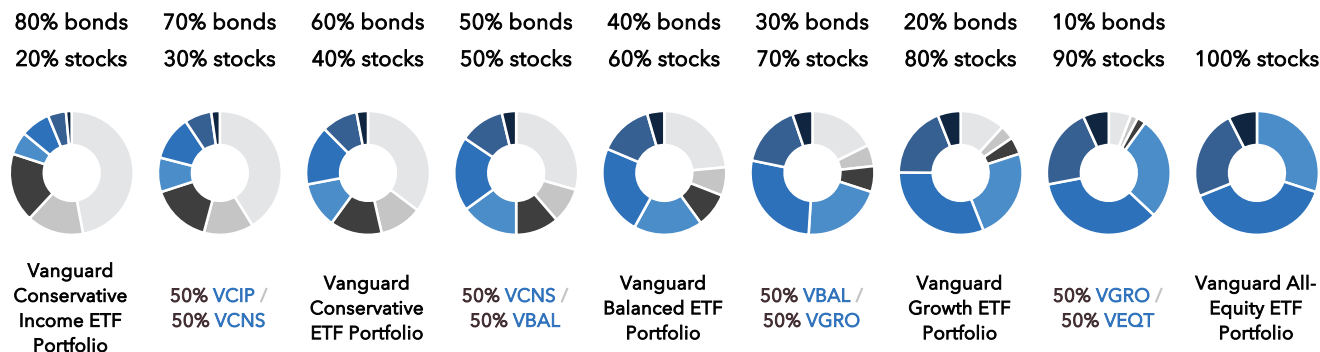


Model ETF Portfolios as of January 31, 2019

Vanguard Asset Allocation ETFs



Underlying ETFs	Symbol	VCIP	VCNS	VCIP / VCNS	VBAL	VBAL / VGRO	VGRO	VGRO / VEQT	VEQT	
Vanguard Canadian Aggregate Bond Index ETF	VAB	47.0%	41.2%	35.3%	29.4%	23.5%	17.6%	11.8%	5.9%	0.0%
Vanguard U.S. Aggregate Bond Index ETF (CAD-hedged)	VBU	14.9%	13.0%	11.1%	9.3%	7.4%	5.6%	3.7%	1.9%	0.0%
Vanguard Global ex-U.S. Aggregate Bond Index ETF (CAD-hedged)	VBG	18.1%	15.8%	13.6%	11.3%	9.0%	6.8%	4.5%	2.3%	0.0%
Vanguard FTSE Canada All Cap Index ETF	VCN	6.0%	9.0%	12.0%	15.0%	18.0%	21.0%	24.0%	27.0%	30.0%
Vanguard U.S. Total Market Index ETF	VUN	7.8%	11.7%	15.6%	19.5%	23.3%	27.2%	31.1%	35.0%	38.9%
Vanguard FTSE Developed All Cap ex North America Index ETF	VIU	4.7%	7.1%	9.4%	11.8%	14.2%	16.5%	18.9%	21.2%	23.6%
Vanguard FTSE Emerging Markets All Cap Index ETF	VEE	1.5%	2.2%	3.0%	3.7%	4.5%	5.2%	6.0%	6.7%	7.5%
<i>Target asset allocations as of December 31, 2018</i>		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Management Expense Ratio (MER)		0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%

Model ETF Portfolio Performance as of January 31, 2019

YTD Return	1.97%	2.38%	2.79%	3.24%	3.69%	4.13%	4.58%	4.94%	5.29%
1-Year Return	2.22%	1.83%	1.43%	1.06%	0.68%	0.29%	-0.10%	-0.63%	-1.17%
3-Year Annualized Return	3.42%	4.14%	4.87%	5.61%	6.34%	7.08%	7.81%	8.49%	9.17%
5-Year Annualized Return	4.21%	4.78%	5.35%	5.92%	6.48%	7.05%	7.61%	8.13%	8.65%
10-Year Annualized Return	5.57%	6.29%	7.00%	7.71%	8.41%	9.11%	9.80%	10.47%	11.14%
20-Year Annualized Return	4.95%	5.04%	5.11%	5.17%	5.22%	5.25%	5.26%	5.26%	5.23%
Lowest 1-Year Return	-5.45%	-9.53%	-13.48%	-17.29%	-20.98%	-24.53%	-27.97%	-31.28%	-34.48%
20-Year Annualized Standard Deviation	3.41%	4.12%	5.02%	6.04%	7.12%	8.23%	9.37%	10.53%	11.70%

Sources: Morningstar Direct, MSCI. S&P Dow Jones and FTSE Russell Indices courtesy of Dimensional Returns 2.0

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Canadian Stocks

01/1998-01/2019: Monthly returns of the MSCI Canada IMI Index, minus 0.020833% per month

Global Stocks (ex Canada)

01/1998-01/2019: Monthly returns of the MSCI ACWI ex Canada IMI Index (net div.) (in CAD), minus 0.020833% per month

Canadian Bonds

01/1998-01/2019: Monthly returns of the FTSE Canada Universe Bond Index, minus 0.020833% per month

Global Bonds

01/1998-01/2019: Monthly returns of the ICE BofA Merrill Lynch Global Broad Market Index (CAD Hedged), minus 0.020833% per month

Vanguard Conservative Income ETF Portfolio (VCIP)

01/1998-01/2019: 47% Canadian Bonds + 33% Global Bonds + 6% Canadian Stocks + 14% Global Stocks (ex Canada), rebalanced monthly

50% VCIP / 50% VCNS

01/1998-01/2019: 50% Vanguard Conservative Income ETF Portfolio (VCIP) + 50% Vanguard Conservative ETF Portfolio (VCNS), rebalanced monthly

Vanguard Conservative ETF Portfolio (VCNS)

01/1998-01/2018: 35.3% Canadian Bonds + 24.7% Global Bonds + 12% Canadian Stocks + 28% Global Stocks (ex Canada), rebalanced monthly

02/2018-01/2019: Actual monthly returns of the Vanguard Conservative ETF Portfolio (VCNS)

50% VCNS / 50% VBAL

01/1998-01/2019: 50% Vanguard Conservative ETF Portfolio (VCNS) + 50% Vanguard Balanced ETF Portfolio (VBAL), rebalanced monthly

Vanguard Balanced ETF Portfolio (VBAL)

01/1998-01/2018: 23.5% Canadian Bonds + 16.5% Global Bonds + 18% Canadian Stocks + 42% Global Stocks (ex Canada), rebalanced monthly

02/2018-01/2019: Actual monthly returns of the Vanguard Balanced ETF Portfolio (VBAL)

50% VBAL / 50% VGRO

01/1998-01/2019: 50% Vanguard Balanced ETF Portfolio (VBAL) + 50% Vanguard Growth ETF Portfolio (VGRO), rebalanced monthly

Vanguard Growth ETF Portfolio (VGRO)

01/1998-01/2018: 11.8% Canadian Bonds + 8.2% Global Bonds + 24% Canadian Stocks + 56% Global Stocks (ex Canada), rebalanced monthly

02/2018-01/2019: Actual monthly returns of the Vanguard Growth ETF Portfolio (VGRO)

50% VGRO / 50% VEQT

01/1998-01/2019: 50% Vanguard Growth ETF Portfolio (VGRO) + 50% Vanguard All-Equity ETF Portfolio (VEQT), rebalanced monthly

Vanguard All-Equity ETF Portfolio (VEQT)

01/1998-01/2019: 30% Canadian Stocks + 70% Global Stocks (ex Canada), rebalanced monthly

Sources: Morningstar Direct, MSCI. S&P Dow Jones and FTSE Russell Indices courtesy of Dimensional Returns 2.0

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