

PHILLIPS, HAGER & NORTH

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The MFA Mortgage Fund

September 2019

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Global Asset
Management

MFA Investment Options

	HISA	Money Market Fund	Intermediate Fund	Bond Fund	Mortgage Fund
Key Guidelines	<ul style="list-style-type: none"> CIBC & National Bank Single credit exposure 	<ul style="list-style-type: none"> Focus on max high quality & diversification Average term to maturity: 60 days 	<ul style="list-style-type: none"> Focus on max high quality & diversification Average term to maturity: 1 year 	<ul style="list-style-type: none"> Focus on max high quality & diversification Average term to maturity: 2.5 years 	<ul style="list-style-type: none"> Focus on private commercial mortgage investments Average term to maturity: 3.3 years
Investment Time Horizon	N/A	0-9 months	9-24 months	24 months-5 years	3 years +
Current Yield	2.32-2.46	1.87	1.77	1.71	2.47

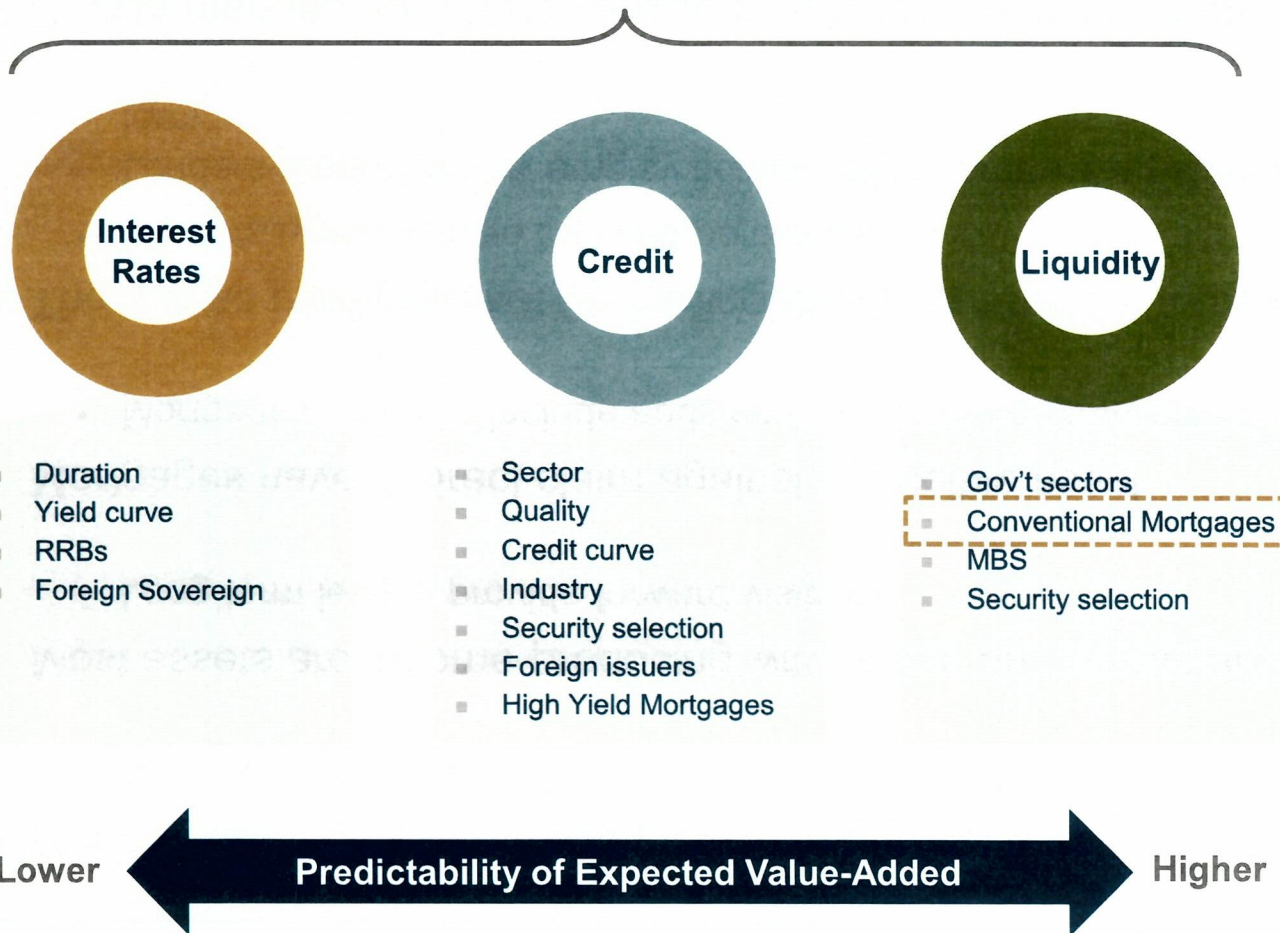


Investment Time Horizon Increases

Why Invest in Commercial Mortgages?

Mortgages Provide a Stable Source of Return

Diversified portfolio with attractive reward-for-risk characteristics



- Aim to provide consistent value-added
- Breadth of strategies, deep investment teams, strong external partnerships
- Target best return/risk opportunities

Canadian Commercial Mortgages & Market Characteristics

- Mortgages that are secured by commercial real estate assets
 - Core property types include industrial, retail, office and multi-residential apartment buildings
- Most assets are income-producing with stable and predictable cash flows
 - Long-term leases provide forward visibility
- Mortgages have a direct claim against a tangible asset
 - Mortgages can also include additional security like guarantees and other collateral support
- There is no public market for trading direct commercial mortgages
 - Lenders typically have buy and hold strategy
 - Lenders predominately employ conservative underwriting standards to limit credit risk through term
- Private markets are characterized by illiquidity and information asymmetry
 - Mortgage market inefficiencies can be capitalized on to improve returns
 - Investors are compensated with an illiquidity premium relative to other more liquid fixed income asset classes

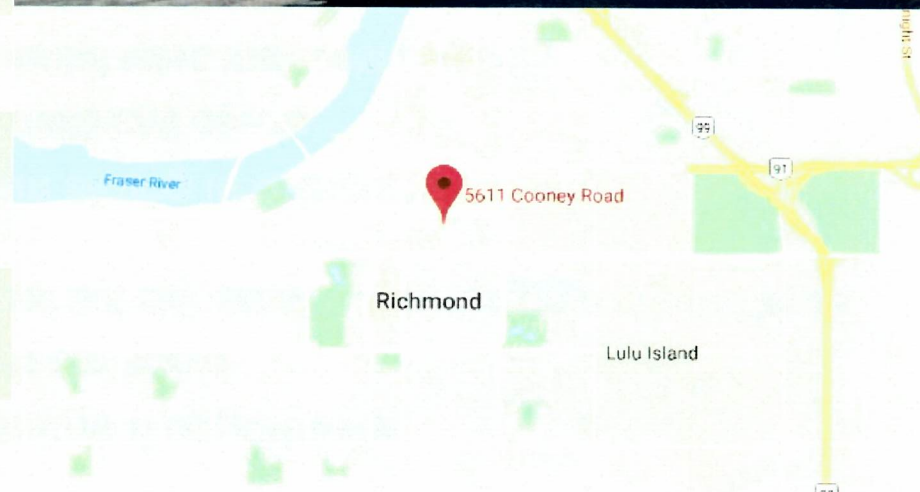
Canadian Commercial Mortgage Market Update

- Mortgages continue to be an attractive investment opportunity
 - Competition remains strong as many lenders are active
 - Mortgage spreads have compressed this year but still remain attractive on a relative basis
- Commercial real estate fundamentals remain strong in Canada
 - Vacancy levels remain low in most core markets and assets
 - Income growth continues to be strong with rental rates increasing steadily
- Government of Canada yields have compressed meaningfully (-.5%) year to date
 - This has lowered the yield being earned on new mortgage investments
- Performance of our mortgages remains strong with no defaults or arrears in the MPT

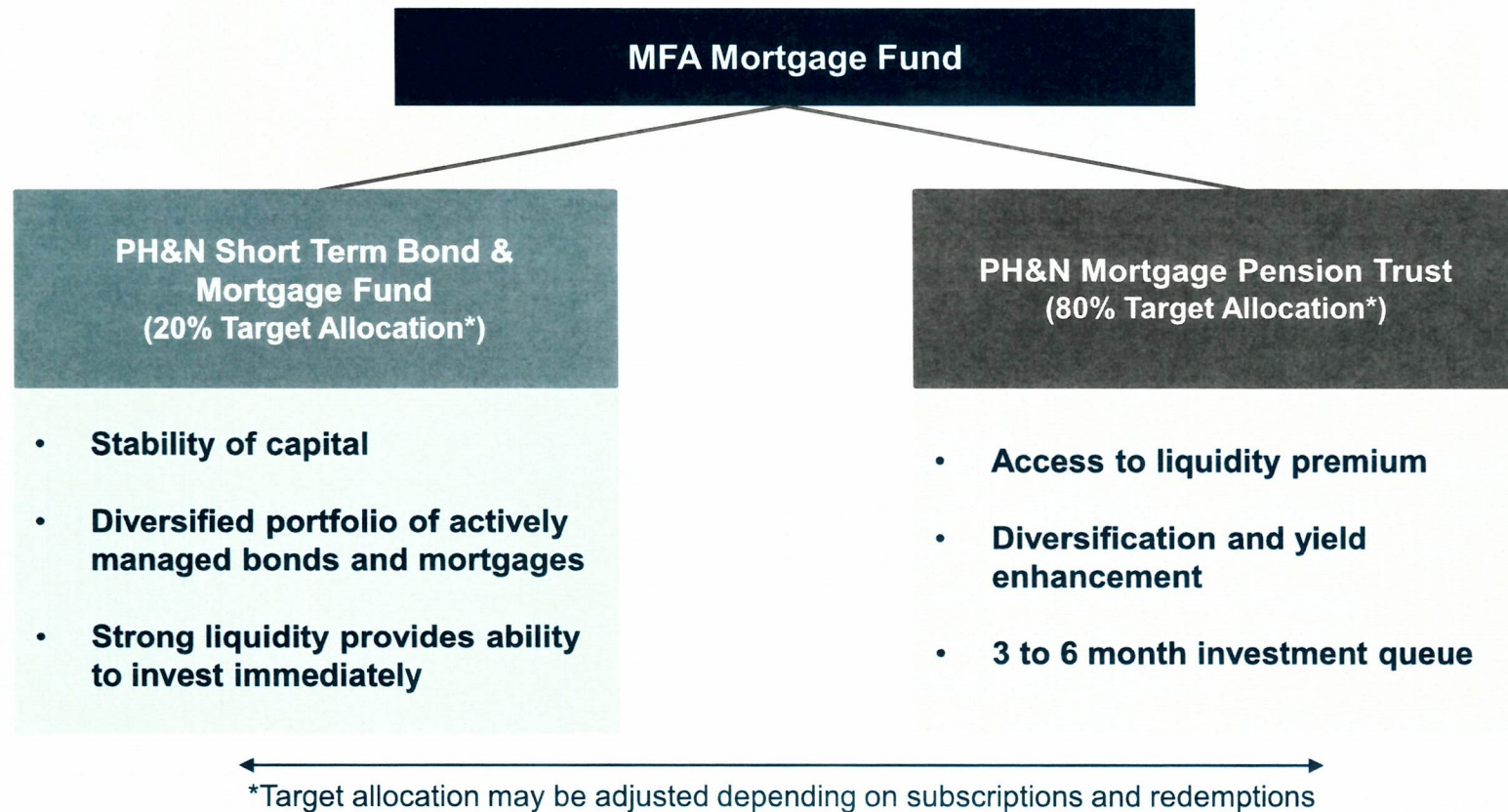
Conventional Mortgage Example

Richmond Office

Address	5611 Cooney Road, Richmond, BC
Loan Amount	\$11,500,000
Amortization	25 Years
Term	5 Years
Coupon	3.57%
Spread	140 bps
Property Value	\$18,150,000
Loan-to-Value	63%
Cash Flow Coverage	1.31x
Guarantor(s)	Corporate Recourse



MFA Mortgage Fund



PH&N Mortgage Pension Trust

August 31, 2019

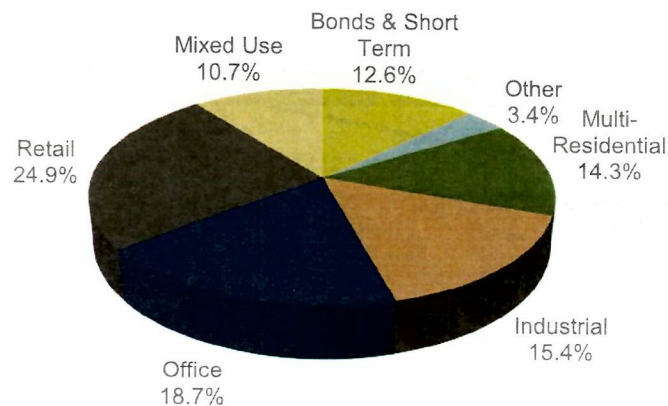
Portfolio Statistics

AUM:	\$4,613.5 million
No. of Mortgages:	670
Weighted Avg Spread ¹ :	182 basis points
Modified Duration:	2.96 years
Yield-to-Maturity:	2.94%
Weighted Amortization:	21.31 years*
Coverage Ratios:	Cash Flow Coverage = 1.7x Loan/Value = 57%

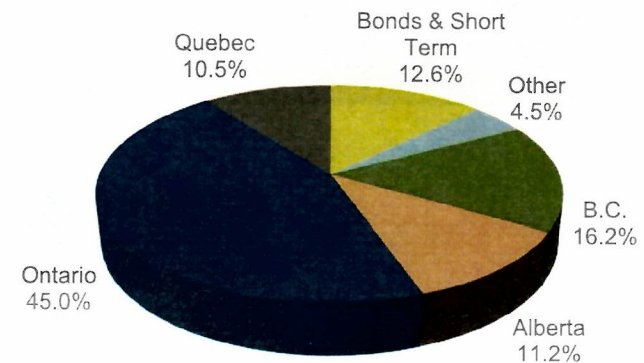
Portfolio Constraints of PH&N MPT

- First mortgages only on income producing properties in Canada
- Minimum cash flow coverage of 1.25x
- Maximum loan-to-value of 75%
- Maximum term to maturity of 11 years
- No mortgage >2.5% of the market value of the portfolio unless government guaranteed; then not >3.5%

Property Type



Geographic Distribution



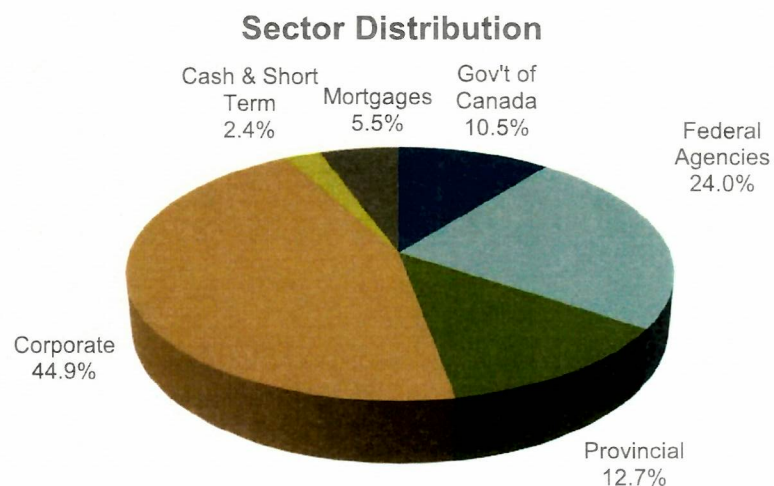
¹ Over equivalent term Canada issues

Yield is reported on a gross-of-fee basis, Series O, standard performance available in the appendix

* Excludes interest only mortgages which represent 11.5% of the total mortgages

PH&N Short Term Bond & Mortgage Fund

Portfolio Structure – August 31, 2019



Portfolio Modified Duration:	2.57 yrs
Benchmark* Modified Duration:	<u>2.72 yrs</u>
Difference	-0.15 yrs
Portfolio Yield to Maturity**:	1.81%
Benchmark* Yield to Maturity:	<u>1.71%</u>
Incremental	+0.10%

* Benchmark represents FTSE Canada Short Term Overall Bond Index

** Yield is reported on a gross-of-fee basis; Series O

Source: FTSE Global Debt Capital Markets Inc., BondLab

- Moderate short duration profile
 - Tactical adjustments as interest rates fluctuate
- Underweight provincials; overweight government agency bonds
- Slight overweight exposure to corporate bonds
 - Cautious due to fundamental concerns
 - Bias towards high quality and less cyclical issuers
- Mortgage exposure only on income-producing, multi-residential properties in Canada
 - Mixture of conventional and CMHC-guaranteed
 - Average cash flow coverage of 1.6x
 - Average loan-to-value of 58%

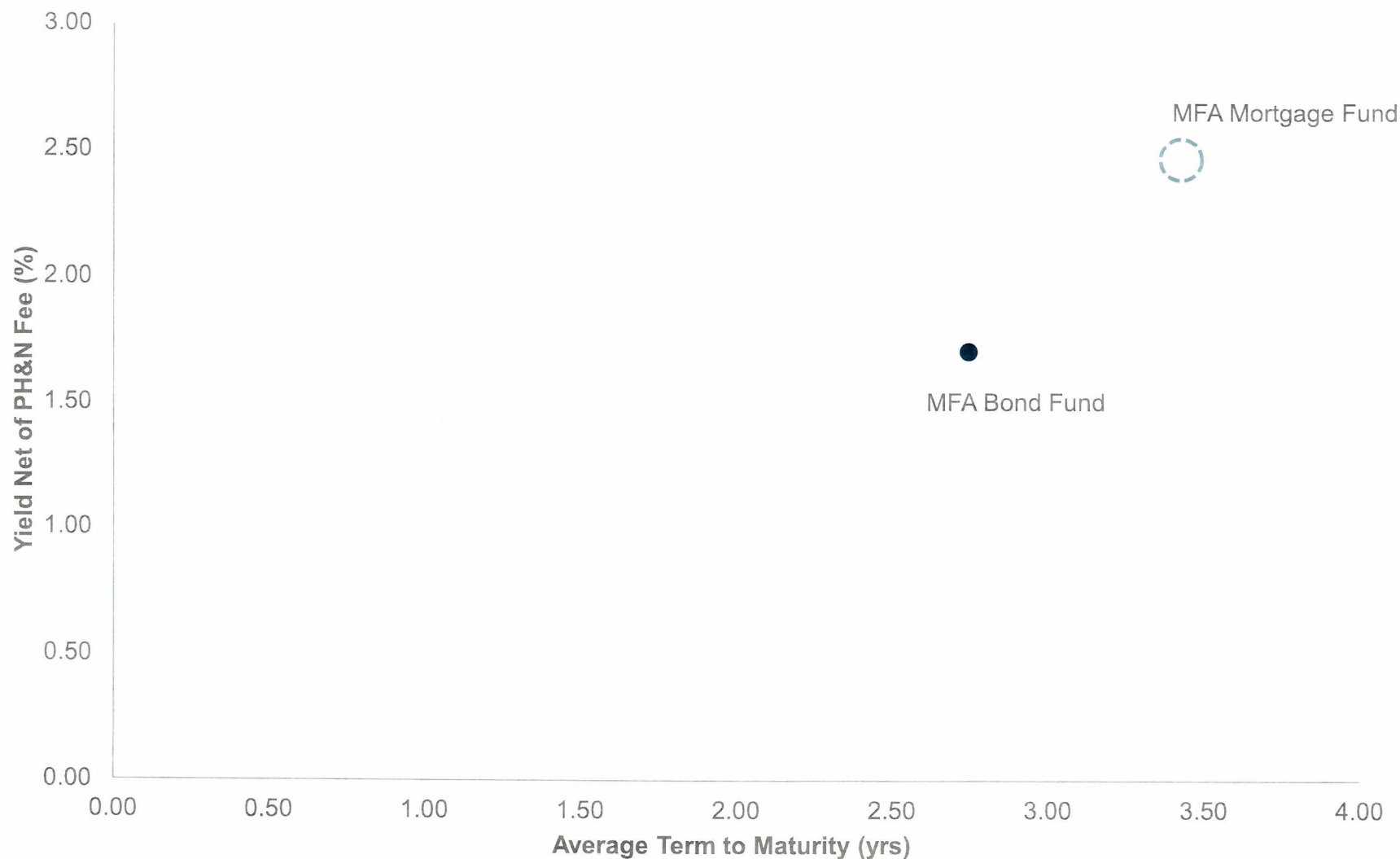
High Quality Portfolio

Cash & Short Term	2.4%
AAA	37.0%
AA	22.6%
A	15.3%
BBB	16.8%
BB & below	0.4%
Mortgages	5.5%

MFA Mortgage Fund

Lower Liquidity Provides Yield Enhancement Opportunity

As of August 31, 2019



MFA Pooled Mortgage Fund – Initial Intake and Documentation

PHASE 1

Queue Process

1. MFA to contact the small group of “test” clients who have already participated in an educational seminar
2. Client to give a soft indication of amount of contribution
3. MFA to advise PH&N of potential commitment
4. PH&N to put into the initial pre-launch queue

Mid October

1. Send new Enrollment documentation to be completed
2. 1st call for funds within 2 to 3 months (Subscription form to be used or can transfer from another fund)
3. Client may only be called for a portion of initial commitment prorated
4. 6-8 months client can expect to be fully invested

* initial subscriptions to go directly into purchasing units of the PH&N MPT

Appendix

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Long Term Investment Performance

as at August 31, 2019

	Three Months (%)	One Year (%)	Three Years (%)	Four Years (%)	Five Years (%)	Ten Years (%)
PH&N Mortgage Pension Trust*	1.62	5.93	3.27	3.26	3.52	4.52
PH&N Short Term Bond & Mortgage Fund*	0.90	4.58	1.95	2.05	2.30	2.84
<i>FTSE Canada Short Term Overall Bond Index</i>	<i>0.80</i>	<i>4.54</i>	<i>1.69</i>	<i>1.65</i>	<i>1.97</i>	<i>2.48</i>

* Series O returns. Total returns are gross-of-fee and reported in Canadian dollars. Periods less than one year are not annualized

RBC GAM Canadian Fixed Income - Mortgages

June 30, 2019

Inception Date: January 1, 2002

Benchmark: FTSE Canada Short Term Overall Bond Index

Currency: CAD

Annual Returns

Year End	Composite Gross Return (%)	Benchmark Return (%)	Composite 3-Yr St Dev (%)	Benchmark 3-Yr St Dev (%)	Number of Portfolios	Internal Dispersion (%)	Composite Assets (millions)	Firm Assets (millions)
2009	5.59	4.54	2.57	2.12	2	5.20	1,081.2	239,783.0
2010	8.24	3.56	2.84	2.34	3	0.19	1,282.0	251,728.7
2011	6.82	4.65	2.67	1.84	2	0.19	1,431.0	249,436.3
2012	3.21	2.01	2.24	1.60	1	-	1,621.9	277,516.2
2013	2.60	1.74	1.83	1.18	1	-	1,843.6	314,414.4
2014	6.27	3.06	1.65	1.05	1	-	2,570.4	350,938.5
2015	3.95	2.61	2.06	1.47	1	-	3,246.2	383,256.3
2016	2.19	1.01	1.96	1.39	1	-	3,627.7	386,749.0
2017	2.53	0.08	2.09	1.59	1	-	4,036.5	417,179.7
2018	4.35	1.91	1.75	1.23	1	-	4,467.4	417,728.2
YTD 2019	2.44	2.67	1.73	1.33	1	-	4,510.8	452,988.9

Annualized Returns (%)

Composite and/or Benchmark	QTD	YTD	1 Year	3 Year	5 Year	7 Year	10 Year
Composite - Gross of Fees	1.50	2.44	5.20	3.15	3.63	3.63	4.66
Benchmark	0.92	2.67	4.08	1.53	1.91	2.02	2.54

The GIPS® Compliant Presentation is incomplete without the full disclosures, continued on the next page

n/a = not applicable

St Dev = Standard Deviation

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June 30, 2019

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Currency: CAD

Description of the Firm: For the purposes of Global Investment Performance Standards (GIPS®), RBC Global Asset Management is the asset management division of Royal Bank of Canada (RBC), operating under the following brands: RBC Global Asset Management (RBC GAM) in Canada, the U.S. (institutional), the U.K. and Hong Kong; Phillips, Hager & North Investment Management (institutional); and BlueBay Asset Management (institutional). With offices around the world, RBC GAM offers a full range of global investment solutions in cash management and fixed income, equity, balanced, alternative and specialty investment strategies through mutual funds, hedge funds, pooled funds and separately managed accounts. The RBC GAM group of companies has more than C\$417 billion (US\$305 billion) in assets under management as at December 31, 2018. RBC purchased Phillips, Hager & North Investment Management, including the assets of BonaVista Asset Management, on May 1, 2008, and BlueBay Asset Management on December 17, 2010. A complete list and description of the firm's composites and performance results is available upon request.

Compliance Statement: RBC GAM claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS® standards. RBC GAM has been independently verified for the periods January 1, 2002 through December 31, 2018. The verification report(s) is/are available upon request. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS® standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS® standards. Verification does not ensure the accuracy of any specific composite presentation.

Composite Description: This composite includes taxable or non-taxable, and segregated (or pooled fund) portfolios which invests in mortgages and cash. Asset mix range guidelines are as follows: First mortgages 75-90%, and fixed income investments including cash and equivalents 10-25%.

Benchmark: FTSE Canada Short-Term Bond Index

Gross of Fees: Gross-of-fee returns are presented prior to the deduction of management fees, but after the deduction of brokerage commissions and applicable non-resident withholding taxes paid.

Performance Calculations: Results are based on all fully discretionary accounts meeting the composite definition, including those accounts no longer with the firm. Returns are shown in Canadian Dollars, and include the reinvestment of all income. Additional information regarding policies for valuing portfolios, calculating performance, and preparing presentations is available upon request. Past performance is not indicative of future results.

Composite Dispersion: The composite dispersion of annual returns is indicated by the performance of individual accounts representing the equal weighted standard deviation of returns. Dispersion of returns is calculated for portfolios included in the composite for the full year.

3-Year Standard Deviation: Periods with less than 3 years of data will show "n/a".

Derivatives, Leverage and Short Positions: None of these strategies is currently employed by any accounts in this composite.

Fee Schedule: The standard management fee for portfolios in the mandate is 0.54% per annum on the first \$10 million, 0.41% per annum on the next \$10 million, 0.27% per annum on the next \$100 million, 0.20% per annum on the next \$380 million and 0.14% on amounts over \$500 million. This may not necessarily represent the actual fee charged.

Minimum Account Size: This Composite includes all fee-paying, discretionary portfolios. Prior to January 2012, portfolios must have a minimum market value of \$2,000,000.

Creation Date: January 1, 2002.

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RBC GAM Canadian Fixed Income - Short Term (PH&N IM)

June 30, 2019

Inception Date: January 1, 1993

Benchmark: FTSE Canada Short Term Overall Bond Index

Currency: CAD

Annual Returns

Year End	Composite Gross Return (%)	Benchmark Return (%)	Composite 3-Yr St Dev (%)	Benchmark 3-Yr St Dev (%)	Number of Portfolios	Internal Dispersion (%)	Composite Assets (millions)	Firm Assets (millions)
2009	7.40	4.54	2.14	2.12	8	1.30	2,487.4	239,783.0
2010	4.12	3.56	2.32	2.34	11	0.79	4,026.0	251,728.7
2011	4.28	4.65	1.74	1.84	12	0.46	5,286.8	249,436.3
2012	2.71	2.01	1.42	1.60	9	0.24	5,945.8	277,516.2
2013	2.06	1.74	0.99	1.18	9	0.21	5,855.6	314,414.4
2014	3.64	3.06	0.97	1.05	8	0.23	6,731.9	350,938.5
2015	2.81	2.61	1.41	1.47	8	0.11	7,346.4	383,256.3
2016	1.77	1.01	1.33	1.39	7	0.08	8,004.1	388,749.0
2017	0.62	0.08	1.51	1.59	8	0.16	9,057.7	417,179.7
2018	2.10	1.91	1.22	1.23	6	0.21	9,120.2	417,728.2
YTD 2019	2.72	2.67	1.26	1.33	6	0.06	10,329.0	452,988.9

Annualized Returns (%)

Composite and/or Benchmark	QTD	YTD	1 Year	3 Year	5 Year	7 Year	10 Year
Composite - Gross of Fees	1.06	2.72	4.16	1.87	2.30	2.44	2.98
Benchmark	0.92	2.67	4.08	1.53	1.91	2.02	2.54

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Composite Description: This composite includes taxable or non-taxable, and segregated (or pooled fund) portfolios which invests in bonds and/or - mortgages and cash. Asset mix range guidelines are as follows: Bonds and mortgages 70-100%, and cash and equivalents 0-30%. The average term to maturity of the portfolios will range between 2 and 4 years.

Benchmark: The benchmark returns are based on the following indices for the periods noted: - FTSE Canada Short-Term (effective October 2007) - SC Short-Term (previous to October 2007).

Gross of Fees: Gross-of-fee returns are presented prior to the deduction of management fees, but after the deduction of brokerage commissions and applicable non-resident withholding taxes paid.

Performance Calculations: Results are based on all fully discretionary accounts meeting the composite definition, including those accounts no longer with the firm. Returns are shown in Canadian Dollars, and include the reinvestment of all income. Additional information regarding policies for valuing portfolios, calculating performance, and preparing presentations is available upon request. Past performance is not indicative of future results.

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3-Year Standard Deviation: Periods with less than 3 years of data will show "n/a".

Derivatives, Leverage and Short Positions: As part of its investment strategy, a portfolio included in this composite uses derivatives, such as futures, currency forwards, and options, for hedging purposes to protect against losses from changes in interest rates and market indices. All futures positions are backed by assets, so that there is no leverage from using these strategies. Currency forwards are used to remove the risk of currency exposure when taking a position in a foreign bond market. Options are used to improve the yield of the portfolio or to implement a view on interest rate moves.

Fee Schedule: The standard management fee for portfolios in the mandate is 0.26% per annum on the first \$10 million, 0.20% per annum on the next \$10 million, 0.13% per annum on the next \$100 million, 0.10% per annum on the next \$360 million and 0.07% on amounts over \$500 million. This may not necessarily represent the actual fee charged.

Minimum Account Size: This Composite includes all fee-paying, discretionary portfolios. Prior to January 2012, portfolios must have a minimum market value of \$2,000,000.

Creation Date: January 1, 1994.

Composite History: In Q4 2015 several portfolios were discovered to have been in this composite erroneously since 2010 or later. They were retroactively removed and an error correction issued.

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