

Model ETF Portfolios as of November 30, 2018

60% bonds 40% stocks 40% bonds 60% stocks 20% bonds 80% stocks

Lowest 1-Year Return (3/08-2/09)

20-Year Annualized Standard Deviation

iShares Canada

-19.73%

7.11%

-26.57%

9.34%

40% bonds

60% stocks



20% bonds

80% stocks

Vanquard Canada Asset Allocation FTFs

Lowest 1-Year Return (3/08-2/09)

20-Year Annualized Standard Deviation









		Vanguard Conservative ETF Portfolio	Vanguard Balanced ETF Portfolio	Vanguard Growth ETF Portfolio			iShares Core Balanced ETF Portfolio	iShares Core Growth ETF Portfolio
Underlying ETFs	Symbol	VCNS	VBAL	VGRO	Underlying ETFs	Symbol	XBAL	XGRO
					iShares Core Canadian ST Corp + Maple Bond Index ETF	XSH	6.0%	3.0%
Vanguard Canadian Aggregate Bond Index ETF	VAB	35.2%	23.5%	11.7%	iShares Core Canadian Universe Bond Index ETF	XBB	26.0%	13.0%
Vanguard U.S. Aggregate Bond Index ETF (CAD-hedged)	VBU	11.0%	7.3%	3.7%	iShares U.S. Treasury Bond ETF (CAD-hedged)	GOVT	4.0%	2.0%
Vanguard Global ex-U.S. Aggregate Bond Index ETF (CAD-hedged)	VBG	13.8%	9.2%	4.6%	iShares Broad USD IG Corporate Bond ETF (CAD-hedged)	USIG	4.0%	2.0%
Vanguard FTSE Canada All Cap Index ETF	VCN	12.0%	18.0%	24.0%	iShares Core S&P/TSX Capped Composite Index ETF	XIC	15.0%	20.0%
Vanguard U.S. Total Market Index ETF	VUN	15.8%	23.7%	31.7%	iShares Core S&P Total U.S. Stock Market ETF	ITOT	27.0%	36.0%
Vanguard FTSE Developed All Cap ex North America Index ETF	VIU	9.4%	14.2%	18.9%	iShares Core MSCI EAFE IMI Index ETF	XEF	15.0%	20.0%
Vanguard FTSE Emerging Markets All Cap Index ETF	VEE	2.7%	4.1%	5.5%	iShares Core MSCI Emerging Markets ETF	IEMG	3.0%	4.0%
Target asset allocations as of September 30, 2018		100.0%	100.0%	100.0%			100.0%	100.0%
Management Expense Ratio (MER)		0.25%	0.25%	0.25%	Management Expense Ratio (MER)		0.21%	0.21%
Model ETF Portfolio Performance as of November 30,	2018				Model ETF Portfolio Performance as of Novemb	er 30, 20	18	
YTD Return		0.19%	0.41%	0.67%	YTD Return		0.85%	1.26%
1-Year Return		-0.09%	0.10%	0.31%	1-Year Return		0.35%	0.68%
3-Year Annualized Return		4.18%	5.47%	6.76%	3-Year Annualized Return		5.41%	6.78%
5-Year Annualized Return		5.51%	6.80%	8.08%	5-Year Annualized Return		7.07%	8.59%
10-Year Annualized Return		6.76%	8.09%	9.39%	10-Year Annualized Return		8.36%	9.85%
20-Year Annualized Return		5.20%	5.38%	5.51%	20-Year Annualized Return		5.35%	5.48%

7.12% Sources: BlackRock Asset Management Canada Limited, Vanguard Investments Canada Inc., Morningstar Direct, MSCI. S&P Dow Jones Indices and FTSE Russell Indices courtesy of Dimensional Returns 2.0

-21.08%

-13.56%

5.03%

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-28.10%

9.36%



Performance Methodology as of November 30, 2018

Canadian Stocks

01/1998-01/2018: Monthly returns of the MSCI Canada IMI Index, minus 0.020833% per month

Global Stocks (ex Canada)

01/1998-01/2018: Monthly returns of the MSCI ACWI ex Canada IMI Index (net div.) (in CAD), minus 0.020833% per month

Canadian Bonds

01/1998-01/2018: Monthly returns of the FTSE Canada Universe Bond Index, minus 0.020833% per month

Global Bonds

01/1998-01/2018: Monthly returns of the ICE BofA Merrill Lynch Global Broad Market Index (CAD Hedged), minus 0.020833% per month

Vanguard Conservative ETF Portfolio (VCNS)

01/1998-01/2018: 35.2% Canadian Bonds + 24.8% Global Bonds + 12% Canadian Stocks + 28% Global Stocks (ex Canada), rebalanced monthly

02/2018-11/2018: Monthly returns of the Vanguard Conservative ETF Portfolio (VCNS)

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

02/2018-11/2018: Monthly returns of the Vanguard Balanced ETF Portfolio (VBAL)

Vanguard Growth ETF Portfolio (VGRO)

01/1998-01/2018: 11.7% Canadian Bonds + 8.3% Global Bonds + 24% Canadian Stocks + 56% Global Stocks (ex Canada), rebalanced monthly

02/2018-11/2018: Monthly returns of the Vanguard Growth ETF Portfolio (VGRO)

iShares Core Canadian Universe Bond Index ETF (XBB)

01/1998-11/2018: Monthly returns of the FTSE Canada Universe Bond Index, minus 0.0175% per month

iShares Core Canadian Short Term Corporate + Maple Bond Index ETF (XSH)

01/1998-11/2018: Monthly returns of the FTSE Canada Short Term Bond Index, minus 0.0175% per month

iShares U.S. Treasury Bond ETF (CAD-hedged) (GOVT)

01/1998-11/2018: Monthly returns of the Bloomberg Barclays US Aggregate Bond Index (CAD Hedged), minus 0.0175% per month

iShares Broad USD Investment Grade Corporate Bond ETF (CAD-hedged) (USIG)

01/1998-11/2018: Monthly returns of the Bloomberg Barclays US Aggregate Bond Index (CAD Hedged), minus 0.0175% per month

iShares Core S&P/TSX Capped Composite Index ETF (XIC)

01/1998-11/2018: Monthly returns of the S&P/TSX Composite Index, minus 0.0175% per month

iShares Core S&P Total U.S. Stock Market ETF (ITOT)

01/1998-11/2018: Monthly returns of the MSCI USA IMI Index (net div.) (in CAD), minus 0.0175% per month

iShares Core MSCI EAFE IMI Index ETF (XEF)

01/1998-11/2018: Monthly returns of the MSCI EAFE IMI Index (net div.) (in CAD), minus 0.0175% per month

iShares Core MSCI Emerging Markets ETF (IEMG)

01/1998-11/2018: Monthly returns of the MSCI Emerging Markets IMI Index (net div.) (in CAD), minus 0.0175% per month

iShares Core Balanced ETF Portfolio (XBAL)

01/1998-11/2018: 26% XBB +6% XSH + 4% GOVT + 4% USIG + 15% XIC + 27% ITOT + 15% XEF + 3% IEMG, rebalanced monthly

iShares Core Growth ETF Portfolio (XGRO)

01/1998-11/2018: 13% XBB + 3% XSH + 2% GOVT + 2% USIG + 20% XIC + 36% ITOT + 20% XEF + 4% IEMG, rebalanced monthly

Sources: BlackRock Asset Management Canada Limited, Vanguard Investments Canada Inc., Morningstar Direct, MSCI. S&P Dow Jones Indices and FTSE Russell Indices courtesy of Dimensional Returns 2.0

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