

# **Actuarial Report**

## **(10<sup>th</sup>)**

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Supplementing the Actuarial Report on the

# **OLD AGE SECURITY PROGRAM**

As at 31 December 2009



Office of the Superintendent of  
Financial Institutions Canada

Bureau du surintendant des  
institutions financières Canada

Office of the Chief Actuary

Bureau de l'actuaire en chef

**Canada**



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12 August 2011

The Honourable Diane Finley, P.C., M.P.  
Minister of Human Resources and Skills Development Canada  
House of Commons  
Ottawa, Canada  
K1A 0G5

Dear Minister:

In accordance with section 4 of the *Public Pensions Reporting Act*, which provides that an actuarial report shall be prepared by the Chief Actuary when an amendment to the *Old Age Security Act* that affects the cost of benefits is introduced in the House of Commons, I am pleased to submit the 10<sup>th</sup> Actuarial Report on the Old Age Security Program.

Yours sincerely,

A handwritten signature in black ink, reading "Jean-Claude Ménard". The signature is written in a cursive style with a large initial 'J' and a stylized 'M'.

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



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## I. Executive Summary

This is the 10<sup>th</sup> Actuarial Report since the inception of the *Old Age Security Act* in 1952. It has been prepared in compliance with section 4 of the *Public Pensions Reporting Act*, which provides that:

“Where an amendment is made to a pension plan referred to in subsection 3(1) and the amendment affects the cost of benefits or creates an initial unfunded liability, the Minister shall cause the Chief Actuary to conduct an actuarial review of the plan as of the effective date of the amendment.”

The most recent report made pursuant to section 3 is the 9<sup>th</sup> Actuarial Report on the Old Age Security (OAS) Program, which was tabled in the House of Commons on 20 July 2011. Therefore, this 10<sup>th</sup> Actuarial Report has been prepared on the basis of the 9<sup>th</sup> Actuarial Report to show the effect of Part 3 of Bill C-3 on the long-term financial status of the OAS.

Part 3 of Bill C-3, the *Supporting Vulnerable Seniors and Strengthening Canada's Economy Act* received Royal Assent on 26 June 2011. It amends the *Old Age Security Act* to provide a top-up benefit of up to \$50 per month for Guaranteed Income Supplement (GIS) recipients who are single or whose spouse or common-law partner is not a pensioner, and for Allowance recipients who are survivors, and a top-up benefit of up to \$70 per month for couples that include two GIS recipients or a GIS recipient and a recipient of the Allowance for the spouse. The additional benefit is reduced by 25 cents for every dollar of income in excess of \$2,000 for single individuals and \$4,000 of combined income for couples. Therefore, no top-up is payable for single individuals after the annual income reaches \$4,400, and for couples after the combined annual income reaches \$7,360 or \$8,800 if the spouse is not a pensioner. All top-ups are effective 1 July 2011 and indexed thereafter in line with increases in the Consumer Price Index (CPI).

### A. Main Findings

- Projected expenditures are respectively \$151 million and \$310 million higher in 2011 and 2012 than under the 9<sup>th</sup> OAS Actuarial Report.
- Projected expenditures are \$1.5 billion higher than under the 9<sup>th</sup> OAS Actuarial Report over the five-year period running from 1 July 2011 to 31 December 2015.
- The projected number of GIS and Allowance beneficiaries who will receive the top-up benefit is about 680,000 in 2011 and about 700,000 in 2012.
- Projected total program expenditures, expressed as a percentage of the Gross Domestic Product (GDP), are 2.37% in 2011 and 2.43% in 2012.

## II. Introduction

This report has been prepared in compliance with section 4 of the *Public Pensions Reporting Act*, which provides that:

“Where an amendment is made to a pension plan referred to in subsection 3(1) and the amendment affects the cost of benefits or creates an initial unfunded liability, the Minister shall cause the Chief Actuary to conduct an actuarial review of the plan as of the effective date of the amendment.”

## III. Description of Part 3 of Bill C-3

Part 3 of Bill C-3, the *Supporting Vulnerable Seniors and Strengthening Canada's Economy Act* received Royal Assent on 26 June 2011. It amends the *Old Age Security Act* to provide a top-up benefit of up to \$50 per month for GIS recipients who are single or whose spouse or common-law partner is not a pensioner, and for Allowance recipients who are survivors, and a top-up benefit of up to \$70 per month for couples that include two GIS recipients or a GIS recipient and a recipient of the Allowance for the spouse. The additional benefit is reduced by 25 cents for every dollar of income in excess of \$2,000 for single individuals and \$4,000 of combined income for couples. Therefore, no top-up is payable for single individuals after the annual income reaches \$4,400, and for couples after the combined annual income reaches \$7,360 or \$8,800 if the spouse is not a pensioner. All top-ups are effective 1 July 2011 and indexed thereafter in line with increases in the CPI.

## IV. Financial Status

The financial estimates presented in this report use the same actuarial assumptions and methods as per the 9<sup>th</sup> OAS Actuarial Report as at 31 December 2009.

### A. Assumptions and Methods

The monthly GIS and Allowance top-up benefit increases the benefits of lower-income GIS and Allowance recipients. The top-up benefit is reduced by 25 cents for every dollar of income in excess of \$2,000 for single individuals and \$4,000 of combined income for couples. Based on data provided by Service Canada and the Canada Revenue Agency, the proportions of beneficiaries who would receive the top-up benefit and their average top-up as a percentage of the maximum top-up have been estimated. The estimated number of beneficiaries who would receive the top-up benefit is split into two groups: those receiving a partial top-up and those receiving a full top-up. This process was done by type of GIS and Allowance recipients, age, and sex. The estimated proportions are assumed to apply for years 2011 and thereafter.

On average, about 38% of all GIS beneficiaries are estimated to be entitled to either a full or partial top-up. The average top-up for GIS beneficiaries is estimated at \$40 per month for single individuals and \$55 per month for couples in 2011.



On average, about 33% Allowance beneficiaries are estimated to be entitled to either a full or partial top-up. The average top-up for Allowance beneficiaries is estimated at \$33 per month for single individuals and \$56 per month for couples in 2011.

## B. Results

For comparison purposes, Table 1 shows the financial status of the OAS Program as it is presented in the 9<sup>th</sup> OAS Actuarial Report as at 31 December 2009. Table 2 presents the financial status of the OAS Program as amended by Part 3 of Bill C-3, and Table 3 presents the impacts of the amendments on the financial status of the OAS Program (the differences between the financial results presented in Tables 2 and 1).

**Table 1 Financial Status before Amendments\***

Year	Number of Beneficiaries (thousands)			Expenditures (\$ million)					GDP (\$ billion)	Expenditures as a Percentage of GDP
	OAS	GIS	Allowance	OAS	GIS	Allowance	Admin. Expenses	Total		
2011	4,889	1,752	93	29,468	8,586	577	135	38,766	1,641	2.36
2012	5,091	1,820	89	31,290	9,067	567	143	41,067	1,705	2.41
2013	5,289	1,886	86	33,141	9,542	559	151	43,393	1,770	2.45
2014	5,482	1,957	84	35,022	10,059	558	160	45,799	1,834	2.50
2015	5,679	2,028	82	36,987	10,591	561	168	48,307	1,900	2.54
2020	6,782	2,431	79	49,018	13,931	599	222	63,770	2,322	2.75
2025	8,043	2,849	76	64,967	18,109	642	293	84,011	2,820	2.98
2030	9,302	3,260	61	83,981	22,997	578	376	107,932	3,442	3.14
2040	10,507	3,576	52	118,525	31,222	603	526	150,876	5,191	2.91
2050	11,282	3,580	50	159,723	38,944	717	698	200,082	7,702	2.60
2060	12,159	3,573	41	216,118	48,445	727	929	266,219	11,412	2.33

\* 9<sup>th</sup> OAS Actuarial Report as at 31 December 2009.

**Table 2 Financial Status of Amended Program**

Year	Number of Beneficiaries (thousands)			Expenditures (\$ million)					GDP (\$ billion)	Expenditures as a Percentage of GDP
	OAS	GIS	Allowance	OAS	GIS	Allowance	Admin. Expenses	Total		
2011	4,889	1,752	93	29,468	8,729	582	138	38,917	1,641	2.37
2012	5,091	1,820	89	31,290	9,367	577	143	41,377	1,705	2.43
2013	5,289	1,886	86	33,141	9,857	570	151	43,719	1,770	2.47
2014	5,482	1,957	84	35,022	10,391	568	160	46,141	1,834	2.52
2015	5,679	2,028	82	36,987	10,939	571	168	48,665	1,900	2.56
2020	6,782	2,431	79	49,018	14,388	611	222	64,239	2,322	2.77
2025	8,043	2,849	76	64,967	18,703	655	293	84,618	2,820	3.00
2030	9,302	3,260	61	83,981	23,748	589	376	108,694	3,442	3.16
2040	10,507	3,576	52	118,525	32,232	615	526	151,898	5,191	2.93
2050	11,282	3,580	50	159,723	40,202	731	698	201,354	7,702	2.61
2060	12,159	3,573	41	216,118	50,013	741	929	267,801	11,412	2.35

**Table 3      Impact of Amendments on Financial Status**

Number of Beneficiaries Receiving the Top-up Benefit (thousands)				Difference in Expenditures* (\$ million)					Difference in Expenditures as a Percentage of GDP*	
Year	OAS	GIS	Allowance	OAS	GIS	Allowance	Admin. Expenses	Total	GDP (\$ billion)	
2011	-	649	26	-	143	5	3	151	1,641	0.01
2012	-	672	26	-	300	10	-	310	1,705	0.02
2013	-	693	25	-	315	11	-	326	1,770	0.02
2014	-	716	25	-	332	10	-	342	1,834	0.02
2015	-	739	25	-	348	10	-	358	1,900	0.02
2020	-	875	25	-	457	12	-	469	2,322	0.02
2025	-	1,013	24	-	594	13	-	607	2,820	0.02
2030	-	1,143	19	-	751	11	-	762	3,442	0.02
2040	-	1,222	16	-	1,010	12	-	1,022	5,191	0.02
2050	-	1,210	15	-	1,258	14	-	1,272	7,702	0.02
2060	-	1,199	12	-	1,568	14	-	1,582	11,412	0.01

\* Differences taken with 9<sup>th</sup> OAS Actuarial Report as at 31 December 2009.

## V. Conclusion

The 10<sup>th</sup> OAS Actuarial Report shows that:

- Projected expenditures are respectively \$151 million and \$310 million higher in 2011 and 2012 than under the 9<sup>th</sup> OAS Actuarial Report.
- Projected expenditures are \$1.5 billion higher than under the 9<sup>th</sup> OAS Actuarial Report over the five-year period running from 1 July 2011 to 31 December 2015.
- The projected number of GIS and Allowance beneficiaries who will receive the top-up benefit is about 680,000 in 2011 and about 700,000 in 2012.
- Projected expenditures, expressed as a percentage of the GDP, are 0.01% higher in 2011 and 0.02% higher in 2012 than projected under the 9<sup>th</sup> OAS Actuarial Report.

## VI. Actuarial Opinion

In our opinion, considering that this 10<sup>th</sup> Actuarial Report was prepared pursuant to the *Public Pensions Reporting Act*:

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

This report has been prepared, and our opinions given, in accordance with both accepted actuarial practice in Canada, in particular, the General Standards of Practice of the Canadian Institute of Actuaries, and internationally accepted actuarial practice as provided by the Guidelines of Actuarial Practice for Social Security Programs of the International Actuarial Association.



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



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

Ottawa, Canada  
12 August 2011

## Appendix A – Detailed Tables

**Table 4 Beneficiaries (Projected)<sup>(1)</sup>**

Year	Number of Beneficiaries			Recipient Rates		
	OAS	GIS	Allowance	OAS	GIS	Allowance
	(thousands)	(thousands)	(thousands)	(%)	(%)	(%)
2010	4,732	1,623	92	98.1	33.6	4.7
2011	4,889	1,752	93	98.2	35.2	4.6
2012	5,091	1,820	89	98.2	35.1	4.3
2013	5,289	1,886	86	98.3	35.1	4.1
2014	5,482	1,957	84	98.4	35.1	3.9
2015	5,679	2,028	82	98.4	35.1	3.7
2016	5,882	2,106	81	98.5	35.3	3.5
2017	6,087	2,185	81	98.6	35.4	3.4
2018	6,307	2,264	80	98.7	35.4	3.3
2019	6,539	2,352	80	98.7	35.5	3.2
2020	6,782	2,431	79	98.8	35.4	3.1
2021	7,025	2,511	79	98.8	35.3	3.0
2022	7,277	2,595	78	98.9	35.3	3.0
2023	7,531	2,677	78	98.9	35.2	2.9
2024	7,784	2,761	77	98.9	35.1	2.9
2025	8,043	2,849	76	99.0	35.1	2.8
2026	8,304	2,935	74	99.0	35.0	2.8
2027	8,559	3,020	72	99.1	35.0	2.8
2028	8,821	3,105	69	99.1	34.9	2.7
2029	9,073	3,186	65	99.2	34.8	2.6
2030	9,302	3,260	61	99.2	34.8	2.6
2031	9,490	3,323	59	99.3	34.8	2.5
2032	9,647	3,376	58	99.4	34.8	2.4
2033	9,787	3,422	57	99.5	34.8	2.4
2034	9,921	3,463	56	99.5	34.7	2.4
2035	10,050	3,495	55	99.6	34.6	2.3
2036	10,171	3,522	53	99.6	34.5	2.3
2037	10,268	3,543	53	99.7	34.4	2.2
2038	10,353	3,558	52	99.7	34.3	2.2
2039	10,429	3,568	52	99.7	34.1	2.1
2040	10,507	3,576	52	99.7	33.9	2.1
2045	10,860	3,582	52	99.8	32.9	1.9
2050	11,282	3,580	50	99.7	31.6	1.8
2055	11,732	3,579	47	99.6	30.4	1.7
2060	12,159	3,573	41	99.7	29.3	1.5

(1) The projected basic OAS pension recipient rates and number of beneficiaries are on a gross basis; that is, before application of the OAS Recovery Tax. The GIS and Allowance benefit recipient rates and number of beneficiaries account for Tax-Free Savings Accounts (TFSA's). All recipient rates include benefits paid outside Canada and for this reason can exceed 100%.

**Table 5 Expenditures and Average Annual Benefits (Projected)<sup>(1)</sup>**

Year	Expenditures (\$ million)					Average Annual Benefit (\$)		
	OAS	GIS	Allowance	Administrative Expenses	Total	OAS	GIS	Allowance
2010	27,984	7,836	553	127	36,500	5,913	4,829	6,018
2011	29,468	8,729	582	138	38,917	6,027	4,981	6,245
2012	31,290	9,367	577	143	41,377	6,146	5,146	6,478
2013	33,141	9,857	570	151	43,719	6,266	5,226	6,626
2014	35,022	10,391	568	160	46,141	6,388	5,310	6,776
2015	36,987	10,939	571	168	48,665	6,513	5,395	6,930
2016	39,048	11,562	576	178	51,364	6,639	5,490	7,084
2017	41,225	12,211	586	188	54,210	6,772	5,589	7,239
2018	43,614	12,879	596	198	57,287	6,915	5,688	7,408
2019	46,219	13,639	605	210	60,673	7,068	5,798	7,590
2020	49,018	14,388	611	222	64,239	7,227	5,918	7,756
2021	51,913	15,173	622	235	67,943	7,390	6,042	7,915
2022	54,982	16,016	631	249	71,878	7,556	6,172	8,084
2023	58,182	16,863	640	263	75,948	7,726	6,299	8,254
2024	61,490	17,762	650	278	80,180	7,900	6,433	8,425
2025	64,967	18,703	655	293	84,618	8,078	6,566	8,606
2026	68,587	19,667	653	309	89,216	8,260	6,701	8,789
2027	72,283	20,664	646	325	93,918	8,445	6,842	8,970
2028	76,171	21,687	629	342	98,829	8,636	6,985	9,174
2029	80,112	22,727	608	360	103,807	8,830	7,133	9,384
2030	83,981	23,748	589	376	108,694	9,029	7,284	9,594
2031	87,603	24,713	580	392	113,288	9,231	7,437	9,785
2032	91,038	25,640	579	408	117,665	9,437	7,594	9,976
2033	94,435	26,540	580	422	121,977	9,649	7,755	10,182
2034	97,877	27,428	581	438	126,324	9,865	7,920	10,398
2035	101,385	28,282	581	453	130,701	10,088	8,093	10,628
2036	104,911	29,125	580	468	135,084	10,315	8,269	10,865
2037	108,309	29,936	584	483	139,312	10,548	8,448	11,085
2038	111,669	30,715	593	497	143,474	10,786	8,632	11,315
2039	115,031	31,472	605	511	147,619	11,030	8,821	11,551
2040	118,525	32,232	615	526	151,898	11,280	9,014	11,807
2045	137,171	36,013	687	605	174,476	12,631	10,053	13,121
2050	159,723	40,202	731	698	201,354	14,157	11,230	14,610
2055	186,143	44,896	763	806	232,608	15,867	12,545	16,261
2060	216,118	50,013	741	929	267,801	17,774	13,996	18,106

(1) The projected basic OAS pension expenditures and average benefits are on a gross basis; that is, before application of the OAS Recovery Tax. The GIS and Allowance expenditures and average benefits account for TFSAs. All expenditures include benefits paid outside of Canada.



**Table 6 Expenditures as a Percentage of GDP (Projected)**

Year	Gross Domestic Product (\$ billion)	Expenditures as % of Gross Domestic Product <sup>(1)</sup>				Total (%)
		OAS (%)	GIS (%)	Allowance (%)	Administrative Expenses (%)	
2010	1,622	1.73	0.48	0.03	0.01	2.25
2011	1,641	1.80	0.53	0.04	0.01	2.37
2012	1,705	1.84	0.55	0.03	0.01	2.43
2013	1,770	1.87	0.56	0.03	0.01	2.47
2014	1,834	1.91	0.57	0.03	0.01	2.52
2015	1,900	1.95	0.58	0.03	0.01	2.56
2016	1,971	1.98	0.59	0.03	0.01	2.61
2017	2,049	2.01	0.60	0.03	0.01	2.65
2018	2,134	2.04	0.60	0.03	0.01	2.68
2019	2,226	2.08	0.61	0.03	0.01	2.73
2020	2,322	2.11	0.62	0.03	0.01	2.77
2021	2,421	2.14	0.63	0.03	0.01	2.81
2022	2,516	2.19	0.64	0.03	0.01	2.86
2023	2,613	2.23	0.65	0.02	0.01	2.91
2024	2,714	2.27	0.65	0.02	0.01	2.95
2025	2,820	2.30	0.66	0.02	0.01	3.00
2026	2,932	2.34	0.67	0.02	0.01	3.04
2027	3,051	2.37	0.68	0.02	0.01	3.08
2028	3,175	2.40	0.68	0.02	0.01	3.11
2029	3,305	2.42	0.69	0.02	0.01	3.14
2030	3,442	2.44	0.69	0.02	0.01	3.16
2031	3,583	2.44	0.69	0.02	0.01	3.16
2032	3,733	2.44	0.69	0.02	0.01	3.15
2033	3,889	2.43	0.68	0.01	0.01	3.14
2034	4,053	2.41	0.68	0.01	0.01	3.12
2035	4,223	2.40	0.67	0.01	0.01	3.10
2036	4,400	2.38	0.66	0.01	0.01	3.07
2037	4,587	2.36	0.65	0.01	0.01	3.04
2038	4,782	2.34	0.64	0.01	0.01	3.00
2039	4,983	2.31	0.63	0.01	0.01	2.96
2040	5,191	2.28	0.62	0.01	0.01	2.93
2045	6,343	2.16	0.57	0.01	0.01	2.75
2050	7,702	2.07	0.52	0.01	0.01	2.61
2055	9,349	1.99	0.48	0.01	0.01	2.49
2060	11,412	1.89	0.44	0.01	0.01	2.35

(1) The projected basic OAS pension expenditures are on a gross basis; that is, before application of the OAS Recovery Tax. The GIS and Allowance expenditures account for TFSAs. All expenditures include benefits paid outside of Canada.

## **Appendix B – Acknowledgements**

Service Canada provided statistics on the Old Age Security Program and the Canada Pension Plan.

The Canada Revenue Agency provided income tax return information.

The co-operation and able assistance received from the above-mentioned data providers deserve to be acknowledged.

The following people assisted in the preparation of this report:

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