I. Executive Summary

This is the Twenty-Third Actuarial Report since the inception of the Canada Pension Plan (CPP) in 1966. It presents the financial status of the Plan as at 31 December 2006. The previous triennial report was the Twenty-First Actuarial Report as at 31 December 2003, which was tabled in the House of Commons on 8 December 2004.

The Canada Pension Plan was subject to a series of amendments since the Twenty-First Actuarial Report pursuant to the adoption of Bill C-36. Bill C-36 amends the *Canada Pension Plan* to bring into operation the existing full funding provision for benefit enhancements or new benefits that is set out in section 113.1(4)*d)* of the Act. The effects of these amendments were covered in the Twenty-Second Actuarial Report, which was tabled on 4 December 2006 in the House of Commons. Bill C-36 received Royal Assent on 3 May 2007. According to the legislation, the formal approval of at least two-thirds of the provinces representing two-thirds of the population is required in order for amendments to the CPP to come into force. This is in process and should be completed in due course. The amendments introduced by Bill C-36 are included in the financial projections of this report and are assumed to come into force on 1 January 2008.

Bill C-36 highlights that the Plan is subject to two financing objectives:

Steady-state funding which replaces the original pay-as-you-go financing to build a reserve of assets equivalent over time to about five and a half years of benefit expenditures or about 25 per cent of Plan liabilities.

Incremental full funding which requires that changes to the CPP that increase benefits or add new benefits be fully funded.

Both of these funding principles were introduced to improve fairness and equity across generations. The move to steady-state funding eases some of the contribution burden on future generations. Under full funding, each generation that receives benefit enrichments is more likely to pay for it in full so that its costs are not passed on to future generations.

A. Purpose of the Report

This report has been prepared in compliance with the timing and information requirements of the *Canada Pension Plan*. Section 113.1 of the Act provides that the Minister of Finance and ministers of the Crown of the provinces shall review the state of the CPP once every three years, and may consequently make recommendations to change the benefits or contribution rates, or both. Section 113.1 identifies the factors they consider in their review, including information to be provided by the Chief Actuary.

An important purpose of the report is to inform contributors and beneficiaries of the current and projected financial status of the Plan. It provides information to evaluate its financial sustainability over a long period, assuming the Act remains unchanged. Such information should facilitate a better understanding of the financial status of the Plan and the factors that influence costs, thus contributing to an informed public discussion of issues related to it.

B. Scope of the Report

Section II presents a general overview of the methodology used in preparing the actuarial estimates included in this report, which are based on the key best-estimate assumptions described in Section III. The results are presented in Section IV and include the projections of the income, expenditures and assets of the Plan over the next 75 years. Section V presents the reconciliation of the results with those presented in the Twenty-First report. Section VI deals with the uncertainty of results and presents financial results under two alternative scenarios. Section VI also presents the impact of financial market volatility on the financial status of the Plan and a sensitivity analysis of the key best-estimate assumptions based on stochastic approaches. Section VII presents a general conclusion about the financial status of the Plan, while Section VIII consists of the actuarial opinion.

The various appendices provide supplemental information on the long-term financial sustainability of the Plan, the Plan provisions, a detailed reconciliation of the results with the previous report and a description of the data, assumptions and methods employed.

C. Main Findings

The results of the actuarial projections of the financial status of the Canada Pension Plan presented in this report are generally consistent with the trends revealed in the previous triennial actuarial report.

- The minimum contribution rate, which is the lowest rate sufficient to sustain the Plan with respect to the two financing objectives without further increase, is 9.82% of contributory earnings for years 2010 and thereafter. The minimum contribution rate of 9.82% consists of the steady-state contribution rate of 9.80% to finance the Plan without Bill C-36 and a contribution rate of 0.02% to fully fund the increase in eligibility for disability benefits with respect to long-term contributors generated by the amendments introduced by Bill C-36.

- With the minimum contribution rate of 9.82%, the assets are expected to increase significantly over the next 13 years, with the ratio of assets to the following year's expenditures growing from 4.1 in 2006 to 5.4 by 2019 and to 5.6 by 2050. From 2050 to 2075 the ratio decreases from 5.6 to 5.3.

- With the legislated contribution rate of 9.9%, total assets are expected to grow from $114 billion at the end of 2006 to $235 billion by the end of 2015.

- With the legislated contribution rate of 9.9%, contributions are more than sufficient to cover the expenditures over the period 2007 to 2019. Thereafter, a proportion of investment earnings is required to make up the difference between contributions and expenditures. In 2050, 31% of investment earnings is required to pay for benefits.

- With the legislated contribution rate of 9.9%, the assets are expected to increase significantly over the next 13 years, with the ratio of assets to the following year's expenditures growing from 4.1 in 2006 to 5.5 by 2019 and 6.0 by 2050. From 2050 to 2075 the ratio grows from 6.0 to 6.4.

- The number of contributors is expected to grow from 12.3 million in 2007 to 15.3 million by 2050. Contributions are expected to increase from $33 billion in 2007 to $37 billion in 2010 and $56 billion in 2020.

D. Uncertainty of Results

To measure the sensitivity of the long-term projected financial position of the plan to future changes in the demographic and economic environment, three types of sensitivity tests were performed.

For the first set of sensitivity tests, two demographically based scenarios were developed that portray a generally younger and older population. The economic outlook under both demographic alternatives was also adjusted to reflect the anticipated effects of a modified demographic environment on the main economic variables that affect the Plan. The younger and older population scenarios produced minimum contribution rates of 9.07% and 10.69%, respectively.

The second set of sensitivity tests focus on the impact that equity market shocks and alternate investment portfolios could have on the financial sustainability of the Plan. The change in the minimum contribution rate caused by an equity shock depends on the magnitude of the shock and the proportion of the portfolio invested in equities. Assuming the best-estimate portfolio of the CPP and a nominal equity return of -10% in 2009 and 2010, the assets of the CPP would be reduced by $28 billion by the end of 2010, which is comparable to nine months of contributions paid to the Plan in 2010. As well, the minimum contribution rate would increase by 0.16% to 9.98%.

On the other hand, the impact of an equity market shock, as described above, is much larger when considering a riskier portfolio invested in 80% equity. In this case, the variation of the minimum contribution rate is much higher due to volatility in the equity markets and the rate would increase from 9.59% to 9.81%, an increase of 0.22% (compared to 0.16% under the best-estimate portfolio). As well, the assets of the CPP would be reduced by $35 billion by the end of 2010, which is equivalent to the total contributions paid to the Plan in 2010.

The final set of sensitivity tests focus on varying the key assumptions individually in order to measure the impact on the financial status of the Plan. These tests show that the minimum contribution rate could deviate significantly from its best-estimate of 9.82% if other than best-estimate assumptions were to be realized. For example, if life expectancies at age 65 were to increase by three more years than the best-estimate of this report by 2050, then the minimum contribution rate would increase to 10.20%. Furthermore, if early retirement were to increase at age 60 by another 20 basis points, then the minimum contribution rate would increase to 10.02%, which is above the legislated rate of 9.9%.

E. Conclusion

The results contained in this report confirm that the legislated contribution rate of 9.9% for years 2010 and thereafter is sufficient to pay future expenditures and to accumulate assets worth $235 billion (i.e. 5.2 times the annual expenditures) in 2015. In 2050, the assets are projected to be $1,432 billion or 6.0 times the annual expenditures.

The minimum contribution rate required to financially sustain the Plan under this report is 9.82% for years 2010 and thereafter. The minimum contribution rate, with respect to the two financing objectives, consists of a steady-state contribution rate of 9.80% to financially sustain the Plan without the amendments introduced by Bill C-36 and a contribution rate of 0.02% to fully fund the increase in benefits resulting from these amendments.

Better-than-anticipated experience, especially regarding investment performance, labour force participation and employment data, over the period 2004 to 2006 has put downward pressure on the minimum contribution rate. On the other hand, a more costly demographic outlook, due to the continuing increases in longevity, combined with an unexpected increase in the number of early retirement benefit uptake, lower inflation expectations and lower rates of return on investments have put upward pressure on the minimum contribution rate. Overall, the minimum contribution rate of 9.82% is slightly higher than was reported in the previous report.

Under the 9.9% legislated contribution rate, the assets are projected to grow rapidly over the next 13 years as contribution revenues are expected to exceed expenditures over that period. Assets will continue to grow until the end of the projection period, but at a slower pace, and the ratio of assets to the following year's expenditures (asset/expenditure ratio) is expected to reach a level of 6.0 by 2050 and 6.4 by 2075. These are indicators that the Plan is financially sustainable over the long term. The pool of assets generated over the projection period provides the Plan with the capacity, through investment earnings, to absorb some, but not all, of the possible unforeseen economic or demographic fluctuations, which otherwise would have to be reflected in the legislated contribution rate. Thus, despite the projected substantial increase in benefits paid as a result of an aging population, the Plan is expected to be able to meet its obligations throughout the projection period.