



Office of the Superintendent of
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Actuarial Report

(17th)

supplementing the Actuarial Report on the

OLD AGE SECURITY PROGRAM

As at 31 December 2018

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8 September 2021

The Honourable Deb Schulte, P.C., M.P.
Minister of Seniors
House of Commons
Ottawa, Canada
K1A 0A6

Dear Minister:

In accordance with section 4 of the *Public Pensions Reporting Act*, which provides that the Minister shall cause the Chief Actuary to conduct an actuarial review of the Old Age Security program when an amendment to the *Old Age Security Act* is made that affects the cost of benefits, I am pleased to submit the 17th Actuarial Report on the Old Age Security program.

Yours sincerely,

A handwritten signature in cursive script, appearing to read 'ABillig', with a long horizontal flourish extending to the right.

Assia Billig, FCIA, FSA, PhD
Chief Actuary

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1 Executive Summary

This is the 17th 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 16th Actuarial Report on the Old Age Security (OAS) Program, which was tabled in the House of Commons on 20 October 2020. Therefore, this 17th Actuarial Report has been prepared on the basis of the 16th Actuarial Report to show the effect of Division 31 of Part 4 of Bill C-30 on the long-term financial status of the OAS program.

Division 31 of Part 4 of Bill C-30, the *Budget Implementation Act, 2021, No. 1*, received Royal Assent on 29 June 2021. It amends the *Old Age Security Act* to increase the OAS pension payable to individuals aged 75 or older by 10%, effective 1 July 2022. The increase will apply to all basic pension amounts, including voluntarily deferred pensions. The additional benefits will be indexed to inflation going forward.

Bill C-30 also provides for a one-time payment of \$500 in August 2021 to OAS pensioners who will be age 75 or older as of June 2022. This one-time payment will be exempt from the definition of income for the Guaranteed Income Supplement and will be funded through a statutory appropriation as opposed to being part of the *Old Age Security Act* and, as such, is not reflected in the cost estimates presented in this report.

1.1 Main Findings

- Expenditures are projected to be respectively \$1.2 billion and \$2.6 billion higher in 2022 and 2023 than under the 16th OAS Program Actuarial Report.
- Expenditures are projected to be \$12.7 billion higher than under the 16th OAS Program Actuarial Report over the five-year period running from 2022 to 2026.
- The projected number of OAS pensioners who will benefit from the increase is 3.2 million in 2022 and is expected to grow to 3.8 million by 2026.
- Projected total program expenditures, expressed as a percentage of the Gross Domestic Product (GDP), are 2.80% in 2022 and 3.05% in 2026, or 0.05 and 0.11 percentage points higher, respectively, than under the 16th OAS Program Actuarial Report.

2 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.”

3 Description of Division 31 of Part 4 of Bill C-30

Division 31 of Part 4 of Bill C-30, the *Budget Implementation Act, 2021, No. 1*, received Royal Assent on 29 June 2021. It amends the *Old Age Security Act* to increase the OAS pension payable to individuals aged 75 or older by 10%, effective 1 July 2022. The increase will apply to all basic pension amounts, including voluntarily deferred pensions. The additional benefits will be indexed to inflation going forward.

Bill C-30 also provides for a one-time payment of \$500 in August 2021 to OAS pensioners who will be age 75 or older as of June 2022. This one-time payment will be exempt from the definition of income for the Guaranteed Income Supplement and will be funded through a statutory appropriation as opposed to being part of the *Old Age Security Act* and, as such, is not reflected in the cost estimates presented in this report.

4 Financial Status

The financial estimates presented in this report use the same actuarial assumptions and methods as per the 16th OAS Program Actuarial Report as at 31 December 2018. A micro-simulation analysis was performed using the 2019 OAS program database (provided by Service Canada (Employment and Social Development Canada)) to determine the impacts of the 10% increase. Those impacts were used to calibrate the aggregate valuation model used to produce the estimates for this report.

4.1 Assumptions and Methods

The 10% increase in the OAS basic pension will be based on the actual pension amount payable before the increase, and so will vary based on that amount (i.e. either a partial or maximum pension, including actuarially adjusted pensions for those who voluntarily defer take-up of their pensions). It is estimated that the 10% increase in the maximum monthly OAS basic pension at age 65 will be \$63.83 in July 2022 (applicable to benefits paid from July to September 2022) based on the projections of the 16th OAS Program Actuarial Report.

Table 1 presents illustrative impacts on the amounts of the OAS basic pension payable before and after the 10% increase for various levels of the pension. For instance, the 10% increase represents a maximum annual increase of \$766 for a full pensioner. For a partial pensioner receiving 50% of the full pension, the annual increase would be \$383.

Table 1 Illustrative Impact on OAS Basic Pension (July 2022 Basis)⁽¹⁾

Level of OAS Basic Pension as a Percentage of Maximum Before 10% Increase (%)	Annualized OAS Basic Pension Before 10% Increase (\$)	Annualized OAS Basic Pension After 10% Increase (\$)	Increase in Annual OAS Basic Pension	
			(\$)	(%)
25%	1,915	2,107	192	10%
50%	3,830	4,213	383	10%
75%	5,745	6,320	575	10%
100%	7,660	8,426	766	10%

(1) Estimated annualized benefits based on the projected OAS annualized maximum basic pension in July 2022 of \$7,660 as per the 16th OAS Program Actuarial Report. Illustrative amounts shown are for individuals who do not voluntarily defer take-up of the pension. For beneficiaries who voluntarily defer take-up of their pension, the additional increase of 10% would apply to their actuarially adjusted pension amount. For example, for an individual who receives a deferred pension of \$800 per month, the additional benefit would be \$80 (10% of \$800). This additional amount will be indexed to inflation thereafter.

The 10% increase would apply to the OAS basic pension and not to GIS or Allowance benefits. However, the increase would affect the additional amount payable to GIS beneficiaries aged 75 and older who receive the Super GIS benefit (i.e. those GIS beneficiaries who receive partial OAS pensions due to having less than 40 years of Canadian residency). This would occur since the additional amount payable to those GIS beneficiaries equals the difference of the maximum and partial basic pension. Since all basic pensions (maximum or partial) would increase by 10%, the additional amount payable would also increase by 10%. Note that the resulting increase in the Super GIS benefit (GIS plus additional amount) would be lower than 10% since only the additional amount would increase and not the core GIS benefit.

Moreover, a 10% increase in the basic pension could result in new Super GIS beneficiaries. The reason is that the resulting higher Super GIS benefit would extend the income range over which the benefit is payable before it is fully reduced by income testing. The new Super GIS beneficiaries would be those individuals with sufficiently high income between the current and new maximum income levels who would have otherwise had their benefits fully reduced by income testing. However, it has been determined that the number of such new Super GIS beneficiaries with higher incomes at ages 75 and older would be negligible.

For GIS beneficiaries whose spouse either does not receive any OAS program benefit or who does receive the regular Allowance benefit, the corresponding income-testing thresholds, which are linked to the maximum OAS basic pension (at age 65), would remain at their current (inflation-indexed) levels and not be affected by the proposed 10% increase. Likewise, the OAS-equivalent portion of the Allowance benefit (regular and survivor) and corresponding income limit of the portion would also remain at their current levels. As such, the number of non-Super GIS and Allowance (regular and survivor) beneficiaries and the amounts of their benefits would be unaffected by the increase in the basic pension.

4.2 Results

For comparison purposes, Table 2 shows the financial status of the OAS program as it is presented in the 16th OAS Actuarial Report as at 31 December 2018. Table 3 presents the financial status of the OAS program as amended by Division 31 of Part 4 of Bill C-30, and Table 4 presents the impacts of the amendments on the financial status of the OAS program (the differences between the financial results presented in Tables 3 and 2) and the projected number of affected beneficiaries.

Calendar Year	Number of Beneficiaries (thousands)		Expenditures (\$ million)				GDP (\$ billion)	Expenditures as a Percentage of GDP
	OAS	GIS / Allowance	OAS	GIS / Allowance	Admin. Expenses	Total		
2022	7,137	2,503	51,704	16,308	272	68,284	2,486	2.75
2023	7,406	2,605	54,699	17,259	288	72,246	2,587	2.79
2024	7,673	2,706	57,794	18,224	304	76,322	2,700	2.83
2025	7,945	2,804	61,030	19,194	321	80,545	2,794	2.88
2026	8,218	2,904	64,387	20,202	338	84,927	2,890	2.94
2027	8,482	3,004	67,784	21,232	356	89,372	2,990	2.99
2028	8,749	3,106	71,325	22,304	375	94,004	3,094	3.04
2029	9,007	3,207	74,902	23,392	393	98,686	3,201	3.08
2030	9,244	3,282	78,418	24,376	411	103,204	3,312	3.12
2040	10,587	3,630	109,609	32,383	583	142,560	4,700	3.03
2050	11,449	3,609	144,830	39,101	736	184,667	6,667	2.77
2060	12,665	3,514	195,531	46,933	970	243,434	9,255	2.63

(1) 16th OAS Program Actuarial Report as at 31 December 2018.

Calendar Year	Number of Beneficiaries (thousands)		Expenditures (\$ million)				GDP (\$ billion)	Expenditures as a Percentage of GDP
	OAS	GIS / Allowance	OAS	GIS / Allowance	Admin. Expenses	Total		
2022	7,137	2,503	52,851	16,368	277	69,496	2,486	2.80
2023	7,406	2,605	57,157	17,388	298	74,843	2,587	2.89
2024	7,673	2,706	60,418	18,362	315	79,094	2,700	2.93
2025	7,945	2,804	63,826	19,341	333	83,500	2,794	2.99
2026	8,218	2,904	67,362	20,359	351	88,072	2,890	3.05
2027	8,482	3,004	70,945	21,399	369	92,713	2,990	3.10
2028	8,749	3,106	74,684	22,482	389	97,555	3,094	3.15
2029	9,007	3,207	78,480	23,581	408	102,469	3,201	3.20
2030	9,244	3,282	82,228	24,577	427	107,231	3,312	3.24
2040	10,587	3,630	116,098	32,704	595	149,397	4,700	3.18
2050	11,449	3,609	153,341	39,492	771	193,604	6,667	2.90
2060	12,665	3,514	206,630	47,376	1,016	255,021	9,255	2.76

Table 4 Impact of Amendments on Financial Status

Calendar Year	Number of Affected Beneficiaries (thousands)		Difference in Expenditures* (\$ million)				GDP (\$ billion)	Difference in Expenditures as a Percentage of GDP*
	OAS	GIS / Allowance	OAS	GIS / Allowance	Admin. Expenses	Total		
2022	3,196	216	1,147	60	5	1,212	2,486	0.05
2023	3,359	227	2,458	129	10	2,597	2,587	0.10
2024	3,517	238	2,624	138	11	2,772	2,700	0.10
2025	3,676	249	2,796	147	12	2,955	2,794	0.11
2026	3,837	260	2,975	157	13	3,145	2,890	0.11
2027	4,000	272	3,161	167	13	3,341	2,990	0.11
2028	4,171	285	3,359	178	14	3,551	3,094	0.11
2029	4,352	298	3,577	190	15	3,783	3,201	0.12
2030	4,541	309	3,810	201	16	4,027	3,312	0.12
2040	6,308	404	6,489	321	27	6,837	4,700	0.15
2050	6,761	402	8,511	391	36	8,938	6,667	0.13
2060	7,222	372	11,098	442	46	11,587	9,255	0.13

* Differences between Tables 3 and 2.

5 Conclusion

The 17th OAS Program Actuarial Report shows that:

- Expenditures are projected to be respectively \$1.2 billion and \$2.6 billion higher in 2022 and 2023 than under the 16th OAS Program Actuarial Report.
- Expenditures are projected to be \$12.7 billion higher than under the 16th OAS Program Actuarial Report over the five-year period running from 2022 to 2026.
- The projected number of OAS pensioners who will benefit from the increase is 3.2 million in 2022 and is expected to grow to 3.8 million by 2026.
- Projected total program expenditures, expressed as a percentage of the Gross Domestic Product (GDP), are 2.80% in 2022 and 3.05% in 2026, or 0.05 and 0.11 percentage points higher, respectively, than under the 16th OAS Program Actuarial Report.

6 Actuarial Opinion

In our opinion, considering that this 17th Actuarial Report on the Old Age Security program was prepared pursuant to the *Public Pensions Reporting Act*:

- the data on which this report is based are sufficient and reliable for the purposes of this report;
- the assumptions used are, individually and in aggregate, reasonable and appropriate for the purposes of this report; and,
- the methods employed are appropriate for the purposes of this report.

This report has been prepared, and our opinion given, in accordance with accepted actuarial practice in Canada, in particular, the General Standards of Practice and the Practice-Specific Standards for Social Security Programs of the Standards of Practice of the Canadian Institute of Actuaries.

As of the date of the signing of this report, we have not learned of any events that would have a material impact on the results presented in this report.



Assia Billig, FCIA, FSA
Chief Actuary



Michel Montambeault, FCIA, FSA
Senior Actuary

Ottawa, Canada
8 September 2021

Appendix A — Detailed Tables (Amended Program)

Table 5 Beneficiaries (Projected) ⁽¹⁾

Calendar Year	Number of Beneficiaries			Recipient Rates		
	OAS (thousands)	GIS (thousands)	Allowance (thousands)	OAS (%)	GIS (%)	Allowance (%)
2019	6,362	2,052	71	96.3	31.1	2.8
2020	6,616	2,214	96	96.4	32.3	3.8
2021	6,874	2,306	97	96.5	32.4	3.7
2022	7,137	2,406	97	96.6	32.6	3.7
2023	7,406	2,507	98	96.6	32.7	3.7
2024	7,673	2,607	99	96.7	32.9	3.7
2025	7,945	2,704	100	96.7	32.9	3.7
2026	8,218	2,803	101	96.8	33.0	3.8
2027	8,482	2,902	102	96.8	33.1	3.9
2028	8,749	3,004	103	96.9	33.3	4.1
2029	9,007	3,105	103	96.9	33.4	4.2
2030	9,244	3,179	102	97.0	33.4	4.3
2031	9,445	3,238	101	97.1	33.3	4.2
2032	9,615	3,290	99	97.2	33.3	4.2
2033	9,771	3,337	98	97.3	33.2	4.1
2034	9,919	3,379	96	97.4	33.2	4.1
2035	10,062	3,420	94	97.5	33.1	4.0
2036	10,197	3,455	93	97.5	33.0	4.0
2037	10,309	3,484	92	97.6	33.0	3.9
2038	10,407	3,507	91	97.6	32.9	3.8
2039	10,497	3,526	90	97.7	32.8	3.7
2040	10,587	3,541	89	97.7	32.7	3.6
2041	10,672	3,540	87	97.7	32.4	3.5
2042	10,751	3,544	87	97.7	32.2	3.4
2043	10,826	3,544	87	97.7	32.0	3.3
2044	10,905	3,543	87	97.7	31.8	3.2
2045	10,989	3,542	87	97.7	31.5	3.2
2046	11,077	3,539	87	97.7	31.2	3.2
2047	11,166	3,535	88	97.7	30.9	3.2
2048	11,257	3,530	88	97.7	30.6	3.1
2049	11,351	3,524	89	97.7	30.3	3.1
2050	11,449	3,519	90	97.6	30.0	3.1
2055	11,980	3,441	92	97.5	28.0	3.0
2060	12,665	3,419	96	97.5	26.3	3.1

(1) The projected OAS basic 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 6 Expenditures and Average Annual Benefits (Projected)⁽¹⁾

Calendar Year	Expenditures (\$ million)					Average Annual Benefit (\$)		
	OAS	GIS	Allowance	Administrative Expenses	Total	OAS	GIS	Allowance
2019	43,945	12,902	547	230	57,624	6,907	6,287	7,706
2020	46,270	13,695	628	242	60,835	6,994	6,187	6,526
2021	48,842	14,671	712	257	64,482	7,106	6,361	7,376
2022	52,851	15,637	731	277	69,496	7,405	6,499	7,532
2023	57,157	16,636	752	298	74,843	7,718	6,636	7,680
2024	60,418	17,587	774	315	79,094	7,874	6,745	7,818
2025	63,826	18,544	797	333	83,500	8,033	6,858	7,941
2026	67,362	19,541	818	351	88,072	8,197	6,971	8,064
2027	70,945	20,563	836	369	92,713	8,364	7,086	8,191
2028	74,684	21,629	853	389	97,555	8,536	7,201	8,313
2029	78,480	22,715	866	408	102,469	8,713	7,316	8,440
2030	82,228	23,702	874	427	107,231	8,896	7,455	8,557
2031	85,787	24,601	877	445	111,710	9,083	7,597	8,706
2032	89,179	25,455	877	462	115,973	9,275	7,737	8,841
2033	92,549	26,290	875	479	120,193	9,472	7,879	8,979
2034	95,949	27,121	874	496	124,440	9,674	8,025	9,117
2035	99,404	27,954	874	513	128,745	9,879	8,175	9,255
2036	102,877	28,779	875	530	133,061	10,089	8,329	9,394
2037	106,215	29,568	877	547	137,207	10,303	8,487	9,542
2038	109,489	30,332	880	563	141,264	10,521	8,649	9,694
2039	112,762	31,077	883	579	145,301	10,742	8,814	9,848
2040	116,098	31,814	890	595	149,397	10,966	8,984	10,002
2041	119,431	32,488	897	611	153,427	11,191	9,177	10,292
2042	122,761	33,151	907	627	157,446	11,419	9,355	10,453
2043	126,128	33,802	919	643	161,492	11,650	9,537	10,618
2044	129,621	34,451	933	660	165,665	11,887	9,724	10,782
2045	133,283	35,111	950	677	170,021	12,128	9,914	10,944
2046	137,071	35,772	969	695	174,507	12,374	10,108	11,108
2047	140,942	36,428	990	713	179,073	12,622	10,305	11,274
2048	144,930	37,085	1,011	732	183,758	12,875	10,507	11,440
2049	149,061	37,753	1,035	751	188,600	13,131	10,712	11,607
2050	153,341	38,433	1,059	771	193,604	13,394	10,922	11,779
2055	177,072	41,846	1,190	880	220,988	14,780	12,161	12,940
2060	206,630	46,046	1,329	1,016	255,021	16,314	13,470	13,889

(1) The projected OAS basic 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 7 Expenditures as a Percentage of GDP (Projected)

Calendar Year	Gross Domestic Product (\$ billion)	Expenditures as % of Gross Domestic Product ⁽¹⁾				
		OAS (%)	GIS (%)	Allowance (%)	Administrative Expenses (%)	Total (%)
2019	2,304	1.91	0.56	0.02	0.01	2.50
2020	2,193	2.11	0.62	0.03	0.01	2.77
2021	2,357	2.07	0.62	0.03	0.01	2.74
2022	2,486	2.13	0.63	0.03	0.01	2.80
2023	2,587	2.21	0.64	0.03	0.01	2.89
2024	2,700	2.24	0.65	0.03	0.01	2.93
2025	2,794	2.28	0.66	0.03	0.01	2.99
2026	2,890	2.33	0.68	0.03	0.01	3.05
2027	2,990	2.37	0.69	0.03	0.01	3.10
2028	3,094	2.41	0.70	0.03	0.01	3.15
2029	3,201	2.45	0.71	0.03	0.01	3.20
2030	3,312	2.48	0.72	0.03	0.01	3.24
2031	3,429	2.50	0.72	0.03	0.01	3.26
2032	3,552	2.51	0.72	0.02	0.01	3.27
2033	3,679	2.52	0.71	0.02	0.01	3.27
2034	3,812	2.52	0.71	0.02	0.01	3.26
2035	3,950	2.52	0.71	0.02	0.01	3.26
2036	4,087	2.52	0.70	0.02	0.01	3.26
2037	4,231	2.51	0.70	0.02	0.01	3.24
2038	4,382	2.50	0.69	0.02	0.01	3.22
2039	4,539	2.48	0.68	0.02	0.01	3.20
2040	4,700	2.47	0.68	0.02	0.01	3.18
2041	4,869	2.45	0.67	0.02	0.01	3.15
2042	5,044	2.43	0.66	0.02	0.01	3.12
2043	5,227	2.41	0.65	0.02	0.01	3.09
2044	5,416	2.39	0.64	0.02	0.01	3.06
2045	5,610	2.38	0.63	0.02	0.01	3.03
2046	5,809	2.36	0.62	0.02	0.01	3.00
2047	6,016	2.34	0.61	0.02	0.01	2.98
2048	6,228	2.33	0.60	0.02	0.01	2.95
2049	6,445	2.31	0.59	0.02	0.01	2.93
2050	6,667	2.30	0.58	0.02	0.01	2.90
2055	7,870	2.25	0.53	0.02	0.01	2.81
2060	9,255	2.23	0.50	0.01	0.01	2.76

(1) The projected OAS basic 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.

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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