



New Brunswick Public Service Pension Plan Composite

Ten years ended December 31, 2017

Year Ended December 31	Full Gross Return ¹ %	Net Return %	Benchmark Return %	Composite 3-Yr SD ² %	Benchmark 3-Yr SD ² %	Composite AUM ³ (in millions of \$CAD)	Firm AUM ³ (in millions of \$CAD)
2017	7.81	7.67	6.72	4.79	5.02	7,638.1	16,645.4
2016	6.58	6.43	5.39	4.57	4.85	7,215.1	15,706.5
2015	7.37	7.21	6.45	4.79	5.14	6,910.9	13,164.0
2014	12.15	11.98	11.13	3.74	3.95	6,555.4	12,219.7
2013	13.06	12.90	12.55	4.21	4.45	5,962.2	10,652.2
2012	8.58	8.44	7.84	4.47	4.68	5,390.3	9,707.6
2011	3.24	3.09	2.49	6.74	7.14	5,028.6	9,081.3
2010	9.23	9.08	9.05	10.35	10.61	4,920.4	8,900.9
2009	14.04	13.89	13.98			4,535.6	8,248.8
2008	(17.18)	(17.35)	(17.13)			3,989.3	7,315.2

¹ Supplemental information

² SD means standard deviation

³ AUM means assets under management

Composite Description

The New Brunswick Public Service Pension Plan (NBPSPP) includes all portfolios managed by Vestcor Inc. (Vestcor) on behalf of the NBPSPP, based on that pension plan's objectives and risk management goals. The NBPSPP composite includes public equity, fixed income, inflation linked, absolute return, real estate, infrastructure and private equity asset classes.

Composite Creation Date

The NBPSPP composite was created January 1, 2014, following the conversion of the Public Service Superannuation Act to the NBPSPP. Prior to the conversion, the pension funds for the NBPSPP were included in the Pension Funds composite.

The NBPSPP composite was created for reporting to the NBPSPP Board of Trustees.

Vestcor has been the investment manager for this pension plan since March 31, 1996. The historical results for the NBPSPP composite are presented on a calendar basis.



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Firm Description

Vestcor was established pursuant to the *New Brunswick Investment Management Corporation Act* proclaimed on March 11, 1996 and was continued on October 1, 2016 pursuant to the *Vestcor Act*. Vestcor provides investment management and advisory services as well as pension and benefits plan administration services for public sector pension, trust, and endowment entities and funds.

The composite funds are invested in unit trust funds, separate accounts, and limited partnerships, established by Vestcor to facilitate the collective investment management and administration of these assets. The funds managed by Vestcor are held in accordance with each composite's investment policy.

A complete list and description of firm composites are available upon request.

Compliance Statement

Vestcor claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS® standards. Vestcor has been independently verified for the periods December 1, 1996 through December 31, 2017. The verification reports are available upon request.

Verification assesses whether the firm has complied with all the composite construction requirements of the GIPS® standards on a firm-wide basis and 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.

Calculation Methodology

Composite returns were calculated in Canadian dollars using the aggregate return method on a daily basis. Daily returns were linked geometrically to calculate periodic returns. Returns include dividends net of withholding taxes, interest, as well as realized and unrealized gains and losses as of the last business day of the reporting period. Performance returns expressed on a full gross basis are after the deduction of all trading expenses, but before the deduction of investment management costs and custodial fees.

Under the terms of its investment management agreements, Vestcor charges for its investment management services on a cost recovery basis, allocated *pro rata* to its clients according to their share of Vestcor's total assets under management. Performance returns expressed on a net basis are after the deduction of all expenses charged for the composite assets under management, including trading expenses, custodial fees, and investment management costs.



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The composite performance presented in this schedule may not be indicative of future performance. Readers should also be aware that other performance calculation methods may produce different results, and that the results for specific accounts and for different periods may vary from composite returns presented. Comparisons of investment results should consider qualitative circumstances and should be made only to portfolios with generally similar objectives.

In the calculation and presentation of performance returns, Vestcor is not aware of any instances in which this presentation does not conform with the laws and regulations of any province or territory of Canada in which Vestcor operates. Additional information regarding Vestcor's policies and procedures for valuing portfolios, calculating and reporting composite results, and preparing compliant presentations, is available upon request.

Number of Portfolios and Internal Dispersion

The internal dispersion measure and number of portfolios are not presented because the NBPSPP is the only portfolio in the composite.

Three Year Annualized Ex-Post Standard Deviation

The 3 year annualized ex-post standard deviation measures the variability of the composite and the benchmark daily returns, aggregated to a monthly basis, over the preceding 36 month period.

Sub-advisors

Vestcor enters into sub-advisory agreements whereby certain assets are managed by sub-advisors. Rates of return earned on assets managed by the sub-advisors are included in Vestcor's composite presentations because Vestcor maintains full discretion over the use and choice of sub-advisors.

Derivative Instruments and Short Positions

Futures contracts, forward foreign exchange contracts, exchange traded and over-the-counter options and swaps, and short positions are used in Vestcor's investment management activities.

These derivative instruments are used for various purposes, including:

- to simulate exposure to a particular market index, but with lower transaction costs;
- to enhance performance returns;
- to modify the cash flow characteristics of an investment; or
- to hedge against potential losses due to changes in foreign exchange rates or stock prices.



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In using derivative instruments, as described above, Vestcor has established investment criteria, policies and procedures over the extent and use of derivative instruments to manage performance returns and mitigate market risks such as foreign currency, interest rate and pricing risk.

Benchmark Description

The NBPSPP's composite blended benchmark is calculated daily using a blend of the asset class benchmarks, based on the beginning daily weights for the respective asset classes. Benchmark returns were calculated using the following indices and weights on December 31, 2017:

Index	Weight (%)
S&P/TSX Total Return Composite Index	11.20
MSCI Canada Minimum Volatility Total Return Index, Gross	5.02
S&P 500 Total Return Index in \$C	6.23
MSCI USA Minimum Volatility (USD) Total Return Index in \$C, Net	4.90
MSCI EAFE Total Return Index in \$C, Net	6.76
MSCI EAFE Minimum Volatility (USD) Total Return Index in \$C, Net	4.95
MSCI Emerging Markets Minimum Volatility (USD) Total Return Index in \$C, Net	2.99
FTSE NAREIT All Equity REITS Total Return Index in \$C	0.56
S&P/TSX Capped REIT Total Return Index	0.42
4% Real Return*	7.21
FTSE TMX Canada All Government Bond Index	17.71
FTSE TMX Canada All Corporate Bond Index	17.63
FTSE TMX Canada Real Return Bond Index	4.97
FTSE TMX Canada 91-Day T-Bill Index	8.76
One-day Canadian Call Loan Rate	0.66
Not applicable	0.03

**Inflation is defined as the percentage change in the twelve-month average CPI-Canada All Items Index*

Effective April 2008, Canadian dollar benchmarks were implemented for international exposure, in conjunction with a foreign exposure hedging overlay strategy. The benchmark for the passive foreign currency exposure hedging overlay is equal to actual returns because the strategy does not attempt to profit from tactical foreign exchange decisions. The MSCI EAFE index replaced MSCI Europe and the NIKKEI 225; and the S&P500 replaced the Russell 2000.

Effective October 1, 2014, minimum volatility benchmarks replaced the market cap indices for Canadian, US, and EAFE Low Volatility public equity funds.