Office of the Superintendent of Financial Institutions Canada
Office of the Chief Actuary

Bureau du surintendant des institutions financières Canada
Bureau de l'actuaire en chef

ACTUARIAL REPORT

on the

CANADA STUDENT LOANS PROGRAM

as at 31 July 2007

Canada

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13 June 2008

The Honourable Monte Solberg, P.C., M.P.
Minister of Human Resources and Social Development
Gatineau, Canada

The Honourable James M. Flaherty, P.C., M.P.
Minister of Finance
Ottawa, Canada

Dear Ministers:

Pursuant to a request from the Assistant Deputy Minister, Human Resources and Social Development, I am pleased to submit the seventh actuarial report as at 31 July 2007 on the Canada Student Loans Program established under the *Canada Student Loans Act* and the *Canada Student Financial Assistance Act*.

Yours sincerely,

Jean-Claude Ménard

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

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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, a portfolio projection, as well as a discussion of all the assumptions underlying the results of the review. The results are presented on a loan year basis from 1 August to 31 July.

A. Purpose of the Report

This is the seventh actuarial report on the CSLP established under the *Canada Student Loans Act* and the *Canada Student Financial Assistance Act*. It presents the results of an actuarial review of the CSLP as at 31 July 2007 and includes projections of future costs of the Program through loan year 2031-32. An actuarial review of the CSLP provides an evaluation of the Program's overall financial costs and increases the level of information provided to the Minister of Human Resources and Social Development, the Minister of Finance, Parliament and the public.

In accordance with accepted actuarial practice, the main purpose of this actuarial report is to show estimates of:

- projections of the number of students in the CSLP and amount of new loans issued;
- projections of the portfolio of loans in-study, loans in repayment and Program cost elements by type of financial arrangement or regime. Also included are projections of the provisions and allowances under the Direct Loan Regime in effect since August 2000; and
- projections of the net cost of the Direct Loan Regime as well as the remaining net cost for the pre-2000 regimes.

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 this 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, a description of data, assumptions and methods employed and 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.

- Although the number of students enrolled full-time in a post-secondary institution decreases over the projection period, the number of students receiving a CSLP loan increases from 345,000 in 2006-07 to 430,000 in 2031-32. This represents an increase in the loan uptake rate of students in post-secondary institutions from 36% to 52%.
- The amount of new loans issued in 2006-07 totalled $1.9 billion and is projected to increase throughout the projection period and reach $2.9 billion in 2031-32.
- The percentage of students at the loan limit decreased from 50% in 2004-05 to 34% in 2005-06 due to an increase in the loan limit from $165 to $210. However, the proportion is projected to grow thereafter and reach 77% in 2031-32. In approximately ten years, the situation will recur where approximately half of all CSLP students will be at the loan limit.
- The Direct Loan portfolio increases from $9.3 billion as at 31 July 2007 to $19.2 billion by the end of the projection period. The amount of Direct loans which were in default on 31 July 2007 is around $1.02 billion.
- According to the projections, the $15 billion limit on the aggregate amount of outstanding loans in section 13 of the CSFAA is expected to be reached in loan year 2014-15.
- The total net cost (expenses less revenues) of the Government's involvement in the CSLP is expected to grow from $697 million in 2006-07 to $1.2 billion in 2031-32. This represents an average annual increase in the cost to the Government of 2.3%.
- Assumptions for future default and recovery rates remain unchanged from the previous report at 20% and 29%, respectively. Therefore the net default rate remains at 14.2%. The provision rate for bad debt – principal is composed of the net default rate and the upward adjustment for interest accrued during the six-month grace period. This adjustment is increased from 0.4% to 0.6% since capitalisation of interest has been higher than expected. Therefore, the provision rate for bad debt – principal is slightly increased to 14.8%.
- The provision rates for bad debt – interest are modified from the previous report to take into account the current recovery experience of interest on defaulted direct loans and the different projected recovery rates for past and more recent default cohorts.
- The provision rate for debt reduction in repayment remains unchanged from the previous report at 0.7%.
- As a sensitivity test, the limit of $210 is indexed annually to inflation. The results of the test are included in Appendix 4 and are summarized below:
    - an additional $58 million (3% increase) of new loans is issued in 2010-11 due to the indexation of the limit and an additional $1.3 billion (46% increase) in 2031-32; and
    - the portfolio reaches $25.6 billion instead of the expected $19.2 billion in loan year 2031-32 and the total net cost for the Government's involvement in the CSLP increases by $328 million (26% increase) in loan year 2031-32.

II. Main Report

The Canada Student Loans Program has been in effect since 1964 and provides Canadians with financial assistance to pursue a post-secondary education. Historically, two successive acts were established to permit the Minister to provide loans to eligible students under the Program. The *Canada Student Loans Act* (CSLA) applies to loan years preceding August 1995. The *Canada Student Financial Assistance Act* (CSFAA) replaced the previous act for loan years after July 1995.

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, a portfolio projection, as well as a discussion of all the assumptions underlying the results of the review. The results are presented on a loan year basis from 1 August to 31 July.

Section A of the report provides a discussion of assumptions that reflect our best judgement; these assumptions are referred to in this report as the "best-estimate" assumptions. They are determined by putting more emphasis on elements affecting the growth of new loans issued.

The projection of loans issued to eligible students for each loan year is presented in section B. This includes a projection of the student population (ages 18 to 34) in order to determine the future number of students enrolled in post-secondary education and eligible to qualify for a loan under the CSLP. A long-term demographic and economic context of the aging of the population and 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 education.

The projection of the portfolio of loans for each regime (Guaranteed, Risk-Shared and Direct) is provided in section C and the forecast of the net cost of the CSLP is presented in section D. For the Government, there are higher public debt charges following the implementation of the new Direct Loan arrangement. The costs related to Direct loans include the interest subsidy on in-study loans, interest relief, provisions for debt reduction and bad debt (principal and interest), Canada Study Grants, Canada Access Grants, alternative payments, loan forgiveness, recovery costs and administration expenses. The costs are reduced by an estimate of net interest revenues coming from student interest payments, interest relief payments and interest accrued during the grace period and on impaired 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 more detailed descriptions of the assumptions, methodology and sensitivity tests and results for changes in assumptions including 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 our best judgement and are referred to as "best-estimate" assumptions. Some of the assumptions are based on the most recent actuarial report on the Canada Pension Plan (CPP), 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 among them. The following sections present the assumptions used as well as their future evolution.

1. Demographic Assumptions

The demographic projections start with the Canadian and Québec populations on 1 July 2006, to which future fertility, mortality and migration assumptions are applied. The population of Canada is adjusted to exclude the non-participating province of Québec and territories of the Northwest Territories and Nunavut. The CPP population projections are essential in determining the future number of students enrolled in and pursuing 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.

a) 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 over the last 20 years. In the 1990s, the 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 decade, poor labour market conditions have caused the school-to-work transition period to increase. Until recently, it was 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.

Starting in 2011, a decline in the labour force growth rate for the population aged 18 to 34 will create more working opportunities and should reduce the school-to-work transition period for this group. The proportion of individuals aged 18 to 34 participating in the labour force is set to increase from 79.6% in loan year 2006-07 to 82.4% in 2031-32. This implies that youths will join the labour market sooner, thus reducing the proportion of the population inclined to remain within the educational system.

b) Inflation, Tuition Fees and Wage Increases

The desire of the Bank of Canada and the Federal Government to keep inflation between 1% and 3% suggests that the rate of inflation will remain low in the coming years. Hence, the annual inflation rate is assumed to remain constant at 2.0% from 2007-08 until 2010-11. Starting in 2011-12, the rate is uniformly increased to its ultimate level of 2.5% in 2015-16. This rate of inflation is maintained for the remainder of the projection period.

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 are treated separately from other expenses since their evolution is, in part, a result of government policies. Based on stated intentions in provincial budgets and actual tuition increases as reported in news releases, the tuition increase is estimated to be 3.1% in loan year 2007-08 and then 3.5% in loan years 2008-09, 2009-10 and 2010-11. 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 3.0% for the long-term, in accordance with past experience.

Future student resources, including student earnings and parental contributions, are influenced by the increase of average annual earnings. The increase in average earnings is related to changes in the manpower supply in the labour force. Therefore, an increase in productivity and a decline in the labour force growth rate, especially after 2011-12, are assumed to force a relatively higher real wage growth. The real growth in average earnings is projected to increase gradually from 0.3% in 2007-08, reaching 1.3% by 2015-16. It is maintained at that level for the rest of the projection period.

c) Cost of Borrowing

Since August 2000, students 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, the loan's duration is a combination of three periods. First, a student is in school and receives an interest subsidy for an average of three years. Next, the student enters a grace period of six months during which interest accrues but no payment is required. Finally, the student enters a period of repayment for a maximum of 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. In recent months, federal bond yields have been decreasing and this trend is expected to continue in the near future. Thus, the real cost of borrowing is estimated to be 1.9% in loan year 2007-08 and slightly lower in 2008-09, at 1.8%. It is anticipated that the rate will recover thereafter and gradually increase to an ultimate rate of 2.7% by loan year 2016-17. The Government cost of borrowing is the sum of the real government cost of borrowing and the rate of inflation as summarized in Table 1.

Table 1 Borrowing Costs

Loan Year	Inflation (%)	Real Government Cost of Borrowing (%)	Government Cost of Borrowing (%)	Prime Rate (%)	Student Cost of Borrowing (%)
	(1)	(2)	(1) + (2)	(3)	(3) + 250 pts
2007-08	2.0	1.9	3.9	5.6	8.1
2008-09	2.0	1.8	3.8	5.1	7.6
2009-10	2.0	2.0	4.0	5.2	7.7
2010-11	2.0	2.1	4.1	5.3	7.8
2011-12	2.1	2.2	4.2	5.4	7.9
2012-13	2.2	2.3	4.4	5.5	8.0
2013-14	2.3	2.4	4.6	5.5	8.0
2014-15	2.4	2.5	4.9	5.5	8.0
2015-16	2.5	2.6	5.1	5.5	8.0
2016-17+	2.5	2.7	5.2	5.5	8.0

The prime rate for loan year 2007-08 is set at 5.6% which is an average of the higher rate at the beginning of the loan year combined with the recent cuts to the rate. In loan year 2008-09, the prime rate is expected to remain low at 5.1%, on average. Beginning in loan year 2009-10, the prime rate is expected to increase gradually reaching an ultimate rate of 5.5% in loan year 2012-13. The student cost of borrowing, used to calculate interest revenue and the cost of interest relief, is the sum of the prime rate and a spread of 250 basis points. The student cost of borrowing can be found in the last column of Table 1.

3. Provision Assumptions

As of August 2000, the CSLP is directly delivered and financed by the Government. Three provisions are established to cover future costs: bad debt – principal, bad debt – interest and debt reduction in repayment (DRR).

The provision for bad debt – 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 in accordance with the status of the loan; that is whether the loan is in-study, in repayment (according to the number of years since consolidation) or impaired (according to the number of years since default). The value of the allowance is projected into the future using assumed default and recovery rates. For each loan category, based on the length of time that the loan has been in that status, the appropriate rate and distribution are applied to determine the value of the allowance.

The provision rate for bad debt – principal is applied to the net loans issued, which are obtained by reducing loans issued by prepayments, Canada Access Grants and loans forgiven while in-study and during the grace period. This provision rate is increased compared to the previous report from 14.6% to 14.8% to reflect the experience of interest accrued during the six-month grace period before consolidation of the loans. The level of the total allowance is determined at the end of the loan year. The total allowance calculated at the end of a year less the total allowance at the end of the previous year is charged as a provision for bad debt – principal and represents the required adjustment to the allowance.

The allowance for bad debt – interest is based on the account's recoverable status and its age since impairment or default. The interest accrued on impaired 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 percentage of the allowance changes according to the number of years since impairment. The total allowance calculated at the end of a year less the total allowance at the end of the previous year is charged as a provision for bad debt –interest.

The methodology to establish the provision for bad debt – interest has been updated and, therefore, the provision rates for the allowance are modified compared to the previous report. First, based on the experience of direct loans, new recovery rates were established according to the number of years since impairment and are applied to the outstanding recoverable interest. Second, in the previous report, the gross default and principal recovery rates by cohort of default were reduced for loan year 2005-06 and thereafter based on experience. The decrease in the proportion of principal recovered was accompanied by a decrease in the proportion of interest recovered. Therefore, interest recovery rates have been changed in this report and different sets of provision rates were established according to the default loan year. To determine the allowance as at 31 July 2007, a mix of those sets of provision rates is used based on the number of years since impairment. The set of provision rates used to determine the allowance as at 31 July 2007 is shown in Table 2, along with the projected rates for the allowance as 31 July 2008 and the weighted average provision rates for the allowance as at 31 March 2008 for the purpose of the Public Accounts.

The DRR provision rate remains unchanged from the previous report at 0.7% and is assumed to remain constant in the future. As with the other provision rates, it is applied to net loans issued. In loan year 2006-07, the DRR expense attributed to direct loan borrowers was $5 million which was the amount projected in the previous report. The emergence of DRR expenses in the Direct Loan Regime will be closely monitored to determine if the provision rate remains appropriate.

Table 2 Provision and Allowance Assumptions

Type of Provision		**Assumptions**		
		(%)		
On net loans issued				
Bad debt – principal		**14.8**		
An experience adjustment to the allowance will be made each year.				
Debt reduction in repayment		0.7		
Total		**15.5**		
		Allowance as at		
On outstanding recoverable interest	**Number of Years Since Impairment**	31 July 2007 (%)	31 March 2008 (%)	31 July 2008 (%)
Allowance for bad debt – interest	Less than 1	33.4	33.4	33.4
	Between 1 and 2	33.8	39.6	42.5
	Between 2 and 3	39.0	41.1	42.2
	Between 3 and 4	47.8	47.8	47.8
	Between 4 and 5	56.1	56.1	56.1
	Between 5 and 6	64.4	64.4	64.4
	Between 6 and 7		71.7	71.7

Table 3 contains a summary of the best-estimate assumptions described previously.

Table 3 Best-estimate Assumptions

1. Total fertility rate for Canada	1.6 per woman
2. Mortality	2000-02 Life Tables for Canada with future improvements
3. Net migration rate	0.50% of the population to 2015 and 0.54% in 2020+
4. Youth participation rate (participating provinces/territory, ages 18-34)	79.6% (2006-07) ⋮ 82.4% (2031-32)
5. Real wage differential	0.3% (2007-08) 0.5% (2008-09) ⋮ 1.3% (2015-16+)
6. Inflation	2.0% (2007-08) 2.0% (2008-09) ⋮ 2.5% (2015-16+)
7. Tuition fee increases	3.1% (2007-08) 3.5% (2008-09) 3.5% (2009-10) 3.5% (2010-11) ⋮ CPI + 3.0% (2015-16+)
8. Government cost of borrowing	3.9% (2007-08) ⋮ 5.2% (2016-17+)
9. Student borrowing cost	8.1% (2007-08) ⋮ 8.0% (2012-13+)
10. Bad debt provision – principal	14.8% (2007-08+)
11. Allowance for bad debt – interest	33.4% (Interest on loans in default for less than a year) ⋮ 100.0% (Interest on loans in default for 14 to 15 years)
12. DRR provision	0.7% (2007-08+)

B. Projection of Total Loans Issued

The purpose of this section is to discuss the projection of the amount of total loans issued by the CSLP. First, the full-time enrolment in post-secondary institutions is projected. Next, the future number of students participating in the CSLP is determined using a projection of the distribution of assessed need for CSLP students. Finally, the previous elements are combined to project the amount of total loans issued.

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. Demographics and post-secondary enrolment will have the largest impact on the progression of full-time students attending post-secondary institutions.

a) Demographic Projections

The population of Canada less Québec and the territories of the Northwest Territories and Nunavut in the age range 18-34 is used to project the number of students enrolled in post-secondary institutions. The projection of this population is a fairly good approximation since it originates from individuals born between 1974 and 2013, most of whom are already included in the population.

In the first nine years of the projection, children of the "baby-boom" generation, called the "echo" generation, are expected to contribute to the increase in the population for ages 18-34. The "baby-boom" generation is more numerous and, consequently, had more children than the previous generation, notwithstanding a lower fertility rate. The population aged 18-34 is expected to increase from 5,839,000 to 6,180,000 by 2015-16. In the last sixteen years of the projection, the population aged 18-34 decreases to 5,916,000. Overall, as Table 4 shows, an increase of 77,000 is expected in the population aged 18-34 over the 25-year projection period.

Table 4 Population and Post-secondary Enrolment

Loan Year	Population of Canada Less Québec, NWT and Nunavut (18-34) (Thousands)	Not Participating In Labour Force (18-34) (Thousands)	Students Enrolled Full-Time (Thousands)	Increase (Thousands)	Growth Rate (%)
2006-07	5,839	1,189	954	-	-
2007-08	5,882	1,209	969	15.2	1.6
2008-09	5,937	1,226	981	11.7	1.2
2009-10	5,993	1,236	985	4.5	0.5
2010-11	6,038	1,236	982	-3.5	-0.4
2011-12	6,077	1,235	976	-6.0	-0.6
2012-13	6,113	1,236	972	-3.6	-0.4
2013-14	6,150	1,243	975	3.1	0.3
2014-15	6,176	1,248	976	0.8	0.1
2015-16	6,180	1,240	964	-12.3	-1.3
2016-17	6,172	1,222	946	-17.6	-1.8
2017-18	6,155	1,207	932	-13.9	-1.5
2018-19	6,130	1,193	920	-11.8	-1.3
2019-20	6,093	1,170	900	-20.0	-2.2
2020-21	6,049	1,141	873	-27.0	-3.0
2021-22	6,011	1,121	855	-18.4	-2.1
2022-23	5,986	1,110	846	-9.0	-1.1
2023-24	5,967	1,097	835	-11.4	-1.4
2024-25	5,941	1,079	821	-13.7	-1.6
2025-26	5,911	1,062	809	-11.6	-1.4
2026-27	5,893	1,053	805	-4.1	-0.5
2027-28	5,884	1,049	806	0.8	0.1
2028-29	5,886	1,046	808	2.4	0.3
2029-30	5,894	1,043	811	3.0	0.4
2030-31	5,903	1,039	813	1.8	0.2
2031-32	5,916	1,044	822	8.9	1.1

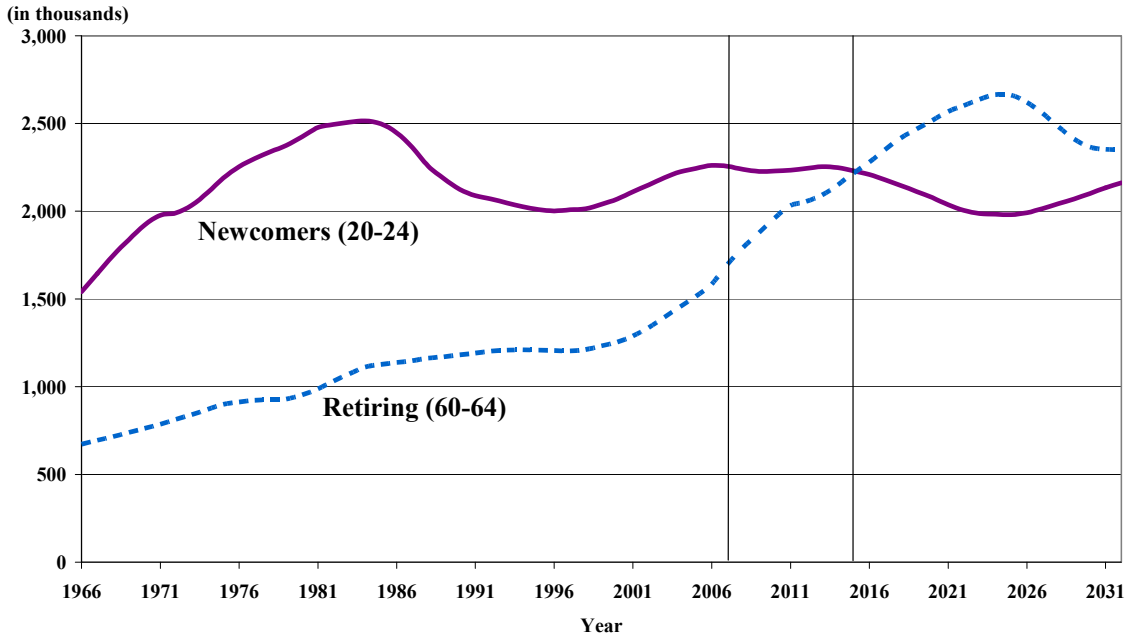
b) Post-secondary Enrolment

The number of students enrolled full-time in post-secondary institutions is closely linked to the evolution of the population aged 18-34 that is not participating in the labour force. Those individuals who are not participating in the labour force may be more inclined to pursue a post-secondary education. Thus, post-secondary enrolment is considered to be a subset of the population not participating in the labour force.

The aging and subsequent retirement of the "baby-boomers", along with a shortage of replacement workers caused by the low fertility rate, are expected to create strong pressure on the labour market. The generations following the "baby-boom" are smaller and thus have fewer labour force entrants to replace the retiring "baby-boomers". This will cause a labour shortage which will increase as more of the "baby-boomers" retire.

As shown in Chart 1, the number of persons retiring or in the age range 60-64 has been very low historically compared to the number of newcomers entering the labour force. This situation is expected to change radically over the next 7 to 25 years, creating an imbalance in the labour market. More specifically, in 2015, the number of persons retiring is expected to catch up with the number of newcomers, reaching 2,227,000 persons. By 2025, the number of persons retiring (2,661,000) will surpass the number of newcomers (1,980,000) by 34%. The labour market will have to adapt since it is accustomed to having at least two newcomers for each person retiring; this ratio will decrease significantly to less than one newcomer for each person retiring. As a result, the participation rates of the population aged 18-34 in the labour force are assumed to increase and the school-to-work transition period will be reduced due to favourable labour market conditions and the increased availability of work.

Chart 1 Evolution of Persons Retiring (60-64) and Newcomers (20-24)



In Table 4, the population not participating in the labour force is projected to increase from 1,189,000 to 1,248,000 during the first eight years of the projection, which is an increase of 59,000. Over the last seventeen years of the projection, the population not participating in the labour force decreases by 204,000 to reach 1,044,000 in loan year 2031-32. This large decrease is caused by the anticipated labour shortage and the assumption that over the last seventeen years of the projection period, the labour force participation rates of the population 18-34 will increase due to favourable labour market conditions and increased availability of work. As participation in the labour force increases, the population not participating in the labour force will, in turn, decrease.

The evolution of the inactive population, those aged 18-34 not participating in the labour force, is a good indicator of the evolution of the population in post-secondary institutions. Enrolment in post-secondary institutions, as well as CSLP participation, varies between age groups. The age distribution of the CSLP shows that approximately 75% of students in the CSLP are in the age range 18-24. The CSLP age distribution was used to separate historical enrolment data into age ranges. A post-secondary participation factor was calculated as the ratio of the historical post-secondary enrolment to the inactive population for each age range. This post-secondary participation factor was then applied to the future inactive population in order to determine the future enrolment in post-secondary institutions.

In Table 4, the population aged 18-34 enrolled full-time in a post-secondary institution is projected to increase by 22,000 (954,000 to 976,000) during the first eight years of the projection period. Over the last seventeen years of the projection period, the number of students enrolled full-time decreases rapidly and reaches 822,000 in loan year 2031-32. This overall decrease of 154,000 students during the last seventeen years of the projection is a result of the decrease in the population aged 18-34 that is not participating in the labour force. The population aged 18-34 enrolled full-time is approximately 75% of the population not participating in the labour force each year in the projection period. Thus, the significant decrease in the population not participating in the labour force, which was discussed above, causes a decrease in the population enrolled in a post-secondary institution.

2. Number of Students in the Canada Student Loans Program

To project the number of students in the CSLP, it is necessary to determine the future distribution of student need, as well as the average 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. A student's need is defined as the excess of expenses over resources, if positive. The expenses assessed include tuition fees, books, shelter, food and transportation. The resources assessed include student earnings, assets and parental contributions. Future distributions of student need are projected using the CSLP need assessment data provided by the Department of Human Resources and Social Development (HRSD). For this report, the need assessment data file for loan year 2004-05 was provided. Although helpful, a more recent data file would be beneficial and improve the projections.

Table 5 Average Student Need

Loan Year	Resources ($)	Tuition ($)	Other Expenses ($)	Total Expenses ($)	Average Student Need ($)	Average Student Need Increase ($)
	(1)	(2)	(3)	(2) + (3)	(2) + (3) - (1)	
2006-07	4,500	5,600	9,300	14,900	10,400	-
2007-08	4,600	5,800	9,400	15,200	10,600	200
2008-09	4,700	6,000	9,600	15,600	10,900	300
2009-10	4,800	6,200	9,800	16,000	11,200	300
2010-11	5,000	6,400	10,000	16,400	11,400	200
2011-12	5,100	6,700	10,200	16,800	11,700	300
2012-13	5,300	6,900	10,400	17,300	12,100	400
2013-14	5,400	7,300	10,600	17,900	12,400	300
2014-15	5,600	7,600	10,800	18,500	12,800	400
2015-16	5,800	8,100	11,100	19,100	13,300	500
2016-17	6,000	8,500	11,300	19,800	13,800	500
2017-18	6,300	9,000	11,600	20,600	14,300	500
2018-19	6,500	9,500	11,900	21,300	14,800	500
2019-20	6,700	10,000	12,100	22,100	15,400	600
2020-21	7,000	10,500	12,400	23,000	16,000	600
2021-22	7,300	11,100	12,700	23,800	16,600	600
2022-23	7,500	11,700	13,000	24,800	17,200	600
2023-24	7,800	12,400	13,400	25,700	17,900	700
2024-25	8,100	13,000	13,700	26,700	18,600	700
2025-26	8,400	13,800	14,000	27,800	19,300	700
2026-27	8,700	14,500	14,300	28,900	20,100	800
2027-28	9,100	15,300	14,700	30,000	20,900	800
2028-29	9,400	16,200	15,000	31,200	21,800	900
2029-30	9,800	17,000	15,400	32,500	22,700	900
2030-31	10,200	18,000	15,800	33,800	23,600	900
2031-32	10,500	19,000	16,200	35,100	24,600	1,000

Table 5 summarizes the three main elements of student need, as well as the average student need.

Average student need is increasing because expenses are rising faster than resources. Tuition fees are the primary source of increases in student need and are ultimately indexed at 3.0% above inflation. However, tuition has been, on average, 3.6% above inflation over the last ten years and 5.2% above inflation over the last fifteen years. Other expenses, which include books, shelter, food and transportation, are indexed at the rate of inflation. Resources are increased at a slower pace than tuition and are ultimately indexed at 1.3% above inflation. Table 5 shows average tuition fees rising from $5,800 in 2007-08 to $19,000 in 2031-32. In fact, tuition fees rise from 126% of a student's available resources in 2007-08 to 181% in 2031-32.

Analysis of the need assessment data provided by HRSD for loan years prior to 2005-06 has shown that the CSLP student need closely follows a normal distribution. A better fit is achieved by slightly modifying the normal curve. The modifications made to the normal curve are described in Appendix 3 of this report. Using the properties of a normal distribution and the 25 years of projected need increases, as shown in Table 5, need curves for the next 25 years were projected.

Chart 2 CSLP Student Projected Need Curve

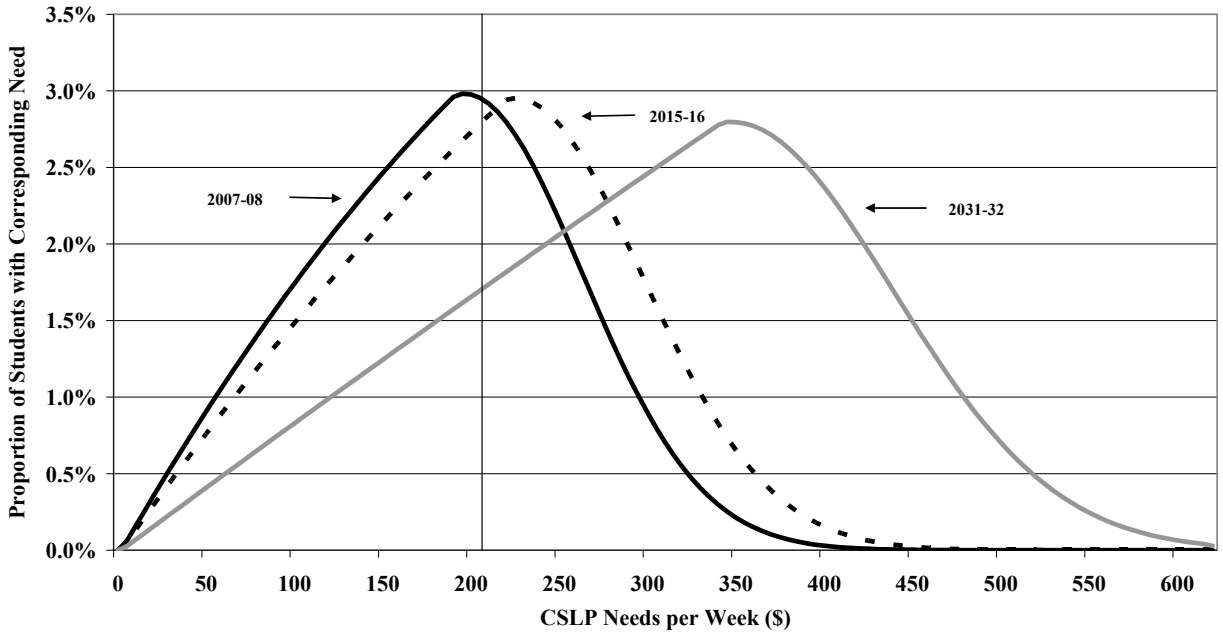


Chart 2 is a projection of the CSLP student need curves for three years during the twenty-five year projection period. The area under each successive need curve grows from year to year and represents the increased participation in the CSLP. The CSLP loan uptake rate is defined as the proportion of students enrolled full-time in a post-secondary institution who take a loan in the CSLP. The vertical line at $210 in Chart 2 represents the current loan limit. Any borrower whose need falls to the right of this line will receive a loan equal to the limit. Those whose need does not exceed the loan limit are eligible to receive a loan amount equal to their entire need. The effect that the constant loan limit has on new loans issued is apparent since the area under the curves and to the right of the vertical line is increasing through time.

During the projection period, the modified normal curves become flatter as students move further to the right of the curve due to increased need. Need will increase if expenses are increasing faster than resources, as is assumed. The need assessment data show that students with high need have a very low level of resources. Thus students to the right of the peak of the need curve have few resources and will see a large increase in their need. Those to the left of a peak will experience an increase in need less than the average since any increase in need should be partially offset by an increase in resources. It is anticipated that as student need increases, newly eligible participants will enter to the left of the peak. New participants will enter the CSLP because their previously negative need became positive or their need increased enough that it became worthwhile to take the loan. It is expected that as need increases, participants will move towards the right of the peak.

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. This is the main cause of the increase in loans issued over the 25-year period.

The product of the number of students enrolled full-time and the CSLP loan uptake rate, resulting from each successive need curve, gives the number of students in the CSLP. Table 6 shows that the loan uptake rate is expected to increase from 36% to 52%, adding 85,000 students to the Program. Thus, the number of students in the Program is projected to increase from 345,000 in 2006-07 to 430,000 in 2031-32.

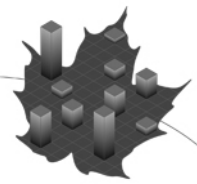
Table 6 Loan Recipients

Loan Year	Students Enrolled Full-time (Thousands)	Loan Uptake Rate (%)	Students in CSLP (Thousands)	Annual Increase in CSLP Students (Thousands)	Annual Increase in CSLP Students (%)
	(1)	(2)	(1) x (2)		
2006-07	954	36.2	345	-	-
2007-08	969	36.6	354	9	2.6
2008-09	981	36.7	360	6	1.7
2009-10	985	36.9	364	3	0.9
2010-11	982	37.1	364	0	0.1
2011-12	976	37.7	368	3	0.9
2012-13	972	38.2	371	4	1.0
2013-14	975	38.8	379	7	2.0
2014-15	976	39.3	384	5	1.4
2015-16	964	40.0	386	2	0.5
2016-17	946	40.6	384	-2	-0.5
2017-18	932	41.2	384	1	0.1
2018-19	920	41.8	385	1	0.2
2019-20	900	42.6	383	-2	-0.5
2020-21	873	43.1	377	-6	-1.6
2021-22	855	43.9	375	-1	-0.4
2022-23	846	44.5	377	1	0.3
2023-24	835	45.3	378	1	0.3
2024-25	821	45.9	377	-1	-0.3
2025-26	809	46.7	378	1	0.2
2026-27	805	47.3	380	3	0.8
2027-28	806	48.0	387	7	1.7
2028-29	808	49.1	397	10	2.5
2029-30	811	50.2	407	11	2.6
2030-31	813	51.2	417	9	2.3
2031-32	822	52.3	430	14	3.3

3. New Loans Issued

This section focuses on the determination of the amount of new loans issued in each loan year. The two factors primarily responsible for the evolution of new loans issued are student need 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 $10,425 in 2006-07 to $24,596 in 2031-32. Although the 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 period as an estimated 85,000 additional students will participate in the CSLP.

Secondly, a constant loan limit will restrict the growth of new loans issued. In loan year 2005-06, the loan limit was increased to $210 per week, but is assumed to remain constant thereafter. This initially resulted in a large decrease of the percentage of students at the limit since fewer students were eligible for a loan of that size. However, over time, as student need increases and the loan limit remains constant, the percentage of students at the loan limit will continue to grow.

In fact, Table 7 shows that the percentage of students at the loan limit is projected to increase from 35.1% in 2006-07 to 77.4% in 2031-32. These students are not eligible for a further increase in loan size despite increasing cost pressures. In approximately ten years, just over half of all CSLP students are projected to reach the loan limit, which was the situation when the decision was made to increase the loan limit to $210 per week. This situation is graphically depicted in Chart 2 which 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 Needs ($)	Increase (%)	% of Students at Limit	New Loans Issued ($ million)	Increase (%)	Students in CSLP (Thousands)	Increase (%)	Average Loan Size ($)	Increase (%)
	(1)		(2)	(3)		(4)		(3)/(4)	
2006-07	10,425	0.0	35.1	1,912	-	345	-	5,541	-
2007-08	10,627	1.9	35.8	1,970	3.0	354	2.6	5,560	0.3
2008-09	10,900	2.6	37.1	2,017	2.4	360	1.7	5,599	0.7
2009-10	11,172	2.5	38.4	2,051	1.7	364	0.9	5,639	0.7
2010-11	11,443	2.4	39.7	2,068	0.8	364	0.1	5,678	0.7
2011-12	11,739	2.6	41.2	2,101	1.6	368	0.9	5,715	0.7
2012-13	12,069	2.8	43.2	2,143	2.0	371	1.0	5,769	1.0
2013-14	12,437	3.1	45.0	2,202	2.8	379	2.0	5,814	0.8
2014-15	12,848	3.3	46.9	2,251	2.2	384	1.4	5,864	0.9
2015-16	13,306	3.6	48.9	2,282	1.4	386	0.5	5,914	0.9
2016-17	13,790	3.6	50.9	2,291	0.4	384	-0.5	5,969	0.9
2017-18	14,299	3.7	52.7	2,311	0.9	384	0.1	6,014	0.7
2018-19	14,831	3.7	54.9	2,337	1.1	385	0.2	6,071	1.0
2019-20	15,389	3.8	56.8	2,345	0.3	383	-0.5	6,119	0.8
2020-21	15,973	3.8	58.7	2,325	-0.8	377	-1.6	6,169	0.8
2021-22	16,585	3.8	60.6	2,334	0.4	375	-0.4	6,218	0.8
2022-23	17,226	3.9	62.6	2,361	1.1	377	0.3	6,269	0.8
2023-24	17,898	3.9	64.3	2,385	1.0	378	0.3	6,311	0.7
2024-25	18,602	3.9	66.3	2,397	0.5	377	-0.3	6,362	0.8
2025-26	19,340	4.0	67.9	2,418	0.9	378	0.2	6,404	0.6
2026-27	20,114	4.0	69.7	2,453	1.5	380	0.8	6,448	0.7
2027-28	20,926	4.0	71.3	2,511	2.4	387	1.7	6,488	0.6
2028-29	21,778	4.1	72.8	2,589	3.1	397	2.5	6,527	0.6
2029-30	22,673	4.1	74.5	2,674	3.3	407	2.6	6,566	0.6
2030-31	23,611	4.1	75.9	2,750	2.9	417	2.3	6,602	0.6
2031-32	24,596	4.2	77.4	2,857	3.9	430	3.3	6,639	0.6

Table 7 shows the annual increase in new loans issued over the 25-year projection period. Overall, the total new loans issued increase from $1,912 million in 2006-07 to $2,857 million in 2031-32, resulting in an average annual increase of 1.6%. This average annual increase can be attributed to two factors: a 0.9% average annual increase in the number of students in the CSLP and a 0.7% average annual increase in the average loan size. The average loan size is calculated as the ratio of new loans issued to 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 increased number of students becoming eligible for a loan as a result of accelerated student need. The average loan size is not greatly 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 4. 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 need.

C. Portfolio Projections

This section presents projections of the portfolio for all three regimes. 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 full-time students in the CSLP. The loans in repayment consist of loans consolidated by students with financial institutions (or the Government) which are still outstanding.

1. Guaranteed and Risk-Shared Portfolios

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 Risk-Shared impaired loans bought back by the Government (principal only). The projection of Risk-Shared impaired loans is necessary to determine when the limit on the aggregate amount of outstanding loans, imposed by the *Canada Student Financial Assistance Act* (CSFAA), will be reached.

Table 8 shows that the Guaranteed Regime is gradually being phased out over the next twelve years, while loans in the Risk-Shared Regime will take an extra six years before being completely phased out.

As at July 2007, the total impaired loans coming from the Guaranteed and Risk-Shared regimes that are owned by the Government amount to approximately $861 million (principal and interest) and are subject to possible future recoveries. The Guaranteed impaired loans 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. This provision calculation is not included in this report.

Table 8 Guaranteed and Risk-Shared Regimes Portfolios

As at July 31	Guaranteed			Risk-Shared			
	Loans In-study (with financial institutions)	Loans in Repayment (with financial institutions)	Total	Loans In-study (with financial institutions)	Loans in Repayment (with financial institutions)	Impaired Loans (bought back by the Government)	Total
	($ million)			($ million)			
2007	17	143	161	171	2,562	191	2,924
2008	10	100	110	96	2,076	181	2,353
2009	4	70	73	47	1,670	168	1,884
2010	-	49	49	20	1,254	151	1,425
2011	-	32	32	10	909	133	1,052
2012	-	20	20	3	638	113	754
2013	-	13	13	-	426	93	519
2014	-	8	8	-	275	75	350
2015	-	6	6	-	171	56	227
2016	-	4	4	-	106	40	146
2017	-	2	2	-	63	27	90
2018	-	1	1	-	34	18	52
2019	-	1	1	-	17	11	28
2020	-	-	-	-	8	7	14
2021	-	-	-	-	4	4	7
2022	-	-	-	-	2	2	4
2023	-	-	-	-	1	1	2
2024	-	-	-	-	0	0	1
2025	-	-	-	-	0	0	1
2026	-	-	-	-	-	-	-

2. Direct Loan Portfolio and Allowances

Under the Direct Loan Regime, according to the accounting recommendations under Section PS 3050 Loans Receivable of the Public Sector Accounting Handbook of the Canadian Institute of Chartered Accountants, a provision should be accounted for as a Program expense since the loans are provided by the Government instead of by financial institutions. The purpose of this provision is to cover all future net costs and risk of loss associated with loans. As a result, the provision avoids overstatement of Program revenues by immediately recognizing the risk of loss.

The projection of the Direct Loan portfolio includes the balance of outstanding loans, the projection of impaired loans for which students have stopped making payments, allowances for bad debt (principal and interest separately) to cover the risk of future default, net of recoveries, from loans disbursed and the allowance for DRR to cover the future cost of students benefiting from this program disposition.

The projection of the Direct Loan portfolio is shown in Table 9. The projections use the consolidation, default and recovery distributions discussed in Appendix 3. The distributions of defaults and recoveries for the Direct Loan Regime are the same as in the previous report. The future gross default and recovery rates remain unchanged at 20.0% and 29.0%, respectively. Overall, the corresponding net default rate remains unchanged at 14.2% for the future.

Table 9 Direct Loan Portfolio and Allowances

As at July 31	Loans In-study	Loans in Repayment	Impaired Loans	Total	Allowance for Bad Debt Principal	Allowance for Bad Debt Interest	DRR
	($ million)				($ million)		
2007	4,227	4,014	1,018	9,259	1,662	71	72
2008	4,476	4,638	1,213	10,326	1,923	110	77
2009	4,681	5,200	1,387	11,268	2,151	156	79
2010	4,848	5,706	1,571	12,125	2,376	213	81
2011	4,972	6,149	1,748	12,868	2,584	280	81
2012	5,085	6,506	1,913	13,504	2,774	356	80
2013	5,194	6,805	2,064	14,063	2,949	439	79
2014	5,314	7,072	2,200	14,587	3,112	526	78
2015	5,434	7,311	2,321	15,067	3,260	612	76
2016	5,537	7,527	2,430	15,493	3,395	696	74
2017	5,609	7,712	2,531	15,853	3,513	775	72
2018	5,676	7,865	2,625	16,166	3,619	847	70
2019	5,743	8,004	2,712	16,459	3,714	914	68
2020	5,792	8,119	2,791	16,702	3,799	975	65
2021	5,805	8,214	2,862	16,882	3,869	1,029	62
2022	5,827	8,282	2,924	17,034	3,931	1,079	60
2023	5,866	8,336	2,979	17,181	3,986	1,122	57
2024	5,912	8,394	3,026	17,331	4,036	1,161	54
2025	5,950	8,449	3,066	17,465	4,079	1,195	52
2026	5,994	8,497	3,102	17,594	4,116	1,226	50
2027	6,055	8,545	3,135	17,735	4,150	1,252	48
2028	6,146	8,601	3,164	17,911	4,184	1,276	46
2029	6,274	8,673	3,193	18,140	4,221	1,296	45
2030	6,429	8,774	3,223	18,426	4,260	1,315	44
2031	6,595	8,915	3,257	18,767	4,298	1,332	44
2032	6,798	9,085	3,296	19,179	4,337	1,347	44

As at 31 July 2007, the outstanding Direct Loan portfolio is $9.3 billion and is derived from new loans issued during loan years 2000-01 to 2006-07 ($11.8 billion), plus the interest accrued during the grace period for these seven years, minus repayments and loans forgiven. The impaired loans are part of the assets and are included in the Direct Loan portfolio projection. The portfolio increases rapidly to reach $13.5 billion within the next five years. By the end of loan year 2031-32, the portfolio reaches $19.2 billion.

Compared to the evaluation as at 31 July 2006, there is no major change in the portfolio of in-study and impaired loans. However, the portfolio in repayment is lower when compared to the previous report. This difference is mainly due to the higher than expected principal payments. In order to project the principal payments, a scheduled payment is calculated using a 114-month repayment period. Some borrowers make payments that exceed the payments calculated using a 114-month repayment period, so an accelerated payment assumption is used to take this into account. Implemented in 2005-06, an HRSD Guideline on amortization periods for consolidating loans suggests the period over which consolidations are to be amortized according to loan size. This Guideline is intended to prevent low monthly payments while ensuring a reasonable repayment schedule.

Allowance for Bad Debt – Principal: Table 10 provides the details of the calculations for the projection of the impaired loans portfolio and the allowance for bad debt – principal under the Direct Loan Regime.

Table 10 Impaired Loans and Allowance for Bad Debt – Principal

	Impaired Loans Portfolio					Allowance for Bad Debt – Principal			
Loan Year	Balance 1 August	Impaired Loans	Collected & Forgiven 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)
2006-2007	853	250	85	-	1,018	1,402	-	1,662	260
2007-2008	1,018	277	82	-	1,213	1,662	-	1,923	261
2008-2009	1,213	298	86	38	1,387	1,923	38	2,151	265
2009-2010	1,387	317	89	44	1,571	2,151	44	2,376	269
2010-2011	1,571	332	93	63	1,748	2,376	63	2,584	271
2011-2012	1,748	346	96	84	1,913	2,584	84	2,774	275
2012-2013	1,913	356	100	105	2,064	2,774	105	2,949	280
2013-2014	2,064	366	104	126	2,200	2,949	126	3,112	288
2014-2015	2,200	375	109	145	2,321	3,112	145	3,260	294
2015-2016	2,321	384	113	163	2,430	3,260	163	3,395	298
2016-2017	2,430	393	112	180	2,531	3,395	180	3,513	298
2017-2018	2,531	401	112	195	2,625	3,513	195	3,619	301
2018-2019	2,625	408	113	208	2,712	3,619	208	3,714	304
2019-2020	2,712	413	114	220	2,791	3,714	220	3,799	304
2020-2021	2,791	418	117	231	2,862	3,799	231	3,869	301
2021-2022	2,862	422	119	240	2,924	3,869	240	3,931	302
2022-2023	2,924	424	121	249	2,979	3,931	249	3,986	305
2023-2024	2,979	426	122	257	3,026	3,986	257	4,036	307
2024-2025	3,026	429	124	264	3,066	4,036	264	4,079	307
2025-2026	3,066	432	125	271	3,102	4,079	271	4,116	308
2026-2027	3,102	435	126	276	3,135	4,116	276	4,150	310
2027-2028	3,135	438	127	281	3,164	4,150	281	4,184	315
2028-2029	3,164	442	128	285	3,193	4,184	285	4,221	322
2029-2030	3,193	448	129	289	3,223	4,221	289	4,260	328
2030-2031	3,223	457	131	292	3,257	4,260	292	4,298	330
2031-2032	3,257	467	133	295	3,296	4,298	295	4,337	334

In order to determine the amount of the allowance at a particular point in time, a prospective methodology is used from a snapshot of the portfolio at that time. This approach determines the value of the allowance based on the status of loans. This method considers the past experience of prior cohorts and permits faster recognition of new trends for current and new cohorts of loans.

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 impaired (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.

First, an allowance on the balance of loans in-study is determined using a provision rate of 14.8%. This rate is increased from the rate of 14.6% set in previous reports, which corresponded to a net default rate of 14.2% and an additional upward adjustment of 0.4% for interest accrued

during the grace period. An upward adjustment is required because the provision rate is applied to loans issued rather than loans consolidated. The difference between loans at consolidation and loans at issuance is the interest accrued during the grace period which is capitalised into loans at consolidation. The projected net default rate remains the same as in the previous report, 14.2%. However the upward adjustment for interest accrued during the grace period is increased to 0.6% due to:

1) The evolution of the student interest rate since the establishment of the adjustment.

2) The experience of interest being capitalised yearly. Theoretically, this interest is supposed to represent around six months, the grace period, of interest accrued on the net principal consolidation amount using the student interest rate. However, in practice, the yearly interest capitalised represents more than six months of interest accrued on the net consolidation. This is because some students fail to confirm enrolment within six months or more than six months elapse between two periods of study. The result is that accrued interest may capitalise during more than one grace period. More details are provided in Appendix 3.

The 14.8% provision rate is applied to the balance of loans in-study, which is calculated at the end of each loan year as:

- the balance of loans in-study at the end of the previous year;
- plus loans issued during the year;
- less the sum of loans while in-study and during the six month grace period before consolidation that were prepaid, reduced by Canada Access Grants and loans forgiven; and
- less the value of loans consolidated during the year.

Second, an allowance on the balance of loans in repayment is determined using a rate corresponding to the proportion of projected defaulted loans that will not be recovered. Finally, an allowance is determined on the balance of defaulted loans that will not be recovered. The level of the total allowance is determined at the end of the year. The total allowance calculated at the end of a year less the total allowance at the end of the previous year is charged as a provision for bad debt – principal and represents the required adjustment to the allowance.

Future default and recovery rates for future cohorts remain unchanged from the previous report, at 20% and 29%, respectively, and remain constant in each loan year. The assumption used for write-offs is unchanged from last report and consists of a 21-year distribution, starting in the fifth year following impairment. However, the experience shows that write-offs projected in the last report for loan year 2006-07 ($1 million) have not been realised. Furthermore, no significant amount of write-offs is planned for loan year 2007-08. For this reason, the write-offs anticipated for loan years 2006-07 and 2007-08 are added to write-offs projected in loan year 2008-09.

For loan year 2006-07, the yearly expense of $260 million corresponds to the difference between the new allowance of $1,662 million and the total allowance at the end of loan year 2005-06, which was established to be $1,402 million in the previous report. For comparison purposes, if the provision rate of 14.6% had been maintained on the balance of loans in-study, the allowance as at 31 July 2007 would have been $1,654 million, resulting in a yearly expense of $252 million.

In the Public Accounts, the Department of Human Resources and Social Development should show an allowance as at 31 March 2008 corresponding to the allowance of $1,662 million as at 31 July 2007, increased by 14.8 % on the monthly net loans issued for months from August 2007 to March 2008.

Allowance for Bad Debt – Interest: In accordance with the collection practice, interest accrues on impaired loans until the loans reach a "non-recoverable" status. A provision is set to cover the risk that such accrued interest will never be recovered. The provision methodology is updated in this report.

First, based on the experience of direct loans, rates for recovery and loan amounts reaching a "non-recoverable" status are set according to the number of years since impairment and the outstanding recoverable interest at the beginning of the year. A provision rate is then determined for each year since impairment. Generally, provision rates have decreased for older default cohorts compared to the previous report since experience regarding interest recoveries for direct loans has been better than expected.

Second, the gross default rate assumption for the principal portion of loans varies by year of default. A gross default rate of 35.4% is used for default cohorts before 2005-06. This rate is reduced to 23.7% for the 2005-06 default cohort and to 20.0% for future default cohorts, starting in loan year 2006-07. Since it is assumed that future default rates will be lower than in the past, resulting in lower projected default amounts, lower recovery rates are also assumed since it will be more difficult to recover these defaulted loans. Therefore, the principal recovery rate assumption was decreased from 60% for past default cohorts to 29% for future default cohorts starting in loan year 2006-07. Recent experience shows a reduction in principal recovery rates as well as interest recovery rates.

The provision rates for bad debt – interest must be adjusted to reflect the lower recovery rates of future cohorts of default. Therefore, three different sets of provision rates, each varying according to the number of years since impairment, were established: one set for default cohorts before loan year 2005-06, one set for default cohort 2005-06 and a last one for default cohorts after 2005-06. For the allowance as at 31 July 2007, the rates used are a mix of the three sets according to the number of years since impairment. This is shown in Chart 3, which presents the three set of rates according to the default loan year as well as the rates used to determine the amount of the allowance as at 31 July 2007. Ultimately, only the set of rates represented by the curve of "default cohorts 2006-07+" will be used. Provision rates are shown in Appendix 3.

Chart 3 Provision Rates for Allowance for Bad Debt – Interest

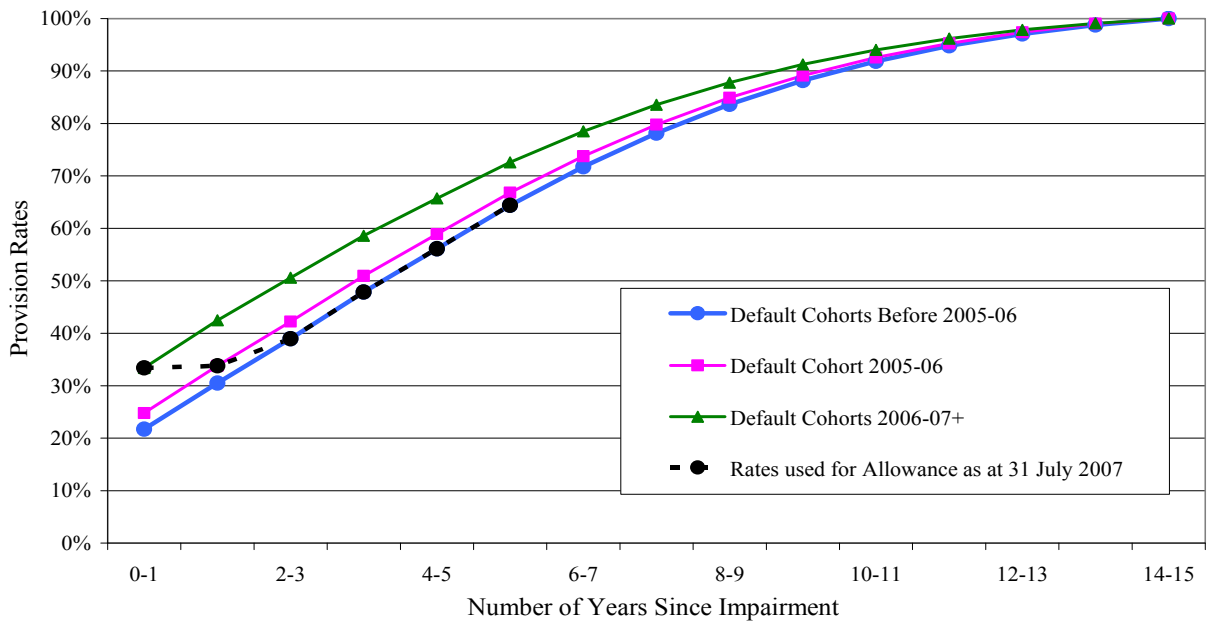


Table 11 Allowance for Bad Debt – Interest

Loan Year	Allowance 1 August ($ million) (1)	Write-Offs ($ million) (2)	Allowance 31 July ($ million) (3)	Yearly Expense ($ million) (3) - (1 - 2)
2006-2007	46	-	71	25
2007-2008	71	-	110	40
2008-2009	110	2	156	48
2009-2010	156	3	213	60
2010-2011	213	5	280	72
2011-2012	280	9	356	85
2012-2013	356	15	439	98
2013-2014	439	22	526	109
2014-2015	526	32	612	118
2015-2016	612	43	696	127
2016-2017	696	55	775	134
2017-2018	775	68	847	140
2018-2019	847	79	914	146
2019-2020	914	90	975	151
2020-2021	975	100	1,029	155
2021-2022	1,029	110	1,079	159
2022-2023	1,079	119	1,122	163
2023-2024	1,122	127	1,161	166
2024-2025	1,161	134	1,195	168
2025-2026	1,195	141	1,226	171
2026-2027	1,226	146	1,252	173
2027-2028	1,252	151	1,276	175
2028-2029	1,276	156	1,296	177
2029-2030	1,296	160	1,315	178
2030-2031	1,315	163	1,332	180
2031-2032	1,332	166	1,347	182

The allowance for bad debt – interest on recoverable accounts is determined using the outstanding interest and a variable provision rate for each year since impairment. The provision rate is set at 33.4% for defaulted interest in the first year of impairment and increases each year thereafter. Under this methodology, the increasing provision rate reflects the fact that the difficulty of recovering defaults increases as the time since impairment increases. The allowance on non-recoverable accounts is 100% and the interest on these accounts is written off over a 21-year period, starting in the fifth year after the impairment occurs. The variation in allowance for a given year and the remaining allowance of the previous year is charged as part of the annual expense. In the Public Accounts, the Department of Human Resources and Social Development is using this methodology to calculate the allowance and annual expense as at 31 March of each year. The allowance as at 31 March 2008 is determined using the provision rates shown in Table 2 and is around $106 million.

Compared to the previous report, the allowances at the beginning and end of loan year 2006-07 are lower because the actual amount of recoveries in the past were higher than those expected using the distributions in the previous report. The allowance as at 31 July 2006 is $46 million. Without the change in methodology described earlier, the allowance as at 31 July 2007 would have been $88 million using the provision rates shown in the previous report. Using the new provision rates, the allowance is reduced to $71 million, which represents an expense of $25 million ($71 - $46 million) for loan year 2006-07. Write-offs of interest anticipated for loan years 2006-07 and 2007-08 are postponed until loan year 2008-09, which is the first year a significant amount of write-offs is expected.

Allowance for Debt Reduction in Repayment: Table 12 provides the details of the calculation for the projection of the allowance for debt reduction in repayment (DRR) under the Direct Loan Regime.

Table 12 Allowance for Debt Reduction in Repayment

Loan Year	Allowance 1 August	Provision*	DRR Expenses	Allowance 31 July
	($ million)	($ million)	($ million)	($ million)
	(1)	(2)	(3)	(1) + (2) - (3)
2006-2007	66	12	5	72
2007-2008	72	12	8	77
2008-2009	77	13	10	79
2009-2010	79	13	11	81
2010-2011	81	13	12	81
2011-2012	81	13	14	80
2012-2013	80	13	15	79
2013-2014	79	14	15	78
2014-2015	78	14	16	76
2015-2016	76	14	16	74
2016-2017	74	14	16	72
2017-2018	72	14	16	70
2018-2019	70	14	17	68
2019-2020	68	14	17	65
2020-2021	65	14	17	62
2021-2022	62	14	17	60
2022-2023	60	15	17	57
2023-2024	57	15	17	54
2024-2025	54	15	17	52
2025-2026	52	15	17	50
2026-2027	50	15	17	48
2027-2028	48	15	17	46
2028-2029	46	16	17	45
2029-2030	45	17	17	44
2030-2031	44	17	17	44
2031-2032	44	18	18	44

* The provision for new loans issued accrues on a loan year basis (Public Accounts provision accrues on a fiscal year basis).

The provision rate for DRR remains unchanged at 0.7%. DRR expenses for the Guaranteed and Risk-Shared regimes decreased in loan year 2006-07 compared to loan year 2005-06. Table 15 shows that the future DRR expenses for these regimes are projected to decrease as the regimes are phased out. At the same time, DRR expenses attributed to Direct Loan borrowers will increase through time. Loan year 2005-06 was the first year that a Direct Loan borrower was eligible to apply for DRR. In loan year 2006-07, the DRR expense attributed to Direct Loan borrowers was $5 million which was the amount projected in the previous report. Unfortunately, a new DRR data file was not provided for loan year 2006-07. Thus, DRR assumptions could not be updated and remain the same as in the last report since the actual DRR paid to Direct Loan borrowers in 2006-07 was in line with the amount projected in the previous report. If future DRR costs are significantly different than projected, then the provision rate will likely have to be revisited. This situation will continue to be monitored and examined as more experience data becomes available.

As with the allowance for bad debt – principal, the provision rate of 0.7% is applied to net, rather than total, loans issued. In the Public Accounts, the Department of Human Resources and Social Development is using this methodology to determine the allowance as at 31 March of each year.

For comparison purposes, Table 13 shows the Direct Loan portfolio in 2007 constant dollars. Starting in loan year 2016-17, the portfolio decreases since the assumed inflation rate is higher than the annual growth of the portfolio in Table 9.

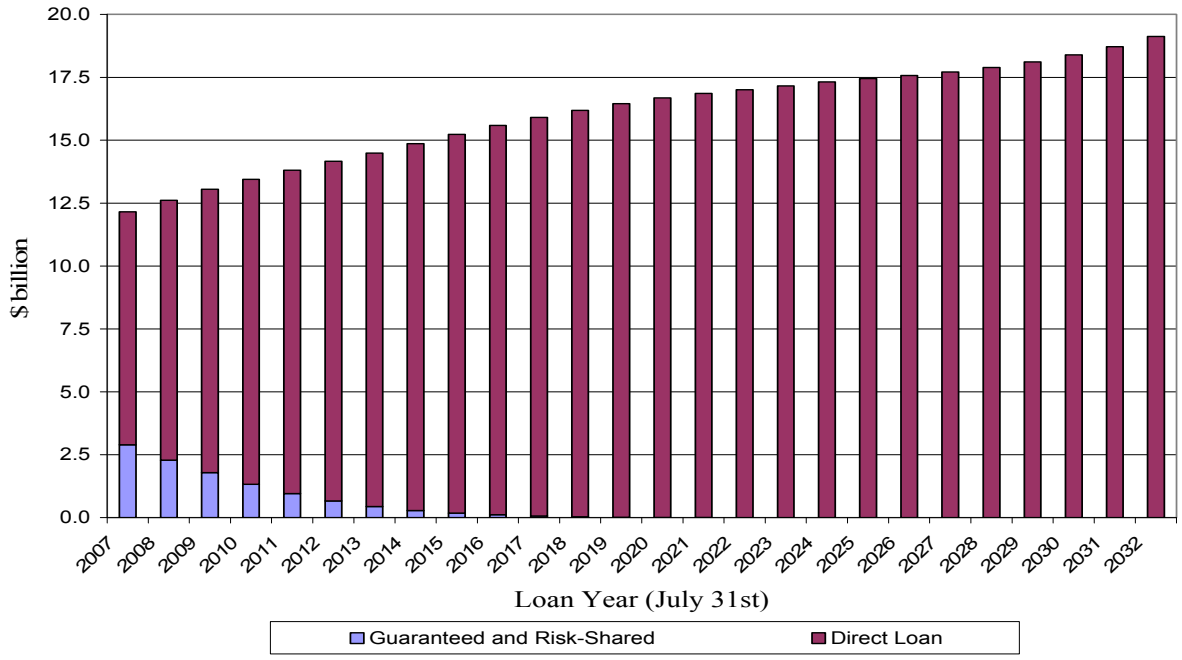
Table 13 Direct Loan Portfolio and Allowances (in millions of 2007 constant dollars)[1]

As at 31 July	Loans In-study	Loans in Repayment	Impaired Loans	Total	Allowance for Bad Debt Principal	Allowance for Bad Debt Interest	DRR
2007	4,227	4,014	1,018	9,259	1,662	71	72
2008	4,388	4,547	1,189	10,124	1,885	108	75
2009	4,499	4,998	1,333	10,830	2,067	150	76
2010	4,564	5,372	1,479	11,415	2,237	201	76
2011	4,580	5,664	1,610	11,853	2,380	258	75
2012	4,578	5,858	1,722	12,159	2,498	321	72
2013	4,567	5,984	1,815	12,366	2,593	386	70
2014	4,559	6,067	1,887	12,513	2,669	451	67
2015	4,544	6,113	1,941	12,598	2,726	512	64
2016	4,508	6,128	1,978	12,614	2,764	567	60
2017	4,447	6,114	2,006	12,567	2,785	614	57
2018	4,382	6,071	2,026	12,479	2,793	654	54
2019	4,317	6,016	2,038	12,371	2,792	687	51
2020	4,239	5,942	2,043	12,224	2,780	713	48
2021	4,137	5,854	2,039	12,030	2,757	734	45
2022	4,043	5,747	2,029	11,820	2,727	748	41
2023	3,964	5,632	2,013	11,608	2,693	758	38
2024	3,889	5,522	1,990	11,401	2,655	764	36
2025	3,812	5,412	1,964	11,188	2,613	766	33
2026	3,739	5,300	1,935	10,974	2,567	765	31
2027	3,677	5,190	1,904	10,771	2,520	760	29
2028	3,635	5,086	1,871	10,592	2,474	754	27
2029	3,612	4,994	1,839	10,445	2,430	747	26
2030	3,605	4,919	1,807	10,331	2,389	737	25
2031	3,601	4,867	1,778	10,246	2,347	727	24
2032	3,614	4,829	1,752	10,195	2,306	716	24

[1] For a given year, the value in 2007 constant dollars is equal to the corresponding value divided by the ratio of the cumulative index of the Consumer Price Index (CPI) of that given year to the cumulative index of the CPI for 2007.

Chart 4 shows a projection of the loan portfolio split between the Direct Loan, Guaranteed and Risk-Shared regimes. Guaranteed and Risk-Shared loans are phased-out over time.

Chart 4 Projection of the Loan Portfolios



3. Limit on Aggregate Amount of Outstanding Loans

The CSFAA imposes a limit on the aggregate amount of outstanding loans in the CSLP. The current limit, in section 13 of the CSFAA, is set at $15 billion and was increased from the previous $5 billion ceiling through an amendment to the CSFAA in 2000. The CSFAA applies to the Risk-Shared and Direct Loan regimes. The aggregate amount of outstanding loans is the principal portion of all loans disbursed and not yet repaid which consists of the total principal amounts of loans in-study, loans in repayment and impaired loans. Table 14 presents the projections of the aggregate amount of outstanding Risk-Shared and Direct loans in the CSLP.

As at 31 July 2007, the aggregate amount of outstanding Risk-Shared and Direct loans is $12.2 billion. This projection shows that the $15 billion limit would be reached during loan year 2014-15. However, fluctuations throughout the year may cause the aggregate amount of loans to exceed the limit prior to loan year 2014-15.

Table 14 Aggregate Amount of Outstanding Risk-Shared and Direct Loans

As at 31 July	Total of Risk-Shared Loans	Total of Direct Loans	Total
	($ million)	($ million)	($ million)
2007	2,924	9,259	12,183
2008	2,353	10,326	12,680
2009	1,884	11,268	13,152
2010	1,425	12,125	13,550
2011	1,052	12,868	13,921
2012	754	13,504	14,258
2013	519	14,063	14,582
2014	350	14,587	14,937
2015	227	15,067	15,294
2016	146	15,493	15,639
2017	90	15,853	15,943
2018	52	16,166	16,218
2019	28	16,459	16,487
2020	14	16,702	16,716
2021	7	16,882	16,889
2022	4	17,034	17,038
2023	2	17,181	17,183
2024	1	17,331	17,332
2025	1	17,465	17,466
2026	-	17,594	17,594
2027	-	17,735	17,735
2028	-	17,911	17,911
2029	-	18,140	18,140
2030	-	18,426	18,426
2031	-	18,767	18,767
2032	-	19,179	19,179

D. Projection of the Net Cost of the Program

1. Student Related Expenses

The most important expense of the CSLP is the cost of supporting students during their study and repayment periods. This expense includes the interest subsidy, the expenses for interest relief and the provisions or expenses for DRR under the different regimes. The Canada Study Grants and Canada Access Grants support students directly rather than assisting them in the form of loans.

Table 15 Student Related Expenses

	Direct Loan			Risk-Shared and Guaranteed			Canada Study and Access Grants	Total
Loan Year	Interest Subsidy	Interest Relief	Provision* for DRR	Interest Subsidy	Interest Relief	DRR		
		($ million)			($ million)		($ million)	($ million)
2006-2007	191.0	67.3	11.9	9.2	18.0	15.6	146.4	459.4
2007-2008	185.5	70.8	12.3	4.1	10.5	13.3	152.9	449.5
2008-2009	191.6	72.8	12.5	1.9	6.2	7.0	156.3	448.2
2009-2010	209.0	79.3	12.7	0.8	3.6	3.8	159.2	468.5
2010-2011	220.0	85.5	12.8	0.4	1.8	2.1	161.5	484.0
2011-2012	231.8	88.7	13.0	0.1	1.1	1.1	164.4	500.1
2012-2013	248.6	91.4	13.2	-	0.6	0.9	167.7	522.5
2013-2014	266.4	92.8	13.6	-	0.3	0.7	171.8	545.5
2014-2015	284.7	94.1	13.9	-	0.1	0.4	175.7	568.9
2015-2016	302.8	95.3	14.1	-	-	0.2	179.0	591.4
2016-2017	312.4	96.3	14.1	-	-	0.1	181.6	604.5
2017-2018	316.1	97.0	14.2	-	-	-	184.8	612.1
2018-2019	319.8	97.4	14.4	-	-	-	188.2	619.8
2019-2020	322.7	97.6	14.4	-	-	-	191.0	625.7
2020-2021	323.7	97.6	14.3	-	-	-	192.8	628.4
2021-2022	324.8	97.2	14.3	-	-	-	195.8	632.1
2022-2023	326.8	96.6	14.5	-	-	-	199.5	637.4
2023-2024	329.3	95.9	14.6	-	-	-	203.2	643.1
2024-2025	331.5	95.4	14.7	-	-	-	206.5	648.1
2025-2026	334.0	94.9	14.9	-	-	-	210.2	653.9
2026-2027	337.2	95.6	15.1	-	-	-	214.5	662.4
2027-2028	342.1	96.4	15.5	-	-	-	219.7	673.7
2028-2029	348.9	97.5	16.0	-	-	-	225.8	688.2
2029-2030	357.4	99.1	16.5	-	-	-	232.2	705.2
2030-2031	366.6	101.1	17.0	-	-	-	238.4	723.1
2031-2032	377.7	103.5	17.7	-	-	-	245.7	744.5

* The provision for new loans issued accrues on a loan year basis (Public Accounts provision accrues on a fiscal year basis).

2. Program Risk Expenses

Another expense for the Government is the risk involved in disbursing loans to students. Specifically, the risk of loan default and the risk of loans being forgiven upon a student's death or disability are included in this section.

Table 16 Risks to the Government

	Direct Loan		Risk-Shared		Guaranteed		
	Provision for Bad Debt		Risk	Put-backs &	Claims for	Loans	
Loan Year	Principal	Interest	Premium	Refunds to FIs	Impaired Loans	Forgiven	Total
	($ million)		($ million)		($ million)	($ million)	($ million)
2006-2007	260.3	24.6	3.8	3.9	12.0	8.7	313.2
2007-2008	260.9	39.6	3.7	5.3	8.2	9.3	327.0
2008-2009	265.5	47.9	2.5	5.0	6.1	10.0	336.9
2009-2010	269.1	59.8	1.3	3.8	4.8	10.6	349.6
2010-2011	270.5	72.4	0.5	3.2	3.4	11.3	361.3
2011-2012	274.6	85.2	0.3	2.7	1.6	11.9	376.4
2012-2013	280.0	97.9	0.2	2.4	0.8	12.4	393.7
2013-2014	287.8	108.7	-	1.9	0.4	12.9	411.7
2014-2015	294.1	118.5	-	1.5	0.2	13.4	427.5
2015-2016	297.6	126.9	-	1.0	0.1	13.8	439.5
2016-2017	298.2	134.0	-	0.7	0.1	14.2	447.2
2017-2018	300.6	140.2	-	0.4	-	14.6	455.8
2018-2019	303.9	145.8	-	0.3	-	14.9	464.9
2019-2020	304.5	150.8	-	0.2	-	15.2	470.7
2020-2021	301.2	155.3	-	0.1	-	15.5	472.1
2021-2022	301.8	159.2	-	0.1	-	15.7	476.8
2022-2023	304.6	162.7	-	-	-	15.9	483.2
2023-2024	306.7	165.7	-	-	-	16.1	488.5
2024-2025	306.9	168.4	-	-	-	16.2	491.5
2025-2026	307.9	170.8	-	-	-	16.4	495.1
2026-2027	310.4	172.9	-	-	-	16.5	499.8
2027-2028	315.3	174.9	-	-	-	16.6	506.7
2028-2029	322.2	176.6	-	-	-	16.8	515.6
2029-2030	328.1	178.3	-	-	-	16.9	523.3
2030-2031	330.1	179.9	-	-	-	17.1	527.1
2031-2032	333.9	181.7	-	-	-	17.4	533.0

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 impaired for at least 12 months, up to a maximum of 3% of the total loans in repayment with the financial institution each year. Financial institutions decide whether to sell impaired 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, impaired loans are included in claims paid as a statutory expense since the Government bears the entire risk of impaired 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 following the death or permanent disability of a borrower during the period of study or repayment.

3. Other Expenses

Alternative payments are made directly to Québec, the Northwest Territories and Nunavut, which do not participate in the CSLP. The participating provinces and territory are paid a fee to finance the administration of the CSLP.

The administration expenses include the fees paid to provinces, the recovery costs of impaired loans for the three regimes and general administration, which are the expenses incurred by the departments involved and fees paid to service providers.

Table 17 Summary of Expenses

Loan Year	Student Related Expenses	Risks to the Government	Alternative Payments*	Administration			Total Expenses
				Fees Paid to Provinces	Recovery Cost	General	
	($ million)	($ million)	($ million)		($ million)		($ million)
2006-2007	459.4	313.2	117.6	13.6	11.2	137.7	1,052.7
2007-2008	449.5	327.0	115.8	13.9	10.9	136.8	1,053.9
2008-2009	448.2	336.9	113.8	14.3	10.9	136.6	1,060.7
2009-2010	468.5	349.6	115.4	14.7	10.9	137.1	1,096.1
2010-2011	484.0	361.3	119.2	15.1	10.8	141.1	1,131.5
2011-2012	500.1	376.4	124.5	15.5	11.0	145.4	1,172.8
2012-2013	522.5	393.7	128.8	16.0	11.3	150.1	1,222.4
2013-2014	545.5	411.7	136.0	16.6	11.7	155.2	1,276.8
2014-2015	568.9	427.5	145.3	17.2	12.1	160.9	1,331.8
2015-2016	591.4	439.5	154.8	17.8	12.5	167.0	1,382.9
2016-2017	604.5	447.2	163.8	18.5	12.6	173.4	1,419.9
2017-2018	612.1	455.8	168.0	19.2	12.7	180.0	1,447.9
2018-2019	619.8	464.9	168.0	20.0	12.8	186.9	1,472.5
2019-2020	625.7	470.7	167.8	20.7	13.1	194.1	1,492.1
2020-2021	628.4	472.1	167.6	21.5	13.3	201.5	1,504.5
2021-2022	632.1	476.8	168.0	22.4	13.6	209.3	1,522.0
2022-2023	637.4	483.2	168.4	23.2	13.8	217.3	1,543.3
2023-2024	643.1	488.5	169.1	24.1	14.0	225.6	1,564.4
2024-2025	648.1	491.5	171.3	25.0	14.1	234.2	1,584.3
2025-2026	653.9	495.1	175.2	26.0	14.3	243.2	1,607.8
2026-2027	662.4	499.8	180.1	27.0	14.4	252.5	1,636.3
2027-2028	673.7	506.7	184.9	28.0	14.5	262.2	1,670.1
2028-2029	688.2	515.6	189.0	29.1	14.7	272.3	1,708.9
2029-2030	705.2	523.3	194.0	30.2	14.8	282.7	1,750.3
2030-2031	723.1	527.1	199.6	31.4	14.9	293.5	1,789.6
2031-2032	744.5	533.0	205.3	32.6	15.1	304.8	1,835.3

* 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.

As shown in Table 17, total expenses associated with the Program increase from $1.1 billion in 2006-07 to $1.8 billion in 2031-32. On average, total expenses increase at a rate of 2.2% per year from 2006-07 to 2031-32.

4. Total Revenue

In Table 18, the revenue for the Direct Loan Regime comes from the interest earned from student loans in repayment, which include interest accrued during the six-month grace period following the study end date, interest accrued on impaired loans and interest relief. This revenue is reduced by the Government's cost of borrowing to obtain the net interest revenue. The interest on impaired Direct loans is accrued until the status of the loans becomes "non-recoverable". The interest recovered on Direct loans is already considered in the above interest earned calculation and is not shown separately.

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

On average, total revenue increases at a rate of 2.1% per year from 2006-07 to 2031-32.

Table 18 Total Revenue

	Direct Loan			Risk-Shared	Guaranteed	
Loan Year	Student Interest Earned	Borrowing Cost	Net Interest Revenue	Principal and Interest from Recovery	Principal and Interest from Recovery	Total Revenue
	($ million)		($ million)	($ million)	($ million)	($ million)
2006-2007	478.5	-188.9	289.6	14.7	51.1	355.3
2007-2008	534.2	-203.6	330.7	13.8	43.1	387.6
2008-2009	580.4	-228.2	352.2	12.5	35.3	400.0
2009-2010	664.2	-267.3	397.0	11.4	26.6	434.9
2010-2011	730.2	-299.1	431.1	10.3	16.3	457.7
2011-2012	790.6	-330.2	460.4	9.5	10.5	480.4
2012-2013	845.2	-366.7	478.5	8.2	7.2	493.9
2013-2014	885.3	-402.8	482.6	6.7	5.0	494.3
2014-2015	921.8	-438.2	483.5	5.3	3.5	492.3
2015-2016	954.4	-473.2	481.2	4.1	2.5	487.8
2016-2017	982.5	-495.5	487.0	2.9	1.8	491.7
2017-2018	1,006.2	-507.7	498.5	2.0	1.2	501.7
2018-2019	1,027.7	-518.8	508.9	1.3	0.9	511.1
2019-2020	1,046.5	-528.2	518.3	0.8	0.6	519.8
2020-2021	1,062.4	-536.3	526.1	0.5	0.4	527.0
2021-2022	1,074.6	-542.8	531.8	0.3	0.3	532.4
2022-2023	1,084.8	-548.0	536.8	0.2	0.2	537.2
2023-2024	1,094.7	-552.9	541.8	0.1	0.1	541.9
2024-2025	1,104.1	-557.4	546.7	-	-	546.7
2025-2026	1,112.5	-561.4	551.1	-	-	551.1
2026-2027	1,120.6	-565.2	555.4	-	-	555.4
2027-2028	1,129.2	-569.1	560.1	-	-	560.1
2028-2029	1,139.5	-573.6	565.9	-	-	565.9
2029-2030	1,152.6	-579.4	573.2	-	-	573.2
2030-2031	1,169.7	-587.2	582.5	-	-	582.5
2031-2032	1,190.6	-596.8	593.8	-	-	593.8

5. Net Cost of the Program

Table 19 shows, in current dollars, total expenses, revenue and the net cost of the Program for the 25-year projection period, while Table 20 shows the same, but in 2007 constant dollars. The expenses and revenue shown correspond to values presented earlier in this report.

Table 19 Net Annual Cost of the Program

	All Regimes			Net Cost of the Program	
Loan Year	Total Expenses	Total Revenue	Total Net Cost of the Program	Direct Loan	Risk-Shared & Guaranteed
	($ million)		($ million)	($ million)	($ million)
2006-2007	1,052.7	355.3	697.4	694.7	2.7
2007-2008	1,053.9	387.6	666.4	673.3	-6.9
2008-2009	1,060.7	400.0	660.8	676.0	-15.2
2009-2010	1,096.1	434.9	661.2	677.9	-16.7
2010-2011	1,131.5	457.7	673.8	686.9	-13.1
2011-2012	1,172.8	480.4	692.4	704.1	-11.6
2012-2013	1,222.4	493.9	728.5	738.0	-9.4
2013-2014	1,276.8	494.3	782.5	790.3	-7.8
2014-2015	1,331.8	492.3	839.5	845.6	-6.1
2015-2016	1,382.9	487.8	895.2	900.0	-4.9
2016-2017	1,419.9	491.7	928.2	931.8	-3.6
2017-2018	1,447.9	501.7	946.2	948.8	-2.5
2018-2019	1,472.5	511.1	961.3	963.2	-1.9
2019-2020	1,492.1	519.8	972.3	973.5	-1.2
2020-2021	1,504.5	527.0	977.4	978.2	-0.8
2021-2022	1,522.0	532.4	989.7	990.2	-0.5
2022-2023	1,543.3	537.2	1,006.1	1,006.4	-0.3
2023-2024	1,564.4	541.9	1,022.5	1,022.6	-0.1
2024-2025	1,584.3	546.7	1,037.6	1,037.7	-
2025-2026	1,607.8	551.1	1,056.7	1,056.7	-
2026-2027	1,636.3	555.4	1,081.0	1,081.0	-
2027-2028	1,670.1	560.1	1,110.0	1,110.0	-
2028-2029	1,708.9	565.9	1,143.0	1,143.0	-
2029-2030	1,750.3	573.2	1,177.0	1,177.0	-
2030-2031	1,789.6	582.5	1,207.2	1,207.2	-
2031-2032	1,835.3	593.8	1,241.6	1,241.6	-

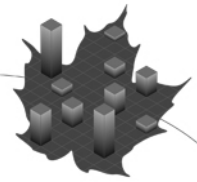
As shown in Table 19, the initial net annual cost for the Direct Loan Regime is $695 million for loan year 2006-07 and reaches $1.2 billion in loan year 2031-32. This represents an annual average increase of 2.3% for the entire projection period. The total net cost of the Program, including all regimes, is projected to grow from $697 million in 2006-07 to $1.2 billion in 2031-32. This represents an average annual increase in the cost to the Government of 2.3%.

In 2007 constant dollars (Table 20), the cost of the Direct Loan Regime decreases by an average of 0.1% a year, from $695 million in loan year 2006-07 to $678 million in 2031-32.

Table 20 Net Annual Cost of the Program (in millions of 2007 constant dollars)[1]

	All Regimes			Net Cost of the Program	
Loan Year	Total Expenses	Total Revenue	Total Net Cost of the Program	Direct Loan	Risk-Shared & Guaranteed
2006-2007	1,052.7	355.3	697.4	694.7	2.7
2007-2008	1,033.3	380.0	653.3	660.1	-6.8
2008-2009	1,019.5	384.4	635.1	649.7	-14.6
2009-2010	1,031.9	409.4	622.4	638.2	-15.7
2010-2011	1,042.2	421.6	620.7	632.7	-12.0
2011-2012	1,056.0	432.6	623.5	634.0	-10.5
2012-2013	1,074.9	434.3	640.6	648.9	-8.3
2013-2014	1,095.3	424.0	671.3	677.9	-6.6
2014-2015	1,113.6	411.6	702.0	707.1	-5.1
2015-2016	1,156.3	407.8	748.5	752.5	-4.1
2016-2017	1,156.1	400.4	755.7	758.6	-2.9
2017-2018	1,147.8	397.7	750.1	752.1	-2.0
2018-2019	1,136.6	394.6	742.1	743.5	-1.4
2019-2020	1,121.5	390.7	730.8	731.7	-0.9
2020-2021	1,101.0	385.7	715.3	715.9	-0.6
2021-2022	1,084.6	379.4	705.2	705.6	-0.4
2022-2023	1,070.9	372.7	698.1	698.3	-0.2
2023-2024	1,057.0	366.2	690.8	690.9	-0.1
2024-2025	1,042.3	359.7	682.6	682.7	-
2025-2026	1,029.9	353.0	676.9	676.9	-
2026-2027	1,020.6	346.4	674.2	674.2	-
2027-2028	1,014.3	340.1	674.2	674.2	-
2028-2029	1,010.6	334.6	675.9	675.9	-
2029-2030	1,007.9	330.1	677.8	677.8	-
2030-2031	1,003.4	326.6	676.9	676.9	-
2031-2032	1,002.0	324.2	677.8	677.8	-

[1] For a given year, the value in 2007 constant dollars is equal to the corresponding value divided by the ratio of the cumulative index of the Consumer Price Index (CPI) of that given year to the cumulative index of the CPI for 2007.



III. Conclusion

The Canada Student Loans Program 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. The Government became involved in assisting students because post-secondary education is costly. The CSLP is meant to supplement resources available to students from their own earnings, their families and other student awards.

Effective 1 August 2000, the Government redesigned the delivery of the CSLP from a program delivered by financial institutions to one directly financed by the Government. As part of this redesign, the Office of the Chief Actuary was given a mandate to conduct an actuarial review that provides an assessment of the current costs of the CSLP, a long-term (25 years) forecast of these costs, a portfolio projection and a discussion of all the assumptions underlying the results of the review. In the delivery of a high quality CSLP actuarial report, it is of the utmost importance to challenge the administration on the quality of data and to gain access to such data.

The number of students receiving a CSLP loan is expected to increase from 345,000 to 430,000 over the projection period. This represents an increase in the loan uptake of students in post-secondary institutions from 36% to 52%. Such an increase in participation in the Program is mainly a result of rising student need. This need is affected by the projection of tuition fees and other expenses, which increase at a faster rate than resources. Contrary to the past two decades, the number of students enrolled in post-secondary institutions is not a contributing factor to the increase in the cost of the Program, as fewer students are expected to enroll in post-secondary institutions over the projection period. Instead, it is rising student need that mostly contributes to increasing Program costs.

The growth rate of new loans issued is, on average, 1.6% per year; it comprises an annual average increase of 0.9% in the number of students participating in the CSLP and a 0.7% increase in the average loan size.

The amount of new loans issued increases from $1.9 billion in loan year 2006-07 to $2.9 billion in 2031-32. The Direct Loan portfolio increases from $9.3 billion in 2006-07 to $19.2 billion by 2031-32.

The total net cost of the Government's involvement in the CSLP, which is the difference between expenses and revenue, is expected to grow from $0.7 billion to $1.2 billion over the projection period. This represents an average annual increase in the cost to the Government of 2.3%.

The provision rate for bad debt – principal, applied to net loans issued, is increased from 14.6% in the previous report to 14.8%. This increase of 0.2% is to take into account the experience of accrued interest during the grace period which is added to the principal at consolidation. The provision rates for bad debt – interest, applied to the balance of recoverable interest according to the year since impairment, are modified to reflect the experience of recoveries and to make a distinction, as for principal, between past default cohorts and recent and future default cohorts who have a lower assumed recovery rate. The provision rate for debt reduction in repayment is unchanged from the previous report.

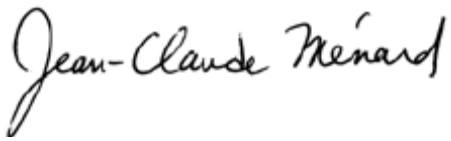
IV. Actuarial Opinion

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 Canadian Institute of Chartered Accountants.

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

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



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

Ottawa, Canada
13 June 2008

V. APPENDICES

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 in order to assist students because post-secondary education is costly. 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 *Canada Student Loans Act* (CSLA) was established, applying to loan years preceding August 1995 and the *Canada Student Financial Assistance Act* (CSFAA) replaced the previous act for loan years after July 1995. Both acts permit the Minister of Human Resources and Social Development to provide loans to eligible students under the CSLP.

1. Eligibility Criteria

A student must be a Canadian citizen, within the meaning of the *Immigration Act* and must demonstrate the need for financial assistance to become eligible to receive a loan. A student must also fulfill a series of criteria (scholastic standard and financial) to be considered for a loan. Upon application each year to their province of residence, loans are available to full-time students regardless of age and, since 1983, to part-time students.

2. Partnerships

Since 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 the students require financial assistance and their eligibility for the CSLP. Provincial/territorial authorities calculate the costs and determine the need of the student based on the difference between costs and available resources. For each school year, the CSLP covers 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 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 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. Service providers receive and process all the applicable loan documentation; i.e., from the disbursement to the consolidation and repayments of the loans. They also keep 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) prior to August 1995, under the *Canada Student Loans Act*, are fully guaranteed by the Government to the lenders. The Government reimburses the lenders for the outstanding principal, accrued interest and costs in the event of default or death of the borrower. Therefore, the Government bears all the risk involved with Guaranteed loans.
- Risk-Shared Loan Regime: For the period from August 1995 to 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 is not at risk except for the payment of the risk premium. Also, financial institutions can decide to sell a certain amount of impaired loans and the Government has to pay a put-back fee of five cents on the dollar for these loans. A part of the recoveries is shared with financial institutions.

- Direct Loan Regime: A new direct loan arrangement came into force, effective 1 August 2000, following the restructuring of the delivery of the Program and amendments made to the *Canada Student Financial Assistance Act* and Regulations. The Government issues loans directly to the student and, again, bears all the risk involved.

3. Loan Benefit

a) In-study Interest Subsidy

The CSLP provides an interest-free loan during the period that the student is studying full-time. The benefit is available to full-time students only and takes the form of an in-study interest subsidy. During this period, the Government pays interest (Government cost of borrowing) on the loan and no payment on the principal is required.

Part-time students are provided assistance in the form of a line of credit. Unlike full-time students, they must make interest payments while in school. If a student's income is below a certain level while in school, the student may qualify for interest relief.

b) Loan Consolidation

At graduation, or if the student does not return to school, all of the student's loans are consolidated or added together during the six-month grace period. During this period, interest accrues on the loan(s) but no payment is required; the student must negotiate an agreement to set out the repayment terms. Once consolidation occurs, the student is considered a borrower in repayment. Since July 1995, the interest rate used to calculate the monthly payment is equal to the prime rate plus 250 basis points for the majority of students.

For loans issued prior to August 1993, no interest accrued during the grace period because the Government continued to pay interest on the loans during this period in the same manner as for the in-study period. For loans issued after July 1993, the student is liable for interest that accrues on loans during this grace period.

Each year, once students return to school, they must provide the financial institutions or the NSLSC with proof of enrolment for each study period in which they are enrolled, even if they are not applying for a new loan. This prevents automatic consolidation from occurring while the student is still in school and permits the student not to pay interest on their loan.

c) Repayment Assistance

The CSLP has measures in place to help students repay their loans - interest relief, extended interest relief and debt reduction in repayment (DRR).

In 1983, the Government introduced a maximum of 18 months of interest relief to assist students experiencing financial difficulty in repaying their loan. The Government assumes responsibility for making interest payments on the outstanding loan and no principal payments are required. In 1997, a measure extended the maximum interest relief that could be obtained from 18 to 30 months. At first, the interest relief had to be taken within the first five years after the completion

of studies; then, in 1998, the five-year limit was removed, entitling anyone to receive interest relief at any time during the repayment period.

The Government also introduced a new extended interest relief measure for students who remain in financial difficulty after exhausting 30 months of interest relief. First, the repayment period is extended from 10 to 15 years to provide the student lower monthly payments. Second, if the student is still in financial difficulty, the interest relief period may be extended further to completely cover the first five years after leaving school. As much as 24 additional months may be awarded if the student is still within the first five-year period after leaving school, bringing the number of interest relief months up to a maximum of 54 months.

In determining eligibility for interest relief, a borrower's monthly family income must fall below an established income threshold in relation to the required monthly payment on the loan. In 2005, the Government increased the income thresholds by 5 per cent.

In 1998, the Government introduced the DRR measure to help students who remain in financial difficulty after all possible interest relief is exhausted. Initially, a 50% loan reduction in principal up to $10,000 was introduced. In 2003, the 50% loan reduction cap was removed, leaving the loan reduction up to $10,000 in place. Two new loan reductions up to $5,000 each were introduced for borrowers still experiencing financial hardship in repayment. In 2005, the second reduction was increased to $10,000 and the third reduction to $6,000. To determine whether the previous reduction has resulted in a manageable debt level, twelve months must elapse between each reduction. The table below briefly describes this assistance since its introduction.

Table 21 Debt Reduction in Repayment

Year	Maximum Reduction per 12-month Period*			Total Maximum Reduction
2005	**1st** - $10,000	**2nd** - $10,000	**3rd** - $6,000	$26,000
2003	**1st** - $10,000	**2nd** - $5,000	**3rd** - $5,000	$20,000
1998	50% of loan principal			$10,000

* Borrowers still experiencing financial hardship may be eligible for another reduction in 12 months.

d) Loan Forgiveness

The Minister has the authority, upon application and qualification, to forgive the loan in the event of a borrower's permanent disability or death while in school or during the repayment period.

4. Canada Study Grants

Canada Study Grants were introduced as non-repayable grants administered since 1995 by the participating provinces on the Government's behalf. These grants are taxable and they assist students with permanent disabilities, high-need part-time students, women pursuing certain doctoral studies and students with dependants.

5. Canada Access Grants

Canada Access Grants have existed since loan year 2005-06 and include:

- the Canada Access Grant for students from low-income families. This grant is available to qualifying students whose family income falls within the range of entitlement to the National Child Benefit supplement (generally, those are families with incomes under

$35,000). The grant covers half of tuition, up to the lesser of $3,000 or the student's assessed federal need for their first year of post-secondary education. It reduces the amount of federal student debt that would otherwise be incurred.

- the Canada Access Grant for students with permanent disabilities. This grant covers the lesser of $2,000 or the student's assessed federal need.

6. Federal Budget 2008

Budget 2008 announced the launch of a new consolidated Canada Student Grant Program which will take effect in the fall of 2009 and coincide with the wind-down of the Canada Millennium Scholarship Foundation. The program will provide defined monthly grants of $250 for eligible low-income students and $100 for eligible middle-income students.

Budget 2008 also proposed new investments to streamline and modernize the Canada Student Loans Program. These investments will be introduced over the four year period beginning in 2009-10 and include the expansion of online services, more equitable support for part-time and married students and enhanced flexibility for those experiencing difficulty in debt repayment, including borrowers with disabilities.

These announcements are not taken into consideration in the projections include in this actuarial report.

Appendix 2 – Data

The input data required with respect to Direct loans were extracted from data files provided by Human Resources and Social Development (HRSD).

1. Direct Loans Issued

Table 22 presents the data extracted from an HRSD file on the number of students and amount of Direct loans issued for loan years 2000-01 to 2006-07 compared with HRSD publicized data. The data regarding loans issued were found to be complete.

Table 22 Direct Loans Issued and Number of Students

Loan Year	Amount of Loans Issued		Number of Students	
	HRSD File	HRSD Publication	HRSD File	HRSD Publication
	($ million)	($ million)		
2000-01	1,573	1,570	343,746	346,568
2001-02	1,507	1,512	328,653	331,541
2002-03	1,545	1,549	328,989	331,763
2003-04	1,643	1,648	340,200	342,982
2004-05	1,629	1,633	337,247	339,828
2005-06	1,938	1,939	343,635	345,765
2006-07	1,932	1,931	344,390	345,123

According to the Monthly Financial Information Schedule (MFIS), total loans issued in 2006-07 was $1,912 million which is slightly lower than the value calculated using the data file. The MFIS value is used as the starting point for projections in this report since it is close to the value used in HRSD Corporate Management System (CMS).

2. Direct Loans Consolidated

Table 23 presents the number and amount of consolidated Direct loans extracted from HRSD data files. The amounts are compared with data from the MFIS. The consolidation date is not available in the data file. It is approximated from the last post-secondary end date. Therefore, the consolidated amounts may be overestimated, especially in the last two loan years, since some students that are still in school are assumed to have consolidated their loan.

Table 23 Direct Loans Consolidated

Loan Year	Amount of Loans Consolidated (Including Six-month Interest in the Grace Period)	
	HRSD File	MFIS
	($ million)	($ million)
2000-01	29.9	62.2
2001-02	676.8	772.2
2002-03	997.6	988.8
2003-04	1,195.3	1,151.3
2004-05	1,397.6	1,296.7
2005-06	1,523.7	1,346.4
2006-07	1,837.1	1,519.3
All	7,658.0	7 136.9

3. Defaults and Recoveries for Direct Loans

Table 24 shows the data on defaults and recoveries (principal only) for Direct loans extracted from HRSD data files. The data regarding defaults and recoveries were found to be complete.

Table 24 Defaults and Recoveries for Direct Loans

Loan Year	Defaults	Recoveries
	($ million)	($ million)
2000-01	5.3	0.3
2001-02	5.0	0.7
2002-03	239.7	23.8
2003-04	252.9	48.8
2004-05	343.9	83.0
2005-06	265.6	85.6
2006-07	250.2	83.7

4. Interest Relief

Table 25 compares amounts of interest relief payments for Direct loans, obtained from HRSD and the interest relief expense extracted from the HRSD data files. The interest relief file does not contain interest relief payment information; it has to be estimated using an estimated interest rate, the outstanding principal amounts and interest relief start and end dates.

Table 25 Interest Relief Payment Data for Direct Loans

Loan Year	Amounts Obtained from HRSD	Estimated from HRSD Files
	($ million)	($ million)
2000-01	0	0
2001-02	3.1	3.9
2002-03	13.4	14.5
2003-04	24.0	25.0
2004-05	33.7	35.4
2005-06	48.9	49.7
2006-07	67.3	66.7

5. Debt Reduction in Repayment

Table 26 compares payment amounts of DRR, obtained from HRSD, with the DRR amounts extracted from HRSD data files.

Table 26 Debt Reduction in Repayment for Guaranteed and Risk-Shared Loans

Loan Year	Amounts Obtained from HRSD	Estimated from HRSD Files
	($ million)	($ million)
2001-02	5.3	5.7
2002-03	8.6	8.5
2003-04	12.1	12.1
2004-05	36.1	35.9
2005-06	24.8	25.3
2006-07	15.6	N/A

Appendix 3 – 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

i) Demographic Evolution

The demographic evolution involves changes in the composition of the future population aged 18-34 for Canada, excluding the non-participating province of Québec and the territories of 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 most recent actuarial reports of the Canada Pension Plan and Old Age Security.

ii) Post-secondary Enrolment

The evolution of post-secondary enrolment shows a long-term decrease in post-secondary enrolment primarily caused by the labour shortage forecasted in Canada after the year 2015. It is anticipated that this labour shortage will be caused by the significant aging of the Canadian population and will considerably raise labour force participation rates in the age range 18-34. A higher expected labour force participation rate in the future implies that a smaller percentage of potential students will choose to attend a post-secondary institution on a full-time basis. The labour force non-participation rates associated with post-secondary enrolment are shown for years 2006-07, 2014-15 and 2031-32 in Table 27 below.

Table 27 Labour Force Non-participation Rates by CSLP Age Band

	Not in Labour Force		Change -	Not in Labour Force	Change -
	2006-07	2014-15	Not in Labour Force	2031-32	Not in Labour Force
Age Band	(1)	(2)	(2) / (1) -1	(3)	(3) / (1) -1
	%	%	%	%	%
18-19	33.6	36.1	7.4	31.6	-6.0
20-24	23.5	23.3	-1.1	20.4	-13.1
25-29	16.6	16.2	-2.5	13.6	-17.9
30-34	15.6	15.8	1.0	13.7	-12.5
18-34	20.4	20.2	-0.7	17.6	-13.3

Table 27 shows a decrease in the inactive population, with an expected cumulative decrease of 0.7% over the next eight years and a larger decrease of 13.3% by 2031-32. This labour shortage will cause the expected decrease in the population not participating in the labour force from 2014-15 to 2031-32. This decrease is mainly concentrated in the older age ranges (25-34) since these individuals are more likely to choose being employed over attending school for a long period of time, given that suitable work is available to them. The younger age group is more likely than the older age group to attend college or university regardless of the situation in the labour force.

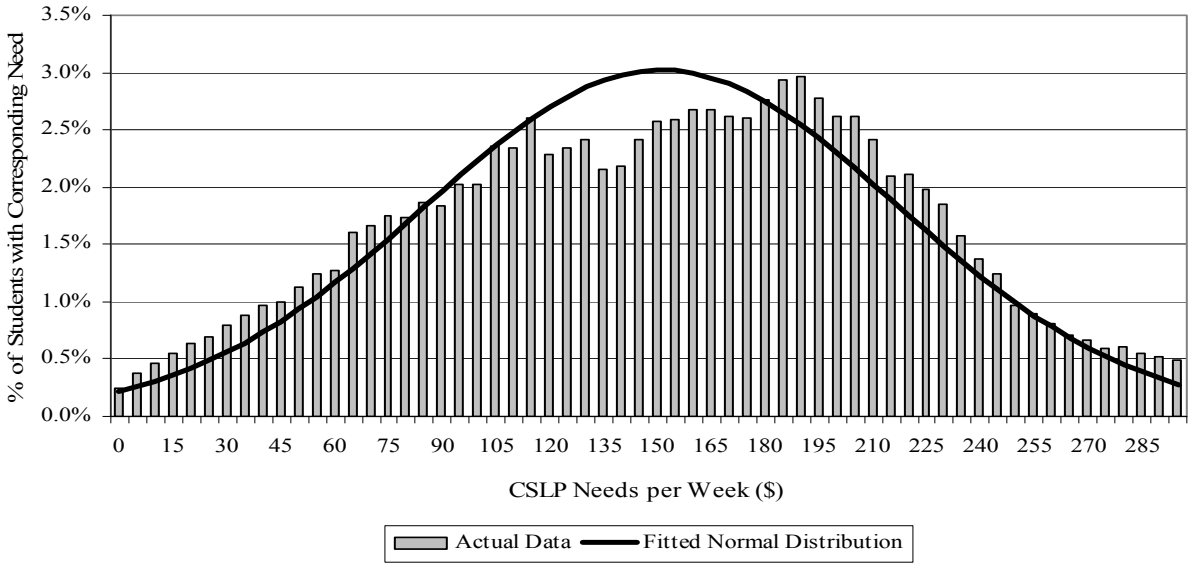
iii) Participation in the CSLP

HRSD has provided CSLP need assessment data for previous loan years, up to and including 2004-05. The CSLP need per week was determined using the following calculation:

CSLP need per week = (assessed need / number of assessed weeks) x 60%.

The CSLP weekly need represents 60% of the assessed weekly need because the CSLP provides 60% of the total loan, while the participating province or territory of residence provides the remaining 40%. A histogram of the CSLP weekly need was created and very closely resembles a normal distribution. Chart 5 below shows the normal distribution fitted to the actual CSLP student weekly need data.

Chart 5 Actual Need and Fitted Normal Distribution 2004-05



The normal distribution provides a good fit, but was adjusted slightly in order to provide a better fit to the historical data. First, at $0 of need, there will be no loans issued and no loans will be issued for negative need. A second-degree polynomial replaced the normal distribution to the left of the peak to ensure the distribution complied with this logic. Second, the proportion of students at or above the loan limit is known for this historical data, so the entire curve was shifted slightly to the right to reflect the proper proportion. The new distribution created by making these small adjustments will be referred to as a modified normal distribution.

For each year in the projection period, the average need increase from the prior year was calculated using the projections for tuition fees, other expenses and resources. Students with low need may experience a small increase in their need since they have resources to offset the expense increase. Students with high need will experience a larger need increase because they do not have sufficient resources to offset an increase in expenses.

The projected average need increases are used to determine new parameters for the modified normal distribution in each of the projection years. Analysis of six years of need assessment data showed that the mean of the need curves increased at a slower rate than the projected average student need. Thus, the mean of the CSLP student need curve is assumed to be the average of the prior year plus two-thirds of the projected average student need increase.

After the new parameters are determined, the CSLP student need curves are projected for the 25-year period.

Since a shift in each modified normal distribution represents the increase in the proportion of students in the CSLP, an assumption was made regarding the growth of the curves. The intersection of subsequent curves is assumed to occur at the need corresponding to the average need of the prior year plus one-half of the projected average need increase during the current year. Having the intersection of curves occur slightly to the right of the average need makes sense because as need increases from year to year, students will move further to the right of the need curve. Using this assumption, each curve was adjusted, resulting in the area under successive curves exceeding 100%. The increased area under the curve represents an increase in participation in the CSLP. Beginning with the base need curve for 2006-07, the area under the curve is 100% and the loan uptake rate is 36.2%. The area under the need curve for 2007-08 is 101% due to an increase in the proportion of students in the CSLP. Thus, the loan uptake rate for 2007-08 is 36.6% (36.2% x 1.01). The product of the number of students enrolled full-time and the loan uptake rate equals the number of students in the CSLP.

b) Evolution of CSLP Student Need

As discussed in the Main Report, student need is defined as the excess of tuition and other expenses over student resources. These elements were also checked for consistency with the average values contained in the need assessment files. Table 5 shows the evolution of student need throughout the projection period.

i) Tuition

Tuition fees are, in part, determined by government policies. Thus, they are determined using provincial budgets stating the government's intentions, along with recent and historical experience for projecting short and long-term increases in tuition fees. The future evolution of tuition is shown in both Table 5 of the Main Report and Table 28 of this appendix.

To arrive at an estimate, the provinces' respective budgets stating their intentions, along with actual tuition increases as reported in news releases and by statistics sources, were used to project tuition increases for the next four years. Table 28 below illustrates these results.

Table 28 Short-term Increase of Tuition Expenses

Province	Weight	Budget/Experience	Results			
			2007-08	2008-09	2009-10	2010-11
	%		%	%	%	%
Newfoundland	2.4	tuition freeze	0.0	0.0	0.0	0.0
Prince Edward Island	0.9	6.6% decrease, 2% increase thereafter	-6.6	2.0	2.0	2.0
Nova Scotia	6.3	7.1% decrease, freeze thereafter	-7.1	0.0	0.0	0.0
New Brunswick	4.5	3.8% increase	3.8	3.8	3.8	3.8
Ontario	52.7	4.7% increase, 5% thereafter	4.7	5.0	5.0	5.0
Manitoba	2.5	1.6% increase, freeze thereafter	1.6	0.0	0.0	0.0
Saskatchewan	3.5	0.8% increase	0.8	0.8	0.8	0.8
Alberta	10.3	5.7% increase, 2.8% thereafter	5.7	2.8	2.8	2.8
British Columbia	17.0	tuition indexed to inflation	1.9	2.0	2.0	2.0
Weighted Average			3.1	3.5	3.5	3.5

The long-term estimate of tuition is based on past increases in tuition relative to increases in the CPI. Over the last 30 years, tuition increases have been, on average, close to CPI plus 3.0%. In the past, government budgetary cost pressures caused tuition fees to rise more

quickly than inflation. Since similar budgetary pressures are expected in the future due to the aging of the population, the 3.5% tuition increase for 2010-11 is graded to reach the CPI increase plus 3% by 2015-16.

The starting point for the 2006-07 tuition fees is calculated from a Statistics Canada Education Division survey on tuition fees, tabulated on a provincial basis. The average tuition was weighted by the total amount of loans issued in each participating province. This analysis resulted in an estimate of $5,615 for average tuition fees in 2006-07.

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.

Expenses are separated into two categories: books and living costs. A need assessment data file for loan year 2004-05 was provided for this report. Several past need assessment files were analyzed and used to update the assumptions on student living arrangements and the percentage of maximum allowable expenses incurred by living situation. The table below uses these assumptions to calculate the annual living cost per student.

Table 29 Monthly Living Costs 2006-07

Living Arrangement	Weight in %	Maximum Monthly Living Costs ($)					Avg % Spent	Annual Living Costs ($)
		Shelter	Food[1]	Trans-portation	Miscel-laneous[2]	Total		
Single, living away from home	67.0	451	211	64	227	953	61.0	6,973
Single Parent	8.0	724	211	64	227	1,226	95.0	13,975
Married Student & Spouse	8.5	898	386	127	428	1,839	72.0	15,891
Single, living at home	16.5	0	169	64	176	409	64.0	3,143
Weighted Average		**437**	**219**	**69**	**235**	**960**		**7,659**

(1) Purchased from stores.
(2) Personal and health care, clothing, household cleaning, communications.

Books and supplies are assumed to be roughly equal to 20% of tuition, which is $5,615 for 2006-07. The assumption of 20% is consistent with the ratio of books and supplies to tuition in the six years of need assessment data. The total expense attributable to books and supplies is $1,123 (20% x $5,615). In addition, effective 1 August 2005, the eligible expenses under books and supplies were extended to include an annual allowance of up to $500 for computers and computer-related costs. It is anticipated that all students will claim this computer allowance. Thus the total expense attributable to books and supplies is increased by $500 for a total of $1,623. The total amount of the CSLP student expenses (excluding tuition), indexed to future increases in the CPI, amounts to $9,282 ($7,659 + $1,623) for loan year 2006-07.

iii) Student Resources

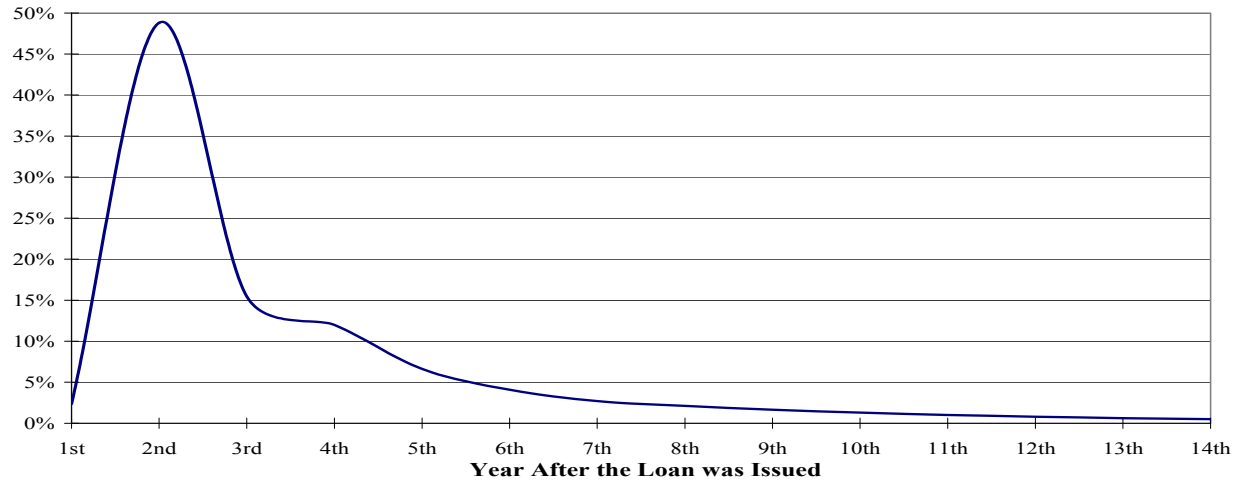
Student resources include student earnings, parental contributions and other resources. Increased resources ultimately serve to reduce the maximum loan available to students through need analysis. Student need is developed in Table 5 of the Main Report.

The starting point for average resources in 2006-07 is calculated as a residual value. Since the average loan size approximately equals average expenses minus average resources, then average resources are roughly equal to average expenses minus average loan size with an adjustment for unmet need. This results in an estimate of $4,472 for a student's average resources in 2007-08.

2. Consolidation

Under the Direct Loan Regime, loans are assumed to consolidate according to the distribution of consolidation by year shown in Chart 6, over a period of fourteen years after a loan is issued. This distribution is built using the first seven years of data for Direct Loan consolidations. A constant decreasing rate is applied for the years that follow.

Chart 6 Distribution of Consolidation



3. Interest Relief

Table 30 shows the base utilization rates of interest relief for the Direct Loan Regime for loan year 2006-07 and onwards. These rates are based on the non-adjusted rates for the Guaranteed and Risk-Shared regimes. The utilization rates in Table 30 are adjusted to take into account Direct Loan interest relief experience for the past six loan years.

For loan year 2006-07, the utilization rates are adjusted to 92% of the rates in Table 30. The utilization rates are then uniformly increased to reach 100% of the rates in Table 30 by loan year 2010-11. Since the loan limit is frozen in the future, it is anticipated that interest relief uptake will decrease as the average earnings of borrowers increase over time. In order to reflect this anticipated decrease in uptake, the interest relief utilization rates will be adjusted by a decreasing factor for 15 years beginning in 2011-12. Compared to the results if the utilization rates were unchanged, this will result in a decrease in the amount of interest relief issued, fewer borrowers exhausting interest relief and subsequently, fewer borrowers eligible for the DRR program.

Table 30 Utilization Rates for Interest Relief for the Direct Loan Regime

Years Since Consolidation	First Year in IR	Second Year in IR	Third Year in IR	Fourth Year in IR	Fifth Year in IR
0 – 1	40.15%	21.51%	12.49%	6.13%	2.14%
1 – 2	4.16%	1.58%	0.76%	0.21%	0.03%
2 – 3	2.57%	1.04%	0.48%	0.15%	0.02%
3 – 4	1.53%	0.58%	0.26%	0.06%	
4 – 5	0.56%	0.20%	0.07%	0.01%	
5 – 6	0.37%	0.11%	0.04%		
6 – 7	0.07%	0.01%	0.00%		
7 – 8	0.05%	0.01%			
8 – 9	0.03%				
9 – 10	0.01%				

4. Debt Reduction in Repayment

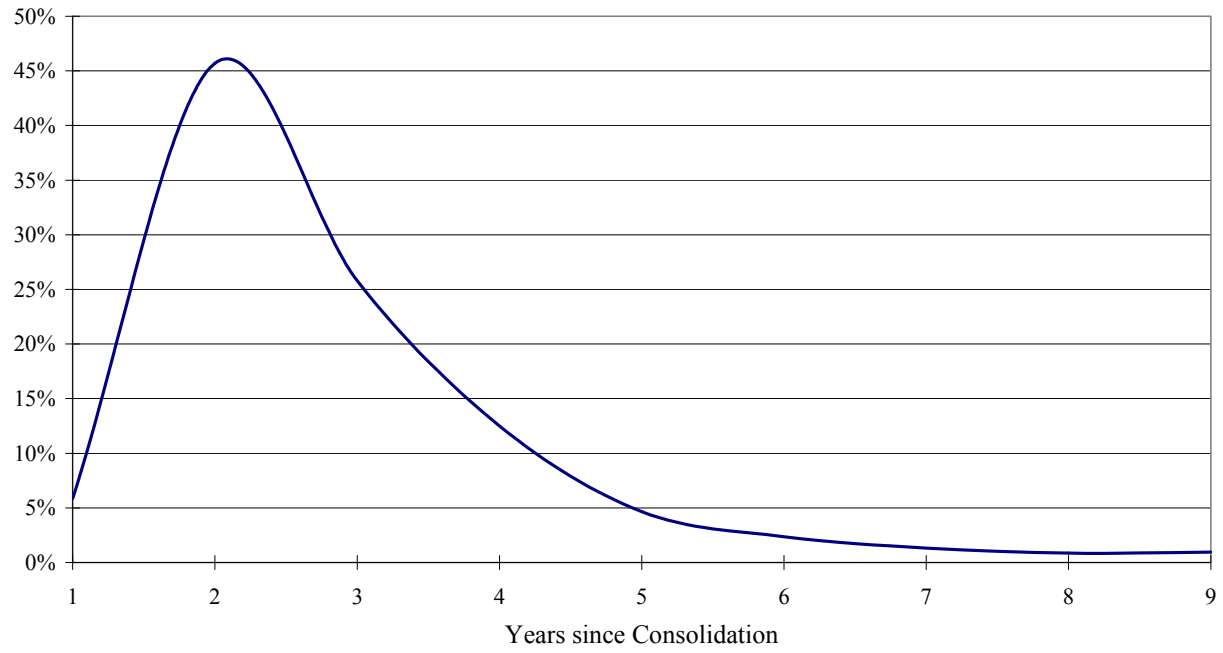
Debt reduction in repayment (DRR) is taken once all possible interest relief is exhausted by the borrower. This is a relatively new program and there is limited experience from it. Moreover, DRR has been enhanced over time and now consists of three reductions: $10,000, $10,000 and $6,000.

The assumptions regarding the proportion of loans going on DRR and the average amount of debt relief have not been updated from the last report because a new DRR data file was not provided. The assumption for the proportion of loans going on DRR, after exhausting interest relief, remains 45%, 7% and 3%, respectively, for each of the three DRR reductions. The average amount of debt relief remains at 50%, 8% and 2%, respectively, for the three reductions.

5. Default Rate

To determine the initial default distribution, the amounts of impaired loans from the Guaranteed Regime were analyzed by consolidation year. Consolidation loan years 1992-93 to 1995-96 were considered for the analysis. The average distribution is shown in Chart 7. According to this distribution, approximately 77% of defaulted loans occurred in the first three years following consolidation.

Chart 7 Default Distribution



In the Actuarial Report as at 31 July 2006, a gross default rate of 20.0% was assumed for loan year 2006-07 and thereafter. The amount of defaulted loans expected in the previous report ($249 million) for loan year 2006-07 using the default distribution shown in Chart 7 and the default rate of 20% is close to the actual experience ($251 million). Therefore, the assumption for the default rate is unchanged.

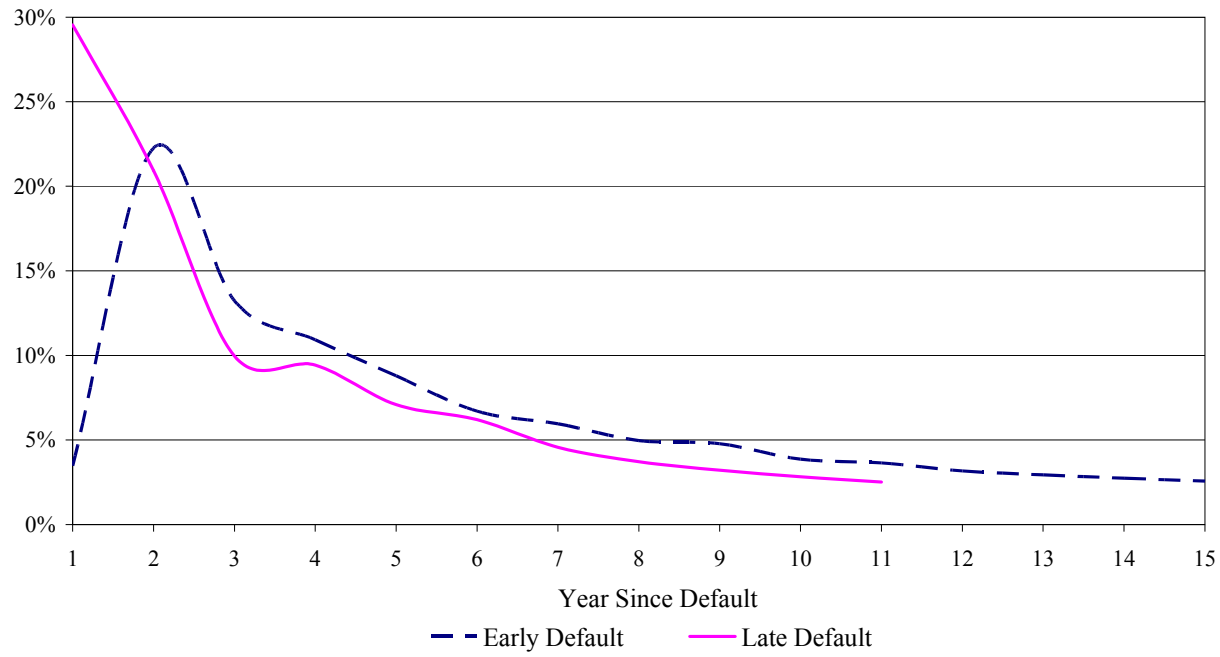
6. Recovery Rate

Recovery amounts for loans in the Guaranteed Regime were analyzed by consolidation year and by year since default. The empirical data were fit to a Weibull distribution. The flexible shape of this distribution makes it an appropriate fit for modelling the recovery process.

To fit the empirical data to a Weibull distribution, the parameters of the distribution were estimated by minimizing the sum of squares of the errors with the curve. Once these parameters were found for all years of default, recoveries were extrapolated by adjusting the tail of the Weibull distribution to the empirical data. The recovery period was limited to 15 years as a realistic time frame in which loans can still be recovered.

Separate distribution curves were obtained for the first four years of default occurrence since consolidation; a fifth curve is used as the ultimate distribution to extrapolate data in future years (Chart 8). The distribution curves are used to extrapolate recoveries for Direct loans.

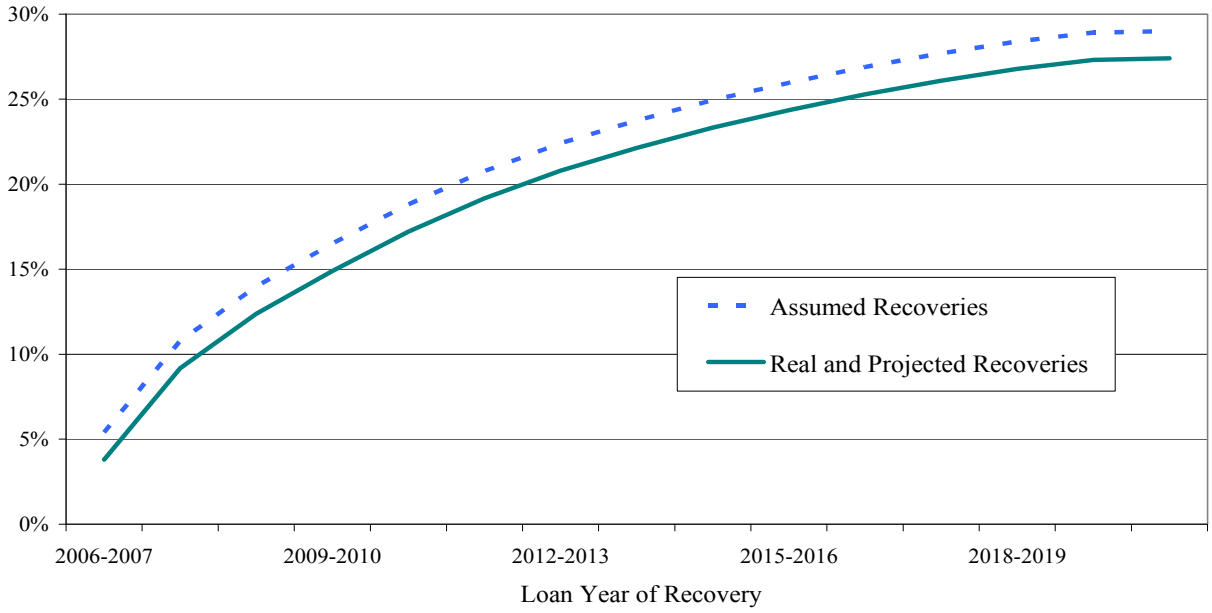
Chart 8 Recovery Distributions Depending on Date of Default



In the Actuarial Report as at 31 July 2006, the assumed default rate for Direct loans was decreased to 20.0% for loan year 2006-07 and thereafter. Since a decrease in the gross default rate was assumed, resulting in lower projected default amounts, it was also assumed that it will be more difficult to recover these defaulted loans, resulting in a lower projected recovery rate. The assumed recovery rate was decreased to 29% for loan year default cohorts 2006-07 and the following default cohorts.

Chart 9 shows the projected cumulative proportion of recoveries for default cohort 2006-07 using the default amount in loan year 2006-07, the recovery distributions shown in Chart 8 and the assumed recovery rate of 29%. The starting point of the dotted line is the proportion of assumed recoveries using the recovery distribution and rate assumptions, while the starting point of the solid line is the actual proportion of recoveries in loan year 2006-07 on loans that became impaired in the same loan year. This chart shows that the actual recoveries in loan year 2006-07 for loans defaulted in loan year 2006-07 are lower than the expected amount. Based on limited experience, the decrease in the assumed future recovery rate to 29% is reasonable.

Chart 9 Projected Cumulative Proportions of Recoveries for 2006-07 Default Cohort



The resulting net default rate is unchanged at 14.2% and remains constant in the future. It corresponds to: gross default rate x (1 – recovery rate) = 20% x (1 – 29%).

7. Bad Debt Provision – Principal

According to the accounting recommendations under Section PS 3050 Loans Receivable of the Public Sector Accounting Handbook of the Canadian Institute of Chartered Accountants, 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 14.2% and an upward adjustment of 0.6% for interest accrued during the grace period is applied.

Table 31 Provision Rate – Bad Debt – Principal

Net Default Rate		14.2%
Adjustment: Interest accrued on loans during grace period	+0.6%	
Bad Debt Provision – Principal: Applied to net loans issued		14.8%

From an accounting perspective, the provision rate for bad debt – principal is applied to the net loans issued. The net loans issued are obtained by reducing loans issued by prepayments, Canada Access Grants and loans forgiven while in-study and during the six month grace period. The level of the total allowance is determined at the end of the loan year. The provision rate for bad debt – principal is modified from the previous report, from 14.6% to 14.8%.

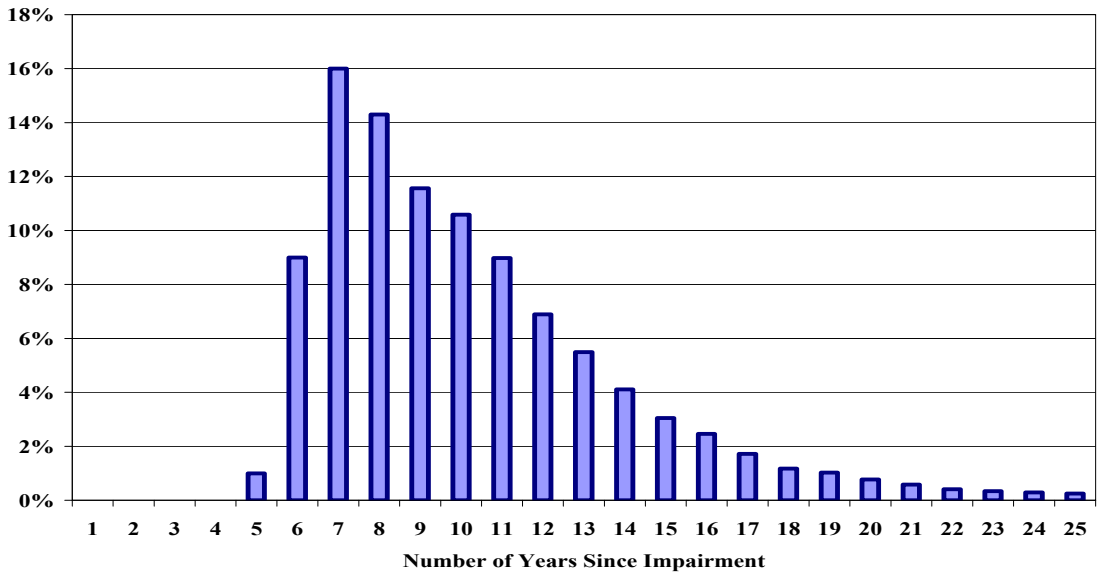
The provision rate of 14.6% corresponded to a net default rate of 14.2% and an upward adjustment of 0.4% for interest accrued during the grace period. The projected net default rate remains unchanged. However, the upward adjustment is increased to 0.6% to take into consideration the experience of interest accrued during the grace period, which is greater than expected. Theoretically, this interest is supposed to represent around six months, the grace period, of interest accrued on the net principal consolidation amount using the student interest rate. However, in practice, the yearly interest capitalised represents more than six months of interest accrued on the net principal consolidation amount.

According to paragraphs 7.1(1) (d) and (e) of the *Canada Student Financial Assistance Regulation*, if more than six months have elapsed between the day on which the borrower ceased to be a full-time student and the first day of the current confirmed period or if the borrower submits the confirmation of enrolment later than six months after the day the borrower ceased to be a full-time student but before the last day of the confirmed period that started within the six-month period, the interest accrued from the day on which he ceased to be a full-time student are due to the government.

Therefore, from an accounting view, in these cases, the loan (principal) was transferred to repayment status, but returned to in-study status because the student is still in school. However, the interest is accrued and due. Then, overall, for a given loan year, the interest capitalised is greater than the interest calculated on the net principal consolidated (loans considered as consolidated during the year less loans returned to in-school status) using the current student interest rate and a six-month grace period. In fact, the interest capitalised represents six months of interest accrued on principal considered to be consolidated during the year without factoring in that some loans have been returned to in-school status.

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 impaired (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 assumption used for write-offs is a 21-year distribution, starting in the fifth year following impairment. Note that the first write-offs of the Direct Loan Regime are postponed until loan year 2008-09 since no significant write-offs are planned until then. The write-off distribution, which is unchanged from the previous report, is presented in Chart 10.

Chart 10 Write-off Distribution



8. Bad Debt Provision – Interest

The methodology for the calculation of the provision for bad debt – interest takes into account the number of years since impairment. Interest on impaired loans is accrued until the loan reaches the "non-recoverable" status. A loan reaches this status when the collectibility of either principal or interest is not reasonably assured. A loan is transferred to "non-recoverable" status according to a 15-year distribution and is then written off according to the write-off distribution used for the principal portion.

Since the interest on impaired 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 impaired loans at the student 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 impairment, 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 variation between the total allowance (on recoverable and non-recoverable accounts) at the end of the year and the remaining allowance of the previous year.

Since different projected principal recovery rates are used for past and more recent cohorts, this must also be reflected in interest recovery. Therefore, three different sets of provision rates, each varying according to the number of year since impairment, were established: one set for default cohorts before loan year 2005-06, one set for default cohort 2005-06 and a last one for default cohorts after 2005-06. For the allowance as at 31 July 2007, the rates used are a mix of the three sets according to the number of years since impairment. The three sets of rates are shown in Table 32, as well as rates used to determine the allowance as at 31 July 2007. Ultimately, only the set of rates in the fourth column (for default cohorts 2006-07 and after) will be used.

Table 32 Provision Rates for Bad Debt – Interest

Number of Years Since Impairment	Default Cohorts (%)			Allowance as at 31 July 2007 (%)
	Before 2005-06	2005-06	2006-07 and After	
Less than 1	21.7	24.8	**33.4**	33.4
Between 1 and 2	30.5	**33.8**	42.5	33.8
Between 2 and 3	**39.0**	42.2	50.6	39.0
Between 3 and 4	**47.8**	50.9	58.6	47.8
Between 4 and 5	**56.1**	58.9	65.7	56.1
Between 5 and 6	**64.4**	66.8	72.6	64.4
Between 6 and 7	71.7	73.8	78.5	
Between 7 and 8	78.2	79.8	83.6	
Between 8 and 9	83.6	84.9	87.8	
Between 9 and 10	88.2	89.1	91.2	
Between 10 and 11	91.9	92.5	94.0	
Between 11 and 12	94.8	95.3	96.2	
Between 12 and 13	97.1	97.4	97.8	
Between 13 and 14	98.8	99.0	99.1	
Between 14 and 15	100.0	100.0	100.0	

9. Other Assumptions

a) Prepayments and Accelerated Payments for Direct Loans

Principal payments received from students were analysed using the Designation Monthly data files for loan years 2004-05 to 2006-07. The analysis revealed that some payments are received while the student is 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 2006-07 is approximately $205 million. The proportion of prepayments received during the period of study represents around 25% of total prepayments. Since the major proportion of prepayments (75%) is made during the six-month grace period, the assumption is established in relation to the consolidation amount. The assumption is set at approximately 14% of consolidations for loan year 2006-07 and thereafter.

ii) Accelerated Payments

Accelerated payments correspond to payments received during the repayment period that exceed the scheduled payment based on a 114-month (9.5 years) repayment period. The assumption used is a distribution of accelerated payment rates that vary according to the number of years since consolidation and is based on information from the Designation Monthly data files. The distribution is presented in Table 33 and represents the proportion by which the scheduled payments are increased.

Table 33 Accelerated Payment Rates

Years Since Consolidation	Rate
Same year as consolidation	162%
1-2	84%
2-3	52%
3-4	49%
4-5	39%
5-6	20%
6-7	10%
7-8 and after	5%

An HRSD Guideline on amortization periods for consolidating loans was implemented in loan year 2005-06. It provides direction on the maximum period over which consolidating loans are to be amortized, taking into consideration the outstanding loan amount. Since experience available under this new practice is not sufficient, the normal principal payments received from students are still calculated based on a standard 114-month repayment period. However, the assumption for accelerated payments considers this Guideline implicitly.

b) Alternative Payments

Alternative 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.

For the calculation of alternative payments, the expenses are: interest subsidies, interest relief expenses for Risk-Shared and Guaranteed regimes, loans forgiven, recovery costs, service providers' costs, Canada Study Grants, Canada Access Grants, claims, risk premiums, put-backs, refunds to financial institutions, Direct Loans' borrowing costs for loans in repayment or on interest relief (i.e. in good-standing) and default amounts for the Direct Loan Regime. The revenues are: student interest payments and principal and interest from recoveries. The cost of alternative payments is $118 million for loan year 2006-07 based on expenses and revenue of loan year 2005-06 and $116 million for loan year 2007-08 based on expenses and revenue of loan year 2006-07.

c) Recovery Costs

Recovery costs have been projected using a percentage of recoveries. The assumption used for recovery costs is around 6% of total recoveries. This rate is assumed to be constant in the future. For future reports, more detailed information regarding the cost of recovery and whether the recovery was successful or unsuccessful would be helpful in setting the assumption.

d) Administration Costs

HRSD provided estimates of the administration costs to support the CSLP for three fiscal years. The costs have been converted to a loan year basis and the extrapolation of future years was done using wage increases. Administration costs include expenses for service providers and are shown below in Table 34.

Table 34 Administration Costs

Loan Year	Administration Costs
	($ million)
2006-07	137.7
2007-08	136.8
2008-09	136.6
2009+	Increase with wages

e) Administration Fees Paid to Provinces

For loan year 2006-07, the administration fees paid to the participating provinces and territory was $13.6 million. The increase in wages is used to project this expense.

f) Canada Study Grants and Canada Access Grants

For loan year 2006-07, the actual cost of the Canada Study Grants was $77.7 million, while the actual cost of Canada Access Grants was $68.7 million for a total of $146.4 million. For future years, the cost of Canada Study Grants is projected to increase with inflation, while the cost of Canada Access Grants is projected to increase with total loans disbursed.

g) Loans Forgiven

In the long term, rates of loans forgiven correspond to 0.03% of loans in-study, 0.11% of loans in repayment and 0.16% of loans in default.

Appendix 4 – Sensitivity Tests

An actuarial examination of the CSLP involves the projection of its income and expenditures over a long period of time. The information presented in section A of the Main Report has been derived using "best-estimate" assumptions regarding demographic and economic trends. Sensitivity tests are performed using assumptions for which changes within a reasonable range have the most significant impact on the long-term financial results.

Both the length of the projection period and the number of assumptions required ensure that actual future experience will not develop precisely in accordance with the best-estimate assumptions. Sensitivity tests have been performed, consisting of projections of CSLP financial results using alternative assumptions.

For each sensitivity test, key assumptions were changed individually, with the other assumptions being maintained at their best-estimate levels. Two tests were performed with respect to each of the assumptions tested, except for the loan limit and student interest rate spread where only one test was performed. The alternative assumptions selected are intended to represent the limits of potential long-term experience. However, it is possible that actual experience could lie outside these limits.

Each of these tests was then categorized as either a "low-cost" scenario or "high-cost" scenario. In the "low-cost" scenarios, the alternative assumptions have the effect of reducing the annual cost of the Program. Conversely, in the "high-cost" scenarios, the assumptions would increase the Program cost.

Table 35 below summarizes the alternative assumptions that were used in the sensitivity tests and is followed by a brief discussion of each assumption.

Table 35 Long-term Sensitivity Test Assumptions

Assumption	Low-cost	Best-estimate	High-cost
1. Loan Limit	--	$210	Indexed to inflation for 2008-09 and thereafter
2. Wage Increases	0.8%	1.3%	1.8%
3. Inflation	1.5%	2.5%	3.5%
4. Labour Force Participation Rates – 2031-32 Canada less Québec, Northwest Territories and Nunavut (ages 18-34)	89.3%	82.4%	79.5%
5. Tuition Cost	CPI	CPI + 3.0%	CPI + 6.0%
6. Rate of Borrowing:			
Government cost of borrowing	3.2%	5.2%	7.2%
Student cost of borrowing	6.0%	8.0%	10.0%
7. Interest Relief Utilization	70%	100%	130%
8. Net Defaults	8.0%	14.2%	17.7%
9. Student Interest Rate Spread	--	250 bps	100 bps

1. Loan Limit

This scenario assumes that the loan limit of $210 per week and thereafter is indexed annually to inflation, thereby showing the effect of many small increases to the limit. Contrary to the best-estimate scenario, the proportion of students at the loan limit will decrease in this scenario. However, the amount of total loans issued will increase gradually from 1.0% over total loans issued under the frozen limit in 2008-09 to 46% at the end of the projection period.

Chart 11 New Loans Issued

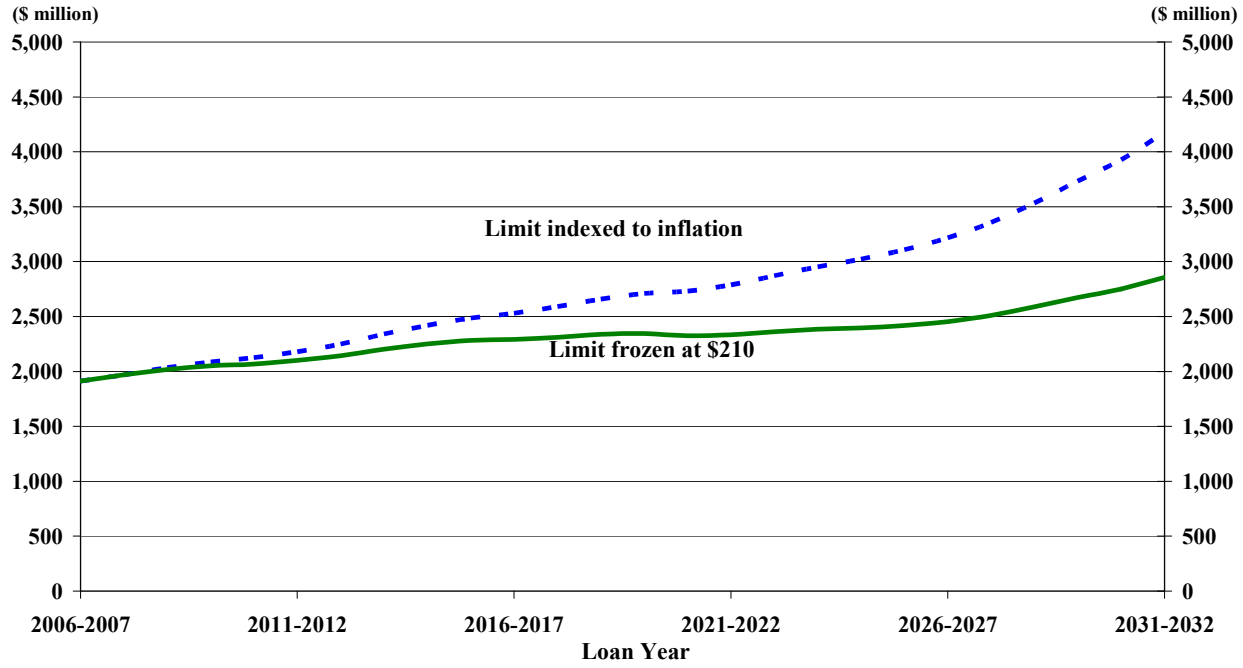
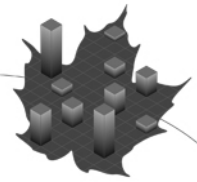


Chart 11 and Table 36 show the impact of gradually increasing the limit on loans issued compared to keeping the limit frozen at $210 per week.

Table 36 Impact of Loan Limit on Loans Issued

	No Change to Loan Limit			Indexed to Inflation Starting in 2008-09				
						Loans Issued		
Loan Year	Limit	% of Students at the Limit	Loans Issued Total	Limit	% of Students at the Limit	Total	Increase Over Frozen	
	($)		($ million)	($)		($ million)	($ million)	(%)
2006-2007	210	35.1	1,912	210	35.1	1,912	-	-
2007-2008	210	35.8	1,970	210	35.8	1,970	-	-
2008-2009	210	37.1	2,017	214	35.1	2,035	18	1
2010-2011	210	39.7	2,068	223	33.2	2,126	58	3
2015-2016	210	48.9	2,282	249	30.8	2,485	203	9
2020-2021	210	58.7	2,325	282	28.9	2,732	407	18
2025-2026	210	67.9	2,418	319	28.7	3,108	690	29
2031-2032	210	77.4	2,857	370	31.2	4,176	1,319	46



2. Wage Increases

Wage increases affect the CSLP by increasing the resources of a student determined in the need assessment process. This, in turn, reduces the need of a student, which can reduce a student's loan availability. However, administration expenses will also increase since these are linked to salary increases.

The real-wage differential is assumed to increase uniformly from its initial to ultimate level. An ultimate real-wage differential of 1.3% has been assumed in years 2015-16 and thereafter for the best-estimate projections. Combined with the best-estimate inflation assumption of 2.5%, it results in an ultimate assumed nominal annual increase in wages of 3.8%.

For the low-cost scenario, the assumed real-wage differential is reduced by 0.5%. This results in an ultimate level of 0.8% in 2016-17.

For the high-cost scenario, the assumed real-wage differential is increased by 0.5%. This results in an ultimate level of 1.8% in 2016-17. This sensitivity test has little impact on the net cost of the Program. For an increase of 0.5% in wages, the portfolio decreases but the administration cost increases.

3. Inflation

An ultimate annual rate of inflation of 2.5% has been assumed for the best-estimate projections. The rate of inflation is assumed to remain constant at 2.0% from 2007-08 until 2010-11. The inflation rate is then assumed to increase uniformly and reach its ultimate level of 2.5% in 2016-17. The inflation rate affects the growth of a student's expenses, the growth of Program expenditures and, indirectly, the resources. It also indirectly affects the Government's cost of borrowing, as well as the repayment rate charged to the student.

For the low-cost scenario, the annual rate of inflation is assumed to decrease by 1.0%. This reduces the long-term rate of inflation to 1.5% in 2016-17. This level of inflation is comparable to that of the 1960s and 1990s.

For the high-cost scenario, the annual rate of inflation is assumed to increase by 1.0%. This increases the long-term rate of inflation to 3.5% in 2016-17. This level of inflation is comparable to long-term historical averages.

4. Labour Force Participation Rates

Labour force participation rates are used to determine the population enrolled full-time in post-secondary institutions. A higher participation rate means that fewer people will be available to attend post-secondary institutions, therefore decreasing enrolment. Similarly, a lower participation rate increases enrolment. During the next twelve years, it is assumed that the overall labour force participation rate will remain relatively stable for youths (ages 18 to 34), averaging 79.8%. For 2019-20 to 2031-32, it is assumed that participation rates will increase overall to 82.4% to compensate for the labour shortage.

For the low-cost scenario, participation rates are assumed to reach their highest historical level of 89.3% by 2031-32. In this scenario, a higher increase in the participation rates is used compared to the base scenario because the labour shortage is more pronounced.

For the high-cost scenario, participation rates are assumed to reach only 79.5% by 2031-32. In this scenario, a lower increase in the participation rates is used compared to the base scenario because the labour shortage is not as severe.

5. Tuition Cost

The long-term estimate of tuition increases is based on past tuition increases relative to the CPI. Over the last 31 years, yearly tuition increases have, on average, corresponded to increases in the CPI plus approximately 3.0%. Since budgetary pressures are anticipated in the future, given the aging of the population, CPI plus 3.0% was used as the ultimate growth rate.

For the low-cost scenario, the ultimate tuition increase is expected to correspond only to increases in the CPI. This result is more in line with increases of other goods and services. This also means that the Government's funding for education will be more in line with inflation.

For the high-cost scenario, the ultimate tuition increase is expected to correspond to increases in the CPI plus 6.0%. The anticipated budgetary pressures due to the aging of the population could reduce funding in key areas such as post-secondary education.

6. Rate of Borrowing

Changes in the real rate of borrowing involve fluctuations in the interest rate not caused by inflation. This rate is related to the Government cost of borrowing, which has an impact on the cost of the interest subsidy for students in school and the cost of providing interest relief to students in need. In addition to the effect on the Government cost of borrowing, this assumption also affects the student real rate of borrowing. This rate has been historically very volatile. As a result, greater emphasis should be placed on assessing the sensitivity of this assumption. The low-cost scenario reduces the rate by 2.0% and the high-cost scenario increases it by 2.0%. Each of these scenarios is plausible based on the volatility of past experience.

7. Interest Relief Utilization

In 1998, the interest relief program was extended from a maximum of 30 months to a maximum of 54 months. As a result, experience based on the use of this extended benefit is limited. Greater emphasis should be placed on assessing the sensitivity of the interest relief utilization rate based on this limited experience.

The low-cost scenario reduces the utilization rate of interest relief by 30%.

The high-cost scenario increases the utilization rate of interest relief by 30%. Better communication to students could increase awareness of the existence of this relatively new extended benefit, which would increase the utilization rate of interest relief.

8. Net Defaults

The net default rate of student loans is a major component of the Government's cost of being involved in the Program. The net default rate on loans consolidated is 14.2%, which corresponds to a gross default rate of 20.0% and a recovery rate of 29.0%. This rate is closely linked with the employment environment for new graduates since that environment affects the ability of students to repay their loans.

In the low-cost scenario, the future recovery rate is increased back up to 60%, which corresponds to the recovery rate for past cohorts, while the gross default rate remains unchanged at 20.0%. This results in a net default rate of 8.0% and a provision rate of 8.6%. If the recovery rate is maintained at 60%, despite a lower gross default rate, it would indicate that the Program is being run very efficiently.

In the high-cost scenario, the future gross default rate is set at 35.4% which corresponds to the default rate for past cohorts, while the future recovery rate is set at 50%. This results in a net default rate of 17.7% and a provision rate of 18.3%. This scenario assumes that the gross default rate will return to a level higher than the most recent experience with a slightly lower recovery rate than in the past. This situation could be experienced in an economic downturn with a high unemployment rate for new graduates. Both of these tests only affect the provision rate for bad debt – principal, the provision rates for bad debt – interest are unchanged.

9. Student Interest Rate Spread

This scenario assumes that the student interest rate spread of 250 basis points is reduced to 100 bps beginning in loan year 2008-09. Overall, this scenario results in a small reduction in the portfolio size at the end of the projection period, but a large increase in the net cost of the Program. By decreasing the student interest rate spread, total revenues decrease significantly due to the reduction in student interest earned. There is a small decrease in total expenses, but not enough to offset the revenue loss. Thus, the net effect is a 16.6% increase in the net cost of the Program at the end of the projection period.

Table 37 below summarizes the results of each of the sensitivity tests.

Table 37 Sensitivity Tests Results for Loan Year 2031-32

Assumptions	Scenario	Loans Issued	Increase	Average Growth Rate	Portfolio July	Increase	Net Cost	Increase
		($ million)	(%)	(%)	($ million)	(%)	($ million)	(%)
Base Scenario	Best-estimate	2,857	-	2.0	19,179	-	1,242	-
Sensitivity tests								
1 - Index the limit to inflation	High-cost	4,176	46.2	3.4	25,598	33.5	1,570	26.5
2 - Wage differential -0.5%	Low-cost	2,922	2.3	2.1	19,587	2.1	1,219	-1.8
2 - Wage differential +0.5%	High-cost	2,790	-2.3	1.9	18,896	-1.5	1,261	1.6
3 - Inflation -1%	Low-cost	2,635	-7.8	1.7	17,913	-6.6	1,008	-18.8
3 - Inflation +1%	High-cost	3,110	8.9	2.3	20,886	8.9	1,523	22.7
4 - High labour force participation	Low-cost	1,865	-34.7	0.5	13,766	-28.2	997	-19.7
4 - Low labour force participation	High-cost	3,303	15.6	2.6	21,562	12.4	1,353	9.0
5 - Tuition: CPI	Low-cost	2,077	-27.3	0.9	15,122	-21.2	1,048	-15.6
5 - Tuition: CPI + 6%	High-cost	3,423	19.8	2.7	22,142	15.5	1,384	11.4
6 - Interest rate -2%	Low-cost	2,857	-	2.0	18,638	-2.8	1,061	-14.5
6 - Interest rate +2%	High-cost	2,857	-	2.0	19,715	2.8	1,424	14.7
7 - Interest relief utilization 70%	Low-cost	2,857	-	2.0	18,686	-2.6	1,217	-2.0
7 - Interest relief utilization 130%	High-cost	2,857	-	2.0	19,602	2.2	1,267	2.1
8 - Net default rate 8.0%	Low-cost	2,857	-	2.0	18,451	-3.8	1,050	-15.4
8 - Net default rate 17.7%	High-cost	2,857	-	2.0	19,389	1.1	1,435	15.6
9 - Student Interest Rate Spread +100	High-cost	2,857	-	2.0	18,780	-2.1	1,448	16.6

Appendix 5 – Acknowledgements

We would like to thank the staff of the Canada Student Loans Directorate of Human Resources and Social Development that provided the relevant data used in this report. Without their useful assistance, we would not have been able to produce this report.

The following people assisted in the preparation of this report:

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