine residents, the full 12 month period of service is not required for eligibility. Family doctors and family



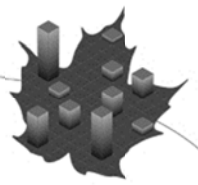
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medicine residents are eligible for forgiveness of \$8,000 per year to a maximum of \$40,000 over five years while nurse practitioners and nurses may be eligible for forgiveness of \$4,000 per year to a maximum of \$20,000 over five years. The amount forgiven is projected based on the expected new number of doctors and nurses who received student loans during their studies and are expected to work in an under-served rural or remote community after graduation.



## Appendix 5 – Sensitivity Tests

The CSLP actuarial evaluation involves the projection of the Program’s revenues and expenses. The information presented in section A of the Main Report was derived using “best-estimate” assumptions. Because of the length of the projection period and the number of assumptions required, it is unlikely that actual future experience will develop precisely in accordance with the best-estimate assumptions. Sensitivity tests were performed using alternative assumptions to project the Program’s financial results.

For each sensitivity test, one key assumption was changed while the others remained at their best-estimate levels. Two tests were performed for each assumption tested, except for the loan limit and grants where only one test was performed. The alternative assumptions were selected to represent a reasonable range of potential long-term experience. They do not however exclude the possibility of actual experience falling outside the range studied.

Each test performed was labeled as either “low-cost” or “high-cost”. In the “low-cost” scenarios, the alternative assumptions reduce the annual cost of the Program, while in the “high-cost” scenarios, they increase it.

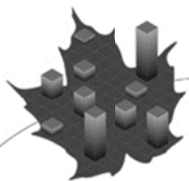
Table 34 below summarizes the alternative assumptions that were used in the sensitivity tests; a brief discussion of each assumption subsequently follows.

**Table 34 Long-term Sensitivity Test Assumptions**

Assumption	Low-cost	Best-estimate (B-E)	High-cost
1. Loan Limit	-	Frozen	Indexed to inflation
2. Loan Limit and Grants	-	Frozen	Indexed to inflation
3. Real Wage Increases	0.7%	1.2%	1.7%
4. Inflation	1.0%	2.0%	3.0%
5. Post-secondary Enrolment Rate – 2038-39 (Canada less Québec, Northwest Territories and Nunavut)	22.6%	23.6%	24.5%
6. Tuition Cost	CPI	CPI + 2.0%	CPI + 4.0%
7. Interest Rates:			
Government's Cost of Borrowing	2.4%	4.4%	6.4%
Student's Cost of Borrowing	5.2%	7.2%	9.2%
8. RAP-Stage 1 Entrance Rates	70% of B-E	Line 1 of Table 28	130% of B-E
9. Net Defaults	6.6%	10.2%	14.3%
10. Student Interest Rate Spread	350 bps	250 bps	100 bps

### 1. Indexation of the Loan Limit

In this test, the \$210 weekly loan limit is indexed annually to inflation starting in loan year 2015-16, thereby showing the effect of many small annual increases on the loan limit. The direct effects are a decrease in the proportion of students at the loan limit and an increase in the total amount of loans issued. The impact on loans issued increases gradually from 1% in 2015-16 to 44% at the end of the projection period, as shown in Table 35.



**Table 35 Impact of Loan Limit on Loans Issued**

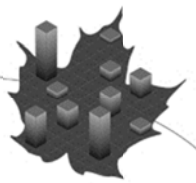
Loan Year	Limit frozen at \$210			Indexed to Inflation Starting in 2015-2016				
	Limit	% of Students at the Limit	Loans Issued Total	Limit	% of Students at the Limit	Loans Issued		
						Total	Increase Over Frozen	
	(\$)	(%)	(\$ million)	(\$)	(%)	(\$ million)	(\$ million)	(%)
2013-2014	210	35.7	2,721	210	35.7	2,721	-	-
2014-2015	210	36.8	2,735	210	36.7	2,735	-	-
2015-2016	210	38.5	2,800	214	37.3	2,820	20	1
2018-2019	210	44.7	2,989	227	38.5	3,110	120	4
2023-2024	210	55.6	3,178	253	41.3	3,530	351	11
2028-2029	210	65.9	3,559	282	45.1	4,268	710	20
2033-2034	210	74.7	4,090	314	49.3	5,346	1,256	31
2038-2039	210	81.8	4,682	350	53.5	6,739	2,057	44

**2. Indexation of Loan Limit and Grants**

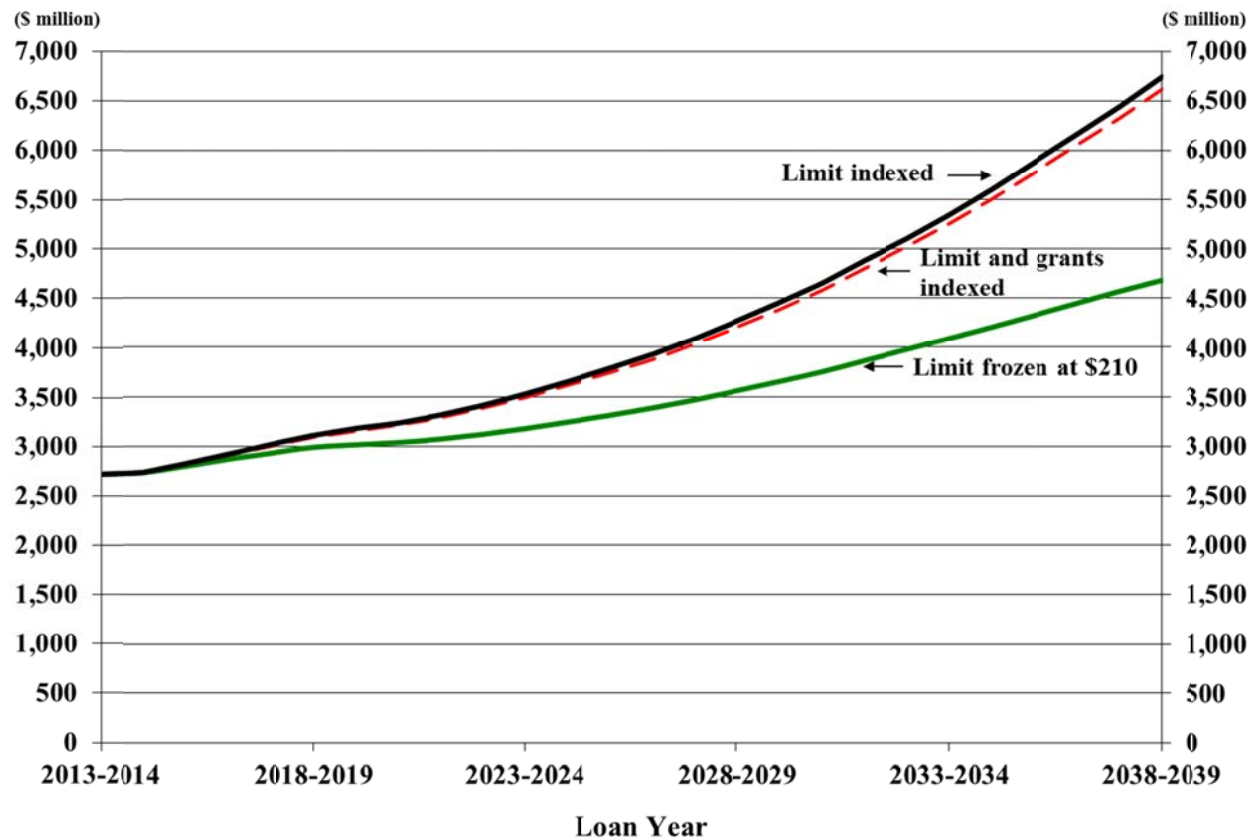
In this test, both the loan limit and grants are indexed annually to inflation. The grants increases lessen the effect of the loan limit increases. Consequently, the impact on total loans issued is smaller than in the first sensitivity test. Table 36 and Chart 9 show the impact of indexing the loan limit and grants.

**Table 36 Impact of Indexation of Loan Limit and Grants on Loans Issued**

Loan Year	Limit frozen at \$210			Limit and Grants Indexed to Inflation Starting in 2015-2016					
	% of Students at the Limit	Loans Issued Total	Grants Total	Limit	% of Students at the Limit	Loans Issued Total	Increase over Frozen	Grants Total	Increase over Frozen
	(%)	(\$ million)	(\$ million)	(\$)	(%)	(\$ million)	(%)	(\$ million)	(%)
2013-2014	35.7	2,721	715	210	35.7	2,721	-	715	-
2014-2015	36.8	2,735	720	210	36.7	2,735	-	720	-
2015-2016	38.5	2,800	729	214	37.2	2,817	0.6	740	1
2018-2019	44.7	2,989	752	227	37.8	3,095	3.5	808	7
2023-2024	55.6	3,178	762	253	39.7	3,493	9.9	902	18
2028-2029	65.9	3,559	821	282	42.6	4,207	18.2	1,070	30
2033-2034	74.7	4,090	916	314	46.2	5,255	28.5	1,318	44
2038-2039	81.8	4,682	1,029	350	49.9	6,615	41.3	1,633	59



**Chart 9 New Loans Issued with Indexation of Loan Limit and Grants**



### 3. Real Wage Increase

Real wage increases are used in the projection of a student’s resources in the need assessment process and in the projection of the Program’s administrative expenses.

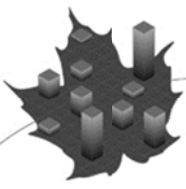
Under the best-estimate assumption, an ultimate real wage increase of 1.2% is assumed starting in loan year 2019-20. Combined with the best-estimate inflation assumption of 2.0%, it results in a nominal annual ultimate wage increase of 3.2%.

The sensitivity tests show the impact of a 50 basis points change in the annual real wage increase, either decreasing the ultimate real wage increase to 0.7% or increasing it to 1.7%. These sensitivity tests have a small impact on the net cost of the Program since the total portfolio and the administrative expenses vary in opposite directions when applying a wage variation.

### 4. Inflation

Under the best-estimate assumptions, an ultimate annual inflation rate of 2.0% is assumed to be reached in loan year 2016-17. The inflation rate affects the growth of a student’s expenses, the growth of the Program’s expenditures and the student resources. It also affects the Government’s cost of borrowing, as well as the repayment rate charged to students.

Under the low-cost scenario, the ultimate annual inflation rate is assumed to decrease to 1.0% in 2016-17, whereas under the high-cost scenario it is assumed to increase to 3.0%.



### 5. Post-secondary Enrolment Rate

The number of students enrolled full-time in a post-secondary institution is projected separately for students participating in the labour force and for students who are not part of the labour force. As shown in Table 4, the 2038-39 post-secondary enrolment is 1,354,000 and the population aged 15-29 is 5,744,000, resulting in an overall post-secondary enrolment rate of 23.6%. The sensitivity tests show the variation of results based on an increase or decrease of students pursuing a post-secondary education.

In the low-cost scenario, post-secondary enrolment rates decrease by 4% throughout the projection period, which results in a rate of 22.6% in 2038-39. Such a decrease could be experienced if the labour shortage worsened.

In the high-cost scenario, post-secondary enrolment rates increase by 4% throughout the projection period, which results in a rate of 24.5% in 2038-39. Such an increase could be experienced if unemployment rates rose.

The amount of loans issued is directly correlated to the enrolment rate so having 4% more students enrolled in a post-secondary institution results in 4% more loans issued.

### 6. Tuition Cost

The long-term estimate of tuition increases is based on past tuition increases relative to the CPI. Over the last 10 years, yearly tuition increases have, on average, corresponded to increases in the CPI plus approximately 1.7%. This increases to CPI plus 2.1% when only considering the last five years. CPI plus 2.0% is used as the best-estimate ultimate growth rate.

In the low-cost scenario, the ultimate tuition increase is expected to be equal to increases in the CPI. This result is more in line with increases of other goods and services.

In the high-cost scenario, the ultimate tuition increase is expected to correspond to increases in the CPI plus 4.0%. With the aging of the population, budgetary pressures can be anticipated, which could lead to higher tuition increases.

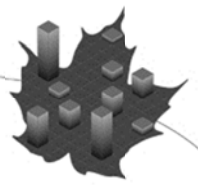
### 7. Interest Rates

The rate of borrowing has an impact on the cost of the interest subsidy for students in school, on the cost of providing RAP (interest portion) to students in need and on the Government's cost of borrowing. This assumption also affects the student rate of borrowing. The low-cost scenario reduces the interest rates by 200 basis points and the high-cost scenario increases them by 200 basis points. Each of these scenarios is plausible based on historical rates.

### 8. Repayment Assistance Plan (RAP)

RAP is a plan that was implemented in August 2009. It replaced the Interest Relief and DRR measures. The utilization of the RAP can vary according to the existing economic situation and students' awareness of this repayment assistance. The low-cost scenario reduces the entrance rates of RAP-Stage 1 by 30% while the high-cost scenario increases them by 30%. Because borrowers move from RAP-Stage 1 to RAP-Stage 2, any change in the entrance rates of RAP-Stage 1 affects RAP-Stage 2.





## 9. Net Defaults

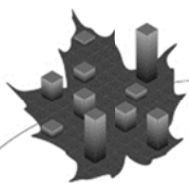
One of the risks for the Government of being involved in the CSLP is the amount of loans that may not be recovered due to defaults. The assumed future net default rate on consolidated loans is 10.2% which corresponds to a default rate of 16.8%, a rehabilitations and recalls rate of 8.7% and a recovery rate of 30.6% [ $10.2\% = 16.8\% \times (1 - 8.7\% - 30.6\%)$ ]. This rate is closely linked with the availability of employment for new graduates since it affects their ability to repay their loans.

In the low-cost scenario, the future default rate is reduced by 500 basis points, to 11.8%, while the future recovery rate is increased by 500 basis points to 35.6%. This results in a net default rate of 6.6% [ $11.8\% \times (1 - 8.7\% - 35.6\%)$ ].

In the high-cost scenario, the future default rate is increased by 500 basis points, to 21.8%, while the future recovery rate is reduced by 500 basis points, to 25.6%. This results in a net default rate of 14.3% [ $21.8\% \times (1 - 8.7\% - 25.6\%)$ ]. Both of these tests affect the provision rates for bad debt – principal.

## 10. Student Interest Rate Spread

The student's cost of borrowing, used to calculate interest revenue, is the sum of the prime rate and a spread of 250 basis points. In the low-cost scenario, the spread is increased to 350 basis points, while in the high-cost scenario, it is reduced to 150 basis points. Changing the student interest rate spread has a direct impact on the interest paid by students, which in turn affects total revenues. In the low-cost scenario, revenues increase, while in the high-cost scenario, they decrease.



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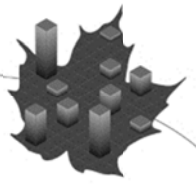
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Table 37 below summarizes the results of each of the sensitivity tests at the end of the projection period.

**Table 37 Sensitivity Test Results for Loan Year 2038-39**

Assumptions	Scenario	Loans		Average	Portfolio		Net		
		Issued	Increase	Growth	July	Increase	Cost	Increase	
		(\$ million)	(%)	(%)	(\$ million)	(%)	(\$ million)	(%)	
<u>Base Scenario</u>	Best-estimate	4,682	-	2.2	31,811	-	2,803	-	
<u>Sensitivity tests</u>									
1 - Index the limit to inflation	High-cost	6,739	43.9	3.7	42,481	33.5	3,237	15.5	
2 - Index Loan Limit and Grants to inflation	High-cost	6,615	41.3	3.6	41,751	31.2	3,969	41.6	
3a - Real Wage	-50 bps	Low-cost	4,713	0.7	2.2	32,028	0.7	2,770	-1.2
3b - Real Wage	+50 bps	High-cost	4,641	-0.9	2.2	31,542	-0.8	2,840	1.3
4a - Inflation	-100 bps	Low-cost	4,479	-4.3	2.0	30,131	-5.3	2,506	-10.6
4b - Inflation	+100 bps	High-cost	4,807	2.7	2.3	33,093	4.0	3,121	11.3
5a - Enrolment Rate	-4%	Low-cost	4,495	-4.0	2.0	30,532	-4.0	2,712	-3.3
5b - Enrolment Rate	+4%	High-cost	4,869	4.0	2.4	33,091	4.0	2,895	3.3
6a - Tuition	CPI	Low-cost	4,426	-5.5	2.0	30,223	-5.0	2,748	-2.0
6b - Tuition	CPI + 4%	High-cost	4,831	3.2	2.3	32,877	3.4	2,836	1.2
7a - Interest Rates	-200 bps	Low-cost	4,682	-	2.2	31,137	-2.1	2,443	-12.9
7b - Interest Rates	+200 bps	High-cost	4,682	-	2.2	32,491	2.1	3,170	13.1
8a - RAP-Stage 1 Entrance Rates	-30%	Low-cost	4,682	-	2.2	31,034	-2.4	2,667	-4.9
8b - RAP-Stage 1 Entrance Rates	+30%	High-cost	4,682	-	2.2	32,474	2.1	2,942	5.0
9b - Net Default Rate	down to 6.6%	Low-cost	4,682	-	2.2	31,248	-1.8	2,627	-6.3
9a - Net Default Rate	up to 14.3%	High-cost	4,682	-	2.2	32,396	1.8	3,005	7.2
10a - Student Interest Rate Spread	350 bps	Low-cost	4,682	-	2.2	32,150	1.1	2,605	-7.1
10b - Student Interest Rate Spread	150 bps	High-cost	4,682	-	2.2	31,473	-1.1	2,995	6.8



## **Appendix 6 – Acknowledgements**

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The following people assisted in the preparation of this report:

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