

2018–19 **Second Quarter**  
Alberta Heritage  
Savings Trust Fund

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November 2018



# Table of Contents

<b>Investment Highlights</b> .....	<b>1</b>
<b>Interim Financial Statements September 30, 2018</b> .....	<b>3</b>
Statement of Financial Position .....	4
Statement of Change in Net Financial Assets .....	4
Statement of Operations and Accumulated Surplus .....	5
Statement of Remeasurement Gains and Losses .....	5
Statement of Cash Flows .....	6
Notes to the Financial Statements .....	7



**3.1%**  
(net of fees)  
**Rate of Return**

**\$17.5**  
billion  
**Fair Value of Net Assets**

**\$702**  
million  
**Net Income**

## Investment Highlights

### Investment Performance

- For the first six months of the fiscal year 2018-19, the Heritage Fund had a return of 3.1%. There was negative value add by Alberta Investment Management Corporation (AIMCo) during the first six months of the fiscal year as the portfolio return was 0.2% below the benchmark return.
- The year-to-date results were driven by good returns in the equity portfolio, which continues to build off strong returns from the previous year. Equities have returned 5.7% since March 31, 2018, led by Private Equity which have returned 13.3%. The inflation sensitive and alternatives portfolio has returned 1.8%, while fixed income has had modest returns of 0.3%.
- The Heritage Fund continues to perform well over the long-term. The five-year annualized rate of return as of September 30, 2018, was 10.2%, while the ten-year rate of return was 8.9% per annum. Both returns are net of fees.
- Over the same five- and ten-year periods, AIMCo has added value to the portfolio in the amounts of 0.9% and 0.7%, respectively.
- As of September 30, 2018, the Heritage Fund had \$17.5 billion in net assets on a fair value basis.

### Asset Allocation

- The assets in each specific category did not change substantially quarter-over-quarter.
- The Fixed Income asset class represented 18.6% of the fund's portfolio. Inflation-Sensitive and Alternatives accounted for 35.9%, while Equities and Overlays were 44.5 % and 1.0% of the portfolio, respectively.

### Investment Income

- The Heritage Fund earned \$769 million during the first six months of the fiscal year. Net income was \$702 million after expenses of \$67 million. To inflation-proof the Fund as required by law, \$195 million of net income will be retained in the fund. The General Revenue Fund will receive \$507 million.

### Alberta Growth Mandate

- The Alberta Growth Mandate was announced as part of *Budget 2015*. The mandate formally directed AIMCo to invest up to 3% of the Heritage Fund in investments that that contributes to Alberta growth.
- As of September 30, 2018, AIMCo has made 31 different investments for a total commitment of \$386 million. To date, two of these investments have been exited and a profit was made on each.

### Investment Returns as of September 30, 2018

	FYTD	5 Year	10 Year	Since Inception
<b>Alberta Heritage Savings Trust Fund</b>	<b>3.1%</b>	<b>10.2%</b>	<b>8.9%</b>	<b>7.4%</b>
Policy Benchmark	3.3%	9.3%	8.2%	6.9%
Value Add	-0.2%	0.9%	0.7%	0.5%
CPI + 450	-	6.1%	6.1%	-

## Asset Allocation (at September 30, 2018)

	Value in millions	Percentage
<b>Money Markets and Fixed Income</b>	<b>\$3,348</b>	<b>18.6%</b>
Cash and Equivalents	\$89	0.5%
Fixed Income	\$3,259	18.1%
<b>Inflation Sensitive and Alternatives</b>	<b>\$6,444</b>	<b>35.9%</b>
Real Estate	\$4,259	23.8%
Private Infrastructure	\$1,660	9.2%
Timberlands	\$525	2.9%
<b>Equity</b>	<b>\$7,995</b>	<b>44.5%</b>
Canadian Public Equity	\$1,510	8.4%
Foreign Equity	\$5,201	29.0%
Private Equity	\$1,284	7.1%
<b>Overlays</b>	<b>\$180</b>	<b>1.0%</b>
<b>Total</b>	<b>\$17,967</b>	<b>100.0%</b>

## Asset Class Returns (for period ended September 30, 2018)

	6 Month	5 Year	10 Year
<b>Money Markets and Fixed Income</b>	<b>0.3%</b>	<b>4.4%</b>	<b>5.5%</b>
Cash and Equivalents	0.8%	1.2%	1.2%
Fixed Income	0.3%	4.4%	5.7%
<b>Inflation Sensitive and Alternatives</b>	<b>1.8%</b>	<b>9.3%</b>	<b>8.1%</b>
Real Estate	1.5%	8.9%	8.6%
Private Infrastructure	0.9%	9.4%	7.1%
Timberlands	6.9%	12.1%	7.4%
<b>Equity</b>	<b>5.7%</b>	<b>12.9%</b>	<b>10.2%</b>
Canadian Public Equity	5.3%	8.2%	7.2%
Foreign Equity	3.9%	14.6%	11.3%
Private Equity	13.3%	9.0%	6.1%
<b>Overlays</b>	<b>0.2%</b>	<b>15.4%</b>	<b>4.9%</b>
<b>Total</b>	<b>3.1%</b>	<b>10.2%</b>	<b>8.9%</b>

September 30, 2018

# Interim Financial Statements (unaudited)

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Alberta Heritage Savings Trust Fund

# Statement of Financial Position

As at September 30, 2018

(unaudited)

(in millions)

	September 30, 2018	March 31, 2018
<b>Financial assets</b>		
Investments (Note 3)	\$ 17,967	\$ 17,633
Receivable from sale of investments	10	10
	<u>17,977</u>	<u>17,643</u>
<b>Liabilities</b>		
Due to the General Revenue Fund	507	207
Payable from purchase of investments	2	10
	<u>509</u>	<u>217</u>
<b>Net financial assets</b>	<u>\$ 17,468</u>	<u>\$ 17,426</u>
<b>Net financial assets</b> (Note 5)		
Accumulated operating surplus	\$ 15,777	\$ 15,582
Accumulated remeasurement gains	1,691	1,844
	<u>\$ 17,468</u>	<u>\$ 17,426</u>

# Statement of Change in Net Financial Assets

Six Months Ended September 30, 2018

(unaudited)

(in millions)

	Three Months Ended September 30,		Six Months Ended September 30,	
	2018	2017	2018	2017
Net surplus retained in the Fund	\$ 109	\$ 66	\$ 195	\$ 123
Net remeasurement losses	(216)	(153)	(153)	(492)
<b>(Decrease) increase in net financial assets</b>	<b>(107)</b>	<b>(87)</b>	<b>42</b>	<b>(369)</b>
<b>Net financial assets, beginning of period</b>	17,575	17,201	17,426	17,483
<b>Net financial assets, end of period</b>	<u>\$ 17,468</u>	<u>\$ 17,114</u>	<u>\$ 17,468</u>	<u>\$ 17,114</u>

The accompanying notes are part of these financial statements.

# Statement of Operations and Accumulated Surplus

Six Months Ended September 30, 2018

(unaudited)

(in millions)

	Three Months Ended September 30,		Six Months Ended September 30,	
	2018	2017	2018	2017
Investment income (Note 7)	\$ 450	\$ 421	\$ 769	\$ 992
Investment expenses (Note 8)	(34)	(34)	(67)	(66)
<b>Net income from operations</b>	<b>416</b>	<b>387</b>	<b>702</b>	<b>926</b>
Transfers to the General Revenue Fund (Note 5b)	(307)	(321)	(507)	(803)
<b>Net surplus retained in the Fund</b> (Note 5b)	<b>109</b>	<b>66</b>	<b>195</b>	<b>123</b>
Accumulated operating surplus, beginning of period	15,668	15,409	15,582	15,352
<b>Accumulated operating surplus, end of period</b>	<b>\$ 15,777</b>	<b>\$ 15,475</b>	<b>\$ 15,777</b>	<b>\$ 15,475</b>

# Statement of Remeasurement Gains and Losses

Six Months Ended September 30, 2018

(unaudited)

(in millions)

	Three Months Ended September 30,		Six Months Ended September 30,	
	2018	2017	2018	2017
Unrealized losses on investments	\$ (155)	\$ (124)	\$ (56)	\$ (335)
Less: Amounts reclassified to the Statement of Operations - realized gains on investments	(61)	(29)	(97)	(157)
<b>Net remeasurement losses</b>	<b>(216)</b>	<b>(153)</b>	<b>(153)</b>	<b>(492)</b>
Accumulated remeasurement gains, beginning of period	1,907	1,792	1,844	2,131
<b>Accumulated remeasurement gains, end of period</b>	<b>\$ 1,691</b>	<b>\$ 1,639</b>	<b>\$ 1,691</b>	<b>\$ 1,639</b>

The accompanying notes are part of these financial statements.

# Statement of Cash Flows

Six Months Ended September 30, 2018

(unaudited)

(in millions)

	Three Months Ended September 30,		Six Months Ended September 30,	
	2018	2017	2018	2017
<b>Operating transactions</b>				
Net income from operations	\$ 416	\$ 387	\$ 702	\$ 926
Non-cash items included in net income	(61)	(29)	(97)	(157)
	355	358	605	769
(Increase) decrease in accounts receivable	(9)	7	-	-
Increase (decrease) in accounts payable	2	(88)	(8)	-
Cash provided by operating transactions	348	277	597	769
<b>Investing transactions</b>				
Proceeds from disposals, repayments and redemptions of investments	576	649	1,021	1,867
Purchase of investments	(932)	(994)	(1,409)	(1,786)
Cash (applied to) provided by investing transactions	(356)	(345)	(388)	81
<b>Transfers</b>				
Transfers to the General Revenue Fund	(307)	(321)	(507)	(803)
Increase (decrease) in amounts due to the General Revenue Fund	307	321	300	(48)
Cash applied to transfers	-	-	(207)	(851)
<b>(Decrease) increase in cash</b>	(8)	(68)	2	(1)
Cash at beginning of period	97	170	87	103
<b>Cash at end of period</b>	<b>\$ 89</b>	<b>\$ 102</b>	<b>\$ 89</b>	<b>\$ 102</b>
<b>Consisting of Deposits in the Consolidated Cash Investment Trust Fund (CCITF) *</b>	<b>\$ 89</b>	<b>\$ 102</b>	<b>\$ 89</b>	<b>\$ 102</b>

\* The CCITF is a highly-liquid, short term money market pooled fund consisting primarily (98%) of securities with maturities of less than one year.

*The accompanying notes are part of these financial statements.*

# Notes to the Financial Statements

September 30, 2018

(unaudited)

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## NOTE 1 AUTHORITY AND MISSION

The Alberta Heritage Savings Trust Fund (the Fund) operates under the authority of the *Alberta Heritage Savings Trust Fund Act*, Chapter A-23, Revised Statutes of Alberta 2000 (the Act), as amended.

The preamble to the Act describes the mission of the Fund as follows:

*“To provide prudent stewardship of the savings from Alberta’s non-renewable resources by providing the greatest financial returns on those savings for current and future generations of Albertans.”*

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## NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND REPORTING PRACTICES

The financial statements are prepared in accordance with Canadian public sector accounting standards. The net financial asset model is presented in the financial statements. Net financial assets are measured as the difference between the Fund’s financial assets and liabilities as described in the statement of financial position.

The accounting policies of significance to the Fund are as follows:

### a) VALUATION OF INVESTMENTS

Investments are recorded at fair value. As disclosed in Note 3, the Fund’s investments consist primarily of direct ownership in units of pooled investment funds (“the pools”). The pools are established by Ministerial Order 16/2014, being the Establishment and Maintenance of Pooled Funds, pursuant to the *Financial Administration Act* of Alberta, Chapter F-12, Section 45, and the *Alberta Investment Management Corporation Act* of Alberta, Chapter A-26.5, Section 15 and 20. Participants in pools include government and non-government funds and plans.

Contracts to buy and sell financial instruments in the pools are between the Province of Alberta and the third party to the contracts. Participants in the pools are not party to the contracts and have no control over the management of the pool and the selection of securities in the pool. Alberta Investment Management Corporation (AIMCo), a Crown corporation within the Ministry of Treasury Board and Finance, controls the creation of the pools and the management and administration of the pools including security selection. Accordingly, the Fund does not report the financial instruments of the pools on its statement of financial position.

The Fund becomes exposed to the financial risks and rewards associated with the underlying financial instruments in a pool when it purchases units issued by the pools and divests its exposure to those financial risks and rewards when it sells its pool units. The Fund reports its share of the financial risks in Note 4.

The fair value of pool units held directly by the Fund is derived from the fair value of the underlying financial instruments held by the pools as determined by AIMCo (see Note 3b). Investments in pool units are recorded in the Fund’s accounts. The underlying financial instruments are recorded in the accounts of the pools. The pools have a market-based

unit value that is used to distribute income to the pool participants and to value purchases and sales of the pool units. The pools include various financial instruments such as bonds, equities, real estate, derivatives, investment receivables and payables and cash.

The Fund's cut-off policy for valuation of investments, investment income and investment performance is based on valuations confirmed by AIMCo on the fourth business day following the period end. Differences in valuation estimates provided to Treasury Board and Finance after the period end cut-off date are reviewed by management. Differences considered immaterial by management are included in investments and remeasurement gains or losses in the following period.

Investments in units of the pools are managed and evaluated on a fair value basis. As such, all investments are designated and recorded in the financial statements at fair value.

Investments in pool units are recorded in the Fund's accounts on a trade date basis.

All purchases and sales of the pool units are in Canadian dollars.

Fair value is the amount of consideration agreed upon in an arm's length transaction between knowledgeable, willing parties who are under no compulsion to act.

**b) INVESTMENT INCOME**

- i) Income distributions from the pools are recorded in the Fund's accounts and included in investment income on the statement of operations and accumulated surplus (see Note 7). Income distributions are based on the Fund's pro-rata share of total units issued by the pools.
- ii) Realized gains and losses on disposal of pool units are recorded in the Fund's accounts and included in income on the statement of operations and accumulated surplus. Realized gains and losses on disposal of pool units are determined on an average cost basis.
- iii) Investment income is recorded on an accrual basis. Investment income is accrued when there is reasonable assurance as to its measurement and collectability.

**c) INVESTMENT EXPENSES**

- i) Investment expenses include all amounts incurred by the Fund to earn investment income (see Note 8). Investment expenses are recorded on an accrual basis. Transaction costs are expensed as they are incurred.
- ii) Other expenses related to the direct administration of the Fund are charged to the Fund on an accrual basis.

**d) REMEASUREMENT GAINS AND LOSSES**

Accumulated remeasurement gains primarily represent the excess of the fair value of the pool units at period end over the cost of the pool units. Changes in accumulated remeasurement gains and losses are recognized in the statement of remeasurement gains and losses. Changes in accumulated remeasurement gains and losses during the period include unrealized increases and decreases in fair value of the pool units and realized gains and losses on sale of the pool units. When the pool units are sold (derecognized), any accumulated unrealized gain or loss associated with the investment becomes realized and is included in net income on the statement of operations and accumulated surplus.

**e) MEASUREMENT UNCERTAINTY**

Measurement uncertainty exists in the fair values reported for certain investments such as private equities, infrastructure, private debt and loans, private real estate, hedge funds, timberland investments, and other investments where no readily available market prices exist. The fair values of these investments are based on estimates. Estimated fair values may not reflect amounts that could be recognized upon immediate sale, or amounts that ultimately may be recognized. Accordingly, the estimated fair values may differ significantly from the value that would have been used had readily available market prices existed for these investments.

**f) TRANSFERS TO THE GENERAL REVENUE FUND (GRF)**

Transfers to the GRF are recorded on an accrual basis. In accordance with Section 8 of the Act, all of the net income of the Fund is transferred to the GRF except for any amount retained in the Fund to maintain its value against inflation (see Note 5 (b)).

**NOTE 3** INVESTMENTS (in millions)

The carrying amounts of the Fund's investments are recorded on a fair value basis. The Fund's investments are managed at the asset class level for purposes of evaluating the Fund's risk exposure and investment performance against approved benchmarks based on fair value. AIMCo invests the Fund's assets in accordance with the Statement of Investment Policies and Goals (SIP&G) approved by the President of Treasury Board, Minister of Finance. The fair value of the pool units is based on the Fund's share of the net asset value of the pooled fund. The pools have a market based unit value that is used to allocate income to participants of the pool and to value purchases and sales of the pool units. AIMCo is delegated authority to independently purchase and sell securities in the pools and Fund, and units of the pools, within the ranges approved for each asset class (see Note 4).

Asset class	Fair Value Hierarchy <sup>(a)</sup>			September 30, 2018	March 31, 2018
	Level 1	Level 2	Level 3		
<b>Interest-bearing securities</b>					
Deposits in CCITF	\$ -	\$ 89	\$ -	\$ 89	\$ 87
Bonds, mortgages and private debt	-	2,082	1,177	3,259	3,181
	-	2,171	1,177	3,348	3,268
<b>Equities</b>					
Canadian	1,159	61	290	1,510	1,440
Global developed	3,195	250	1,184	4,629	4,254
Emerging markets	441	21	110	572	643
Private	-	-	1,284	1,284	1,218
	4,795	332	2,868	7,995	7,555
<b>Inflation sensitive</b>					
Real estate	-	-	4,259	4,259	4,438
Infrastructure	-	-	1,660	1,660	1,667
Timberland	-	-	525	525	513
	-	-	6,444	6,444	6,618
<b>Strategic, tactical and currency investments *</b>	-	20	160	180	192
<b>Total Fair Value of Investments</b>	\$ 4,795	\$ 2,523	\$ 10,649	\$ 17,967	\$ 17,633

\* This asset class is not listed separately in the SIP&G as it relates to strategic investments and currency overlays made on an opportunistic and discretionary basis (see Note 4).

**a) Fair Value Hierarchy:** The quality and reliability of information used to estimate the fair value of investments is classified according to the following fair value hierarchy with level 1 being the highest quality and reliability.

- **Level 1** - fair value is based on quoted prices in an active market. This level includes publicly traded listed equity investments totalling \$4,795 (March 31, 2018: \$4,470).
- **Level 2** - fair value is estimated using valuation techniques that make use of market-observable inputs other than quoted market prices. This level includes debt securities and derivative contracts not traded on a public exchange totalling \$2,523 (March 31, 2018: \$2,471). For these investments, fair value is either derived from a number of prices that are provided by independent pricing sources or from pricing models that use observable market data such as swap curves and credit spreads.
- **Level 3** - fair value is estimated using inputs based on non-observable market data. This level includes private mortgages, hedge funds, private equities and all inflation sensitive investments totalling \$10,649 (March 31, 2018: \$10,692).

**Reconciliation of Level 3 Investments**

	<b>September 30, 2018</b>	<b>March 31, 2018</b>
	<i>(six months)</i>	<i>(one year)</i>
Balance, beginning of period	\$ 10,692	\$ 10,426
Unrealized gains (losses)	81	(14)
Purchases of Level 3 pooled fund units	593	1,745
Sale of Level 3 pooled fund units	(717)	(1,465)
<b>Balance, end of period</b>	<b>\$ 10,649</b>	<b>\$ 10,692</b>

**b) Valuation of Financial Instruments recorded by AIMCo in the Pools**

The methods used by AIMCo to determine the fair value of investments recorded in the pools is explained in the following paragraphs:

- **Interest-bearing securities:** Public interest-bearing securities are valued at the period-end closing sale price or the average of the latest bid and ask prices quoted by an independent securities valuation company. Private mortgages are valued based on the net present value of future cash flows discounted using appropriate interest rate premiums over similar Government of Canada benchmark bonds trading in the market. Private debt and loans is valued similar to private mortgages.
- **Equities:** Public equities are valued at the period-end closing sale price or the average of the latest bid and ask prices quoted by an independent securities valuation company. The fair value of hedge fund investments is estimated by external managers. The fair value of private equities is estimated by managers or general partners of private equity funds, pools and limited partnerships. Valuation methods for private equities may encompass a broad range of approaches. The cost approach is used to value companies without either profits or cash flows. Established private companies are valued using the fair market value approach reflecting conventional valuation methods including discounted cash flows and earnings multiple analysis.
- **Inflation sensitive investments:** The estimated fair value of private real estate investments is reported at the most recent appraised value, net of any liabilities against the real property. Real estate properties are appraised annually by qualified external real estate appraisers. Appraisers use a combination of methods to determine fair value including replacement cost, direct comparison, direct capitalization of earnings and discounted cash flows. The fair value of timberland investments is appraised annually by independent third party evaluators. Infrastructure investments are valued similar to private equity investments.
- **Strategic, tactical and currency investments:** The estimated fair value of infrastructure investments held in emerging market countries are valued similar to private equities. For tactical asset allocations, investments in derivative contracts provides overweight or underweight exposure to global equity and bond markets, including emerging markets. Currency investments consist of directly held currency forward and spot contracts.
- **Foreign currency:** Foreign currency transactions in pools are translated into Canadian dollars using average rates of exchange. At period end, the fair value of investments in other assets and liabilities denominated in a foreign currency are translated at the period-end exchange rates.

- Derivative contracts:** The carrying value of derivative contracts in a favourable and unfavourable position is recorded at fair value and is included in the fair value of the pools (see Note 4f). The estimated fair value of equity and bond index swaps is based on changes in the appropriate market-based index net of accrued floating rate interest. Interest rate swaps and cross-currency interest rate swaps are valued based on discounted cash flows using current market yields and exchange rates. Credit default swaps are valued based on discounted cash flows using current market yields and calculated default probabilities. Forward foreign exchange contracts and futures contracts are valued based on quoted market prices. Options to enter into interest rate swap contracts are valued based on discounted cash flows using current market yields and volatility parameters which measure changes in the underlying swap. Warrants and rights are valued at the period-end closing sale price or the average of the latest bid and ask prices quoted by an independent securities valuation company.

## NOTE 4 INVESTMENT RISK MANAGEMENT (in millions)

The Fund is exposed to financial risks associated with the underlying securities held in the pools created and managed by AIMCo. These financial risks include credit risk, market risk and liquidity risk. Credit risk relates to the possibility that a loss may occur from the failure of another party to perform according to the terms of a contract. Market risk is comprised of currency risk, interest rate risk and price risk. Liquidity risk is the risk the Fund will not be able to meet its obligations as they fall due.

The investment policies and procedures of the Fund are clearly outlined in the SIP&G approved by the Ministry of Treasury Board and Finance. The purpose of the SIP&G is to ensure the Fund is invested and managed in a prudent manner in accordance with current, accepted governance practices incorporating an appropriate level of risk. The Ministry of Treasury Board and Finance manages the Fund's return-risk trade-off through asset class diversification, target ranges on each asset class, diversification within each asset class, quality constraints on fixed income instruments and restrictions on amounts exposed to countries designated as emerging markets. Forward foreign exchange contracts may be used to manage currency exposure in connection with securities purchased in a foreign currency (see Note 4b).

In order to earn the best possible return at an acceptable level of risk, the President of Treasury Board, Minister of Finance has approved the following target policy asset mix:

Asset Class	Target Asset Policy Mix	Actual Asset Mix			
		September 30, 2018		March 31, 2018	
Interest-bearing securities	15 - 45%	\$ 3,348	18.6%	\$ 3,268	18.5%
Equities	35 - 70%	7,995	44.5%	7,555	42.8%
Inflation sensitive	15 - 40%	6,444	35.9%	6,618	37.6%
Strategic, tactical and currency investments	(a)	180	1.0%	192	1.1%
		<b>\$ 17,967</b>	<b>100.0%</b>	<b>\$ 17,633</b>	<b>100.0%</b>

(a) In accordance with the SIP&G, AIMCo may invest up to 2% of the fair value of the Fund's investments in strategic opportunities that are outside of the asset classes listed above. AIMCo may, at its discretion, use currency overlays to an economic exposure limit of 5% of the market value of the Fund.

**a) Credit Risk****i) Debt securities**

The Fund is indirectly exposed to credit risk associated with the underlying debt securities held in the pools managed by AIMCo. Counterparty credit risk is the risk of loss arising from the failure of a counterparty to fully honour its financial obligations. The credit quality of financial assets is generally assessed by reference to external credit ratings. The credit rating of a debt security may be impacted by the overall credit rating of the counterparty, the seniority of the debt issue, bond covenants, maturity distribution and other factors. Credit risk can also lead to losses when issuers and debtors are downgraded by credit rating agencies usually leading to a fall in the fair value of the counterparty's obligations. Credit risk exposure for financial instruments is measured by the positive fair value of the contractual obligations with counterparties. The fair value of all investments reported in Note 3 is directly or indirectly impacted by credit risk to some degree. The majority of investments in debt securities have credit ratings considered to be investment grade.

The table below summarizes the Fund's investment in debt securities by credit rating at September 30, 2018:

Credit rating	September 30, 2018	March 31, 2018
Investment Grade (AAA to BBB-)	65.7%	66.9%
Speculative Grade (BB+ or lower)	0.4%	0.5%
Unrated	33.9%	32.6%
	100.0%	100.0%

**ii) Counterparty default risk - derivative contracts**

The Fund is exposed to counterparty credit risk associated with the derivative contracts held in the pools. The maximum credit risk in respect of derivative financial instruments is the fair value of all contracts with counterparties in a favourable position (see Note 4f). AIMCo is responsible for selecting and monitoring derivative counterparties on behalf of the Fund. AIMCo monitors counterparty risk exposures and actively seeks to mitigate counterparty risk by requiring that counterparties collateralize mark-to-market gains for the Fund. Provisions are in place to allow for termination of the contract should there be a material downgrade in a counterparty's credit rating. The exposure to credit risk on derivatives is reduced by entering into master netting agreements and collateral agreements with counterparties. To the extent that any unfavourable contracts with the counterparty are not settled, they reduce the Fund's net exposure in respect of favourable contracts with the same counterparty.

**iii) Security lending risk**

To generate additional income, the pools participate in a securities-lending program. Under this program, the custodian may lend investments held in the pools to eligible third parties for short periods. At September 30, 2018, the Fund's share of securities loaned under this program is \$644 (March 31, 2018: \$592) and collateral held totals \$685 (March 31, 2018: \$632). Securities borrowers are required to provide the collateral to assure the performance of redelivery obligations. Collateral may take the form of cash, other investments or a bank-issued letter of credit. All collateralization, by the borrower, must be in excess of 100% of investments loaned.

**b) Foreign currency risk**

The Fund is exposed to foreign currency risk associated with the underlying securities held in the pools that are denominated in currencies other than the Canadian dollar. Foreign currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The fair value of investments denominated in foreign currencies is translated into Canadian dollars using the reporting date exchange rate. As a result, fluctuations in the relative value of the Canadian dollar against these foreign currencies can result in a positive or negative effect on the fair value of investments. Approximately 37% (March 31, 2018: 37%) of the Fund's investments, or \$6,581 (March 31, 2018: \$6,552), are denominated in currencies other than the Canadian dollar, with the largest foreign currency exposure being to the US dollar, 19% (March 31, 2018: 18%) and the Euro, 5% (March 31, 2018: 6%).

If the value of the Canadian dollar increased by 10% against all other currencies, and all other variables are held constant, the potential loss in fair value to the Fund would be approximately 3.7% of total investments (March 31, 2018: 3.7%).

The following table summarizes the Fund's exposure to foreign currency investments held in the pools at September 30, 2018:

Currency <sup>(a)</sup>	September 30, 2018		March 31, 2018	
	Fair Value	Sensitivity	Fair Value	Sensitivity
U.S. dollar	\$ 3,440	\$ (344)	\$ 3,089	\$ (309)
Euro	983	(98)	1,043	(104)
British pound sterling	772	(77)	834	(83)
Japanese yen	362	(36)	366	(37)
Other foreign currency	1,024	(103)	1,220	(122)
<b>Total foreign currency investments</b>	<b>\$ 6,581</b>	<b>\$ (658)</b>	<b>\$ 6,552</b>	<b>\$ (655)</b>

<sup>(a)</sup> Information on specific currencies is disclosed when the current period fair value is greater than 1% of the Fund's net assets.

**c) Interest rate risk**

The Fund is exposed to interest rate risk associated with the underlying interest-bearing securities held in the pools managed by AIMCo. Interest rate risk relates to the possibility that the fair value of investments will change due to future fluctuations in market interest rates. In general, investment returns from bonds and mortgages are sensitive to changes in the level of interest rates, with longer term interest bearing securities being more sensitive to interest rate changes than shorter-term bonds. If interest rates increased by 1%, and all other variables are held constant, the potential loss in fair value to the Fund would be approximately 1.2% of total investments (March 31, 2018: 1.1%).

**d) Price risk**

Price risk relates to the possibility that pool units will change in fair value due to future fluctuations in market prices of equities held in the pools caused by factors specific to an individual equity investment or other factors affecting all equities traded in the market. The Fund is exposed to price risk associated with the underlying equity investments held in the pools managed by AIMCo. If equity market indices (S&P/TSX, S&P500, S&P1500 and MSCI ACWI and their sectors) declined by 10%, and all other variables are held constant, the potential loss in fair value to the Fund would be approximately 5.7% of total investments (March 31, 2018: 5.6%). Changes in fair value of investments are recognized in the statement of remeasurement gains and losses.

**e) Liquidity risk**

Liquidity risk is the risk that the Fund will encounter difficulty in meeting obligations associated with its financial liabilities. Liquidity requirements of the Fund are met through income generated from investments, and by investing in units of pools that hold publicly traded liquid assets traded in an active market that are easily sold and converted to cash. Units in pools that hold private investments like real estate, timberland, infrastructure and private equities are less easily converted to cash since the underlying securities are illiquid because they take more time to sell. The Fund's main liabilities include transfers payable to the General Revenue Fund and payables related to purchase of pool units.

**f) Use of Derivative Financial Instruments in Pooled Investment Funds**

The Fund has indirect exposure to derivative financial instruments through its investment in units of the pools. AIMCo uses derivative financial instruments to cost-effectively gain access to equity markets in the pools, manage asset exposure within the pools, enhance pool returns and manage interest rate risk, foreign currency risk and credit risk in the pools.

By counterparty	Number of counterparties	Fund's Indirect Share	
		September 30, 2018	March 31, 2018
Contracts in net favourable position (current credit exposure)	73	\$ 260	\$ 111
Contracts in net unfavourable position	15	(120)	(239)
<b>Net fair value of derivative contracts</b>	<b>88</b>	<b>\$ 140</b>	<b>\$ (128)</b>

- i) Current credit exposure: The current credit exposure is limited to the amount of loss that would occur if all counterparties to contracts in a net favourable position totaling \$260 (March 31, 2018: \$111) were to default at once.
- ii) Cash settlements: Receivables or payables with counterparties are usually settled in cash every three months.
- iii) Contract notional amounts: The fair value of receivables (receive leg) and payables (pay leg) and the exchange of cash flows with counterparties in pooled funds are based on a rate or price applied to a notional amount specified in the derivative contract. The notional amount itself is not invested, received or exchanged with the counterparty and is not indicative of the credit risk associated with the contract. Notional amounts are not assets or liabilities and do not change the asset mix reported in Note 3. Accordingly, there is no accounting policy for their recognition in the statement of financial position.

Types of derivatives used in pools	Fund's Indirect Share	
	September 30, 2018	March 31, 2018
Structured equity replication derivatives	\$ 53	\$ (50)
Foreign currency derivatives	59	(98)
Interest rate derivatives	23	17
Credit risk derivatives	5	3
<b>Net fair value of derivative contracts</b>	<b>\$ 140</b>	<b>\$ (128)</b>

- i) Structured equity replication derivatives: Equity derivatives are structured to receive income from counterparties based on the performance of a specified market-based equity index, security or basket of equity securities applied to a notional amount in exchange for floating rate interest paid to the counterparty. Floating rate notes are held in equity pools to provide floating rate interest to support the pay leg of the equity derivative. Rights, warrants, futures and options are also included as structured equity replication derivatives.
- ii) Foreign currency derivatives: Foreign currency derivatives include contractual agreements to exchange specified currencies at an agreed upon exchange rate and on an agreed settlement date in the future.
- iii) Interest rate derivatives: Interest rate derivatives exchange interest rate cash flows (fixed to floating or floating to fixed) based on a notional amount. Interest rate derivatives primarily include interest rate swaps and cross currency interest rate swaps, futures contracts and options.
- iv) Credit risk derivatives: Credit risk derivatives include credit default swaps allowing the pools to buy and sell protection on credit risk inherent in a bond. A premium is paid or received, based on a notional amount in exchange for a contingent payment should a defined credit event occur with respect to the underlying security.
- v) Deposits: At September 30, 2018, deposits in futures contracts margin accounts totalled \$16 (March 31, 2018: \$30) and deposits as collateral for derivative contracts totalled \$nil (March 31, 2018: \$10).

**NOTE 5** NET FINANCIAL ASSETS (in millions)

Net financial assets represent the difference between the carrying value of financial assets held by the Fund and its liabilities. The following table shows accumulated net income and transfers to (from) the Fund since the Fund was created on May 19, 1976:

	<b>Cumulative since 1976</b>	
	<b>September 30, 2018</b>	<b>March 31, 2018</b>
<b>Accumulated net income</b>	\$ 43,267	\$ 42,565
<b>Transfers to the Fund</b>		
Resource Revenue (1976-1987)	12,049	12,049
Access to the Future <sup>(a)</sup>	1,000	1,000
Voted Payments	2,918	2,918
	<u>15,967</u>	<u>15,967</u>
<b>Transfers (from) the Fund</b>		
Section 8 transfers <sup>(b)</sup>		
Income	(43,472)	(42,770)
Amount Retained in the Fund	3,756	3,561
	<u>(39,716)</u>	<u>(39,209)</u>
Capital Expenditures (1976-1995) <sup>(c)</sup>	(3,486)	(3,486)
Other Statutory Transfers <sup>(d)</sup>	(255)	(255)
	<u>(43,457)</u>	<u>(42,950)</u>
<b>Accumulated surplus from operations</b>	15,777	15,582
<b>Accumulated rereasurement gains</b>	1,691	1,844
<b>Carrying value of net financial assets</b>	<u>\$ 17,468</u>	<u>\$ 17,426</u>

- (a) Section 9.1 of the Act and Section 4(5) of the *Access to the Future Act* provides that up to \$3,000 may be transferred from the GRF to the Fund (see Note 6 (ii)).
- (b) During the period, the Fund earned net income of \$702, of which \$195 was retained in the Fund and \$507 is payable to the GRF. Section 8 of the Act states that the net income of the Heritage Fund, less any amount retained in the Fund, in accordance with section 11 of the Act, shall be transferred to the GRF in a manner determined by the President of Treasury Board, Minister of Finance. The amount to be retained in the Fund for inflation proofing is determined by multiplying the accumulated operating surplus of the Fund from the prior fiscal year end by the estimated percentage increase in the Alberta Consumer Price Index (Alberta CPI) for the year. In accordance with section 11(2), if the Alberta CPI is a negative number, that negative number shall be treated as if it were zero.
- (c) Capital expenditures include transfers of \$300 to the Alberta Heritage Foundation for Medical Research in 1980 and \$100 to the Alberta Heritage Scholarship Fund in 1981.
- (d) Transfers of \$200 to the Alberta Heritage Scholarship Fund and \$3 for the Agriculture and Food Innovation Account were made in 2015. Transfers out of the Fund to the Access to the Future Fund total \$52.

**NOTE 6** INVESTING IN ADVANCED EDUCATION (in millions)

The following notional account has been established within the Fund. The notional balance provided below is used as a base to which a rate is applied to determine future cash transfers to support advanced education and educational initiatives for the long-term benefit of Albertans:

	<b>September 30, 2018</b>	<b>March 31, 2018</b>
	<i>(six months)</i>	<i>(one year)</i>
Balance, beginning of period	\$ 1,584	\$ 1,460
Rate of return adjustment	49	124
<b>Balance, end of period</b>	<u>\$ 1,633</u>	<u>\$ 1,584</u>

- i) The Account was established for the purpose of funding the Access to the Future Fund in the Ministry of Advanced Education. The Access to the Future Fund supports innovation and excellence that enhances and expands opportunities for Albertans to participate in accessible, affordable and high-quality advanced education opportunities.
- ii) A maximum of \$3,000 can be allocated to the account from within the Fund of which \$750 has been allocated in 2005-06 and \$250 in 2006-07. The balance in the account is adjusted for (a) the rate of return reported by the Fund for the period and (b) transfers to the Access to the Future Fund.
- iii) Maximum transfers to the Access to the Future Fund are calculated as 4.5% of the average of the closing balances of the Account for the preceding 3 fiscal years. Effective in fiscal year 2015-16, transfers to the Access to the Future Fund are made from the General Revenue Fund (Sec 4(7) of the *Access to the Future Act*). The last transfer to the Access to the Future Fund was made in 2014-15.

## NOTE 7 INVESTMENT INCOME (in millions)

The following is a summary of the Fund's investment income by asset class:

	Three Months Ended September 30,		Six Months Ended September 30,	
	2018	2017	2018	2017
<b>Interest-bearing securities</b>	\$ 23	\$ 52	\$ 57	\$ 78
<b>Equities</b>				
Canadian	65	79	100	99
Global	138	76	250	381
Private	96	64	123	98
	299	219	473	578
<b>Inflation sensitive</b>				
Real estate	78	67	172	165
Infrastructure	21	50	24	127
Timberland	24	27	29	22
	123	144	225	314
<b>Strategic, tactical and currency investments</b>	5	6	14	22
	\$ 450	\$ 421	\$ 769	\$ 992

The investment income includes realized gains and losses from disposal of pool units totalling \$94 (September 30, 2017: \$157) and from directly held foreign exchange contracts totalling \$3 (September 30, 2017: (\$1)). Income distributions from the pools total \$672 (September 30, 2017: \$836).

Income earned in pooled investment funds is distributed to the Fund daily based on the Fund's pro rata share of units issued by the pool. Income earned by the pools is determined on an accrual basis and includes interest, dividends, security lending income, realized gains and losses on sale of securities determined on an average cost basis, income and expense on derivative contracts and writedowns of securities held in pools which are indicative of a loss in value that is other than temporary.

**NOTE 8** INVESTMENT EXPENSES (in millions)

	Three Months Ended September 30,		Six Months Ended September 30,	
	2018	2017	2018	2017
	Amount charged by AIMCo for:			
Investment costs <sup>(a)</sup>	\$ 25	\$ 28	\$ 50	\$ 54
Performance based fees <sup>(a)</sup>	9	6	17	12
<b>Total investment expenses</b>	<b>\$ 34</b>	<b>\$ 34</b>	<b>\$ 67</b>	<b>\$ 66</b>
Increase in expenses	0.0%	13.3%	1.5%	4.8%
Increase (decrease) in average investments under management	0.2%	(2.6%)	(1.8%)	(0.9%)
Increase (decrease) in value of investments attributed to AIMCo	0.2%	0.3%	(0.2%)	0.1%
<b>Investment expense as a percent of:</b>				
Dollar earned	7.6%	8.1%	8.7%	6.7%
Dollar invested	0.2%	0.2%	0.4%	0.4%

(a) Investment expenses are charged by AIMCo on a cost recovery basis. Please refer to AIMCo's financial statements for a detailed breakdown of the types of expenses incurred by AIMCo. Amounts recovered by AIMCo for investment costs include those costs that are primarily non-performance related including external management fees, external administration costs, employee salaries and incentive benefits and overhead costs. Amounts recovered by AIMCo for performance based fees relate to external managers hired by AIMCo.

Includes \$57 thousand (September 30, 2017: \$57 thousand) charged to the Fund by Alberta Treasury Board and Finance for investment accounting and reporting services.

**NOTE 9** INVESTMENT PERFORMANCE (net of investment expenses)

Estimated investment returns are provided as supplementary information. The determination of the estimated return is based on fair values using quoted market prices and estimates of fair value where no quoted market prices are available. The estimated return includes gains and losses that have not been realized. Estimated benchmark returns are based on published market-based indices and estimates where no published index is available.

	Three Months Ended September 30,		Six Months Ended September 30,		Average Annualized Return	
	2018	2017	2018	2017	5 years <sup>(d)</sup>	10 years
<b>Time-weighted rates of return, at fair value <sup>(a)</sup></b>						
<b>Net return on investments <sup>(b)</sup></b>	1.1%	1.3%	3.1%	2.4%	10.2%	8.9%
<i>Policy benchmark return <sup>(b)</sup></i>	0.9%	1.0%	3.3%	2.3%	9.3%	8.2%
Value added (lost) by AIMCo <sup>(c)</sup>	0.2%	0.3%	(0.2%)	0.1%	0.9%	0.7%

(a) The time-weighted rate of return involves the calculation of the return realized by the Fund over a specified period and is a measure of the total proceeds received from an investment dollar initially invested. Total proceeds include cash distributions (interest and dividend payments) and capital gains and losses (realized and unrealized).

(b) Investment returns are provided by AIMCo. The net investment return and policy benchmark return is based on a weighted average of returns for each asset class. Investment returns for assets classified as real estate, private equities, infrastructure, hedge funds and private debt are based on estimates of fair value. For these investments, measurement uncertainty exists because trading activity is infrequent and fair values are derived using valuation techniques which incorporate assumptions that are based on non-observable market data. Reasonably possible alternative assumptions could yield an increase or decrease in the fair value amounts and investment returns reported for these types of investments. Any change in estimated returns, resulting from new information received after the cut-off date for preparation of the Fund's financial statements, will be reflected in the next reporting period.

(c) In the SIP&G, the Ministry of Treasury Board and Finance expects that the investments held by the Fund will return approximately 100 basis points, or 1% per annum, above the policy benchmark.

(d) In accordance with the SIP&G, over a five-year period, it is expected that the policy portfolio will earn an average return of 4.5%, adjusted for inflation and value added by investment manager of 1.0%. The five-year annualized CPI is 1.7%, bringing the five-year annualized Portfolio Return Expectation to 7.2%.

**NOTE 10** FINANCIAL STATEMENTS

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Quarterly and annual financial statements are prepared by the Department of Treasury Board and Finance and are approved by the Department's Senior Financial Officer and Deputy Minister. The statements report the activities and financial performance of the Fund for the period and are provided to the Standing Committee on the Alberta Heritage Savings Trust Fund in accordance with section 15 and 16 of the Act. Unaudited interim financial statements for the first three quarters of each fiscal year are made available to the public by the President of Treasury Board, Minister of Finance within two months following each quarter-end. Annual audited financial statements of the Fund are included in the annual report of the Ministry of Treasury Board and Finance which is made public on or before June 30 following each fiscal year ending on the preceding March 31.

Alberta

