

Quarterly Investment Update

Second Quarter 2017

DAVID R. JOHNSON, CFP, CLU, CH.FC
SENIOR FINANCIAL ADVISOR/ MANULIFE SECURITIES INCORPORATED
LIFE INSURANCE ADVISOR, CERTIFIED FINANCIAL PLANNER - D.R. JOHNSON FINANCIAL SERVICES INC.

STEVEN D. JOHNSON, CFP
FINANCIAL ADVISOR/ MANULIFE SECURITIES INCORPORATED
LIFE INSURANCE ADVISOR, CERTIFIED FINANCIAL PLANNER - D.R. JOHNSON FINANCIAL SERVICES INC.

MANULIFE SECURITIES INCORPORATED
D.R. JOHNSON FINANCIAL SERVICES
MARSLAND CENTRE, 20 ERB ST. W, SUITE 502
WATERLOO, ONTARIO N2L 1T2
PH: 519-884-4650
FAX:519-884-0150

Manulife Securities Incorporated is a Member of the Canadian Investor Protection Fund.

The Manulife Securities logo and the Block Design are trademarks of The Manufacturers Life Insurance Company and are used by it, and by its affiliates under license. This material is not to be construed as an offer or solicitation. The securities mentioned may not necessarily be considered suitable investments for all clients. Contact your Investment Advisor to discuss your individual investment needs.

This presentation is for information purposes only. It should not be considered legal, tax or accounting advice and should not replace the advice of your legal, tax or accounting professionals. Every effort has been made to ensure the information contained in this presentation is accurate.

Manulife cannot guarantee the accuracy of any information in this presentation that has been reproduced from a third party source.

Manulife, Manulife Securities, Manulife Investments, Manulife Bank and Trust, Manulife Financial, the Block Design, the Four cubes and Strong, Reliable, Trustworthy, Forward-thinking are registered trademarks of The Manufacturers Life Insurance Company and are used by it, and by its affiliates, under license.



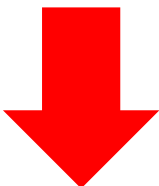
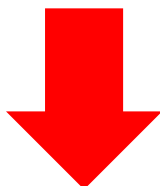
Stocks, bonds and mutual funds are offered through Manulife Securities Incorporated. Insurance products and services are offered through D.R. Johnson Financial Services Inc. Banking products and services are offered through referral.

Dimensional Fund Advisors Canada ULC ("DFA Canada") is not affiliated with David R. Johnson. DFA Canada is a separate and distinct company.






Market Update: A Quarter in Review

June 30, 2017


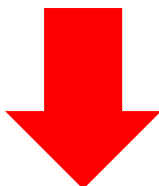

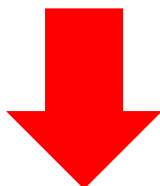
CANADIAN STOCKS

Large Cap	Small Cap	Growth	Value
-1.78%	-2.86%	-1.51%	-2.24%
			






INTERNATIONAL STOCKS

Large Cap	Small Cap	Growth	Value	Emerging
+3.48%	+5.27%	+4.84%	+2.17%	+3.48%
				

US STOCKS

Large Cap	Small Cap	Growth	Value
+0.52%	-0.09%	2.04%	-1.24%
			

REAL ESTATE AND FIXED INCOME

Global REITs	1-Month T-Bills	Short-Term Bonds	Intermediate Bonds	Global Bonds (hedged)
-0.99%	+0.13%	-0.42%	+1.11%	+0.23%
				

Data is in Canadian dollars. Market segment (index representation) as follows: Canadian stocks: Large Cap (S&P/TSX 60), Small Cap (MSCI Canadian Small), Growth (MSCI Canadian Growth), Value (MSCI Canadian Value); US stocks: Large Cap (S&P 500), Small Cap (Russell 2000), Growth (Russell 3000 Growth), Value (Russell 3000 Value); International stocks: Large Cap (MSCI EAFE [net div]), Small Cap (MSCI EAFE Small Cap [net div]), Growth (MSCI EAFE Growth [net div]), Value (MSCI EAFE Value [net div]), Emerging Markets (MSCI Emerging [net div]); Real Estate: Global REITs (S&P Global REIT [net div]); Fixed Income: Canadian (Canadian 1-month T-bills), Short Term Bonds (FTSE TMX Canada Short-Term Bond), Intermediate Bonds (FTSE TMX Canada Universe Bond), Global Bonds-Hedged (Citi World Government Bond Index 1-5 Years [hedged to CAD]). Indexes are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Past performance does not guarantee future returns.

S&P/TSX data provided by S&P/TSX. MSCI data copyright MSCI 2017, all rights reserved. The S&P data are provided by Standard & Poor's Index Services Group. Russell data copyright © Russell Investment Group 1995-2017, all rights reserved. Canadian fixed income data provided by FTSE TMX Global Debt Capital Markets Inc., all rights reserved. Citigroup bond indexes copyright 2017 by Citigroup.

Survey of Long-Term Performance

June 30, 2017

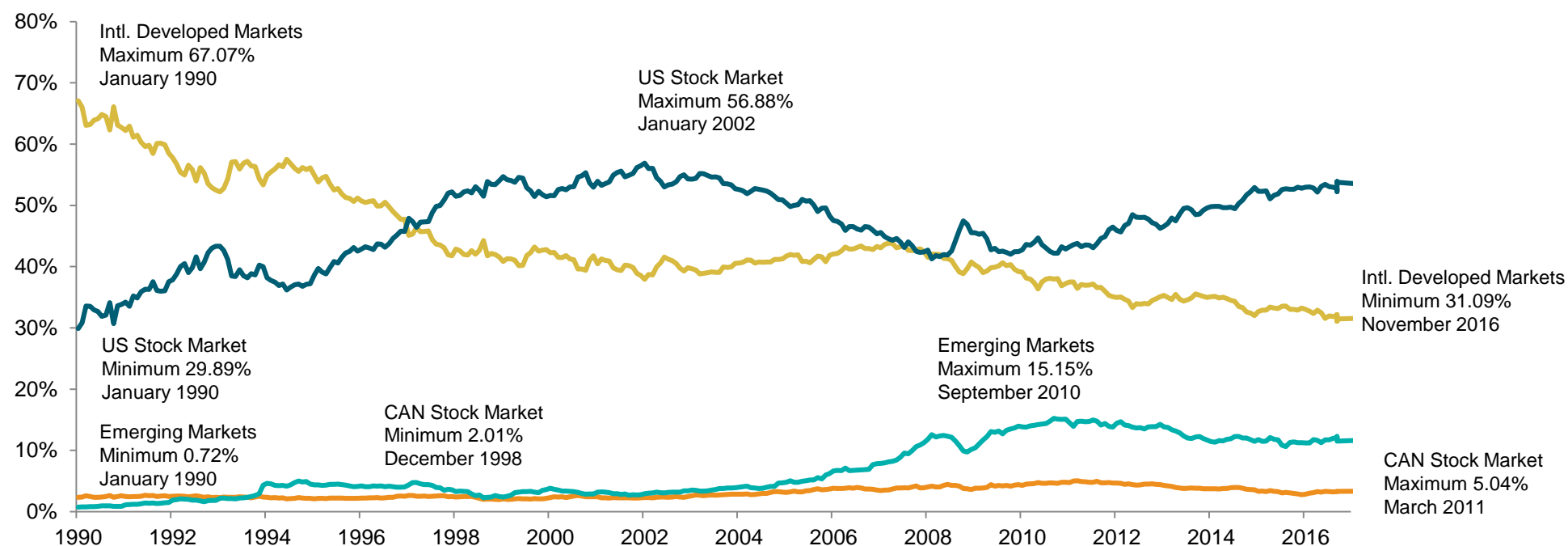
Asset Class	Index	Annualized (%)					Since Inception	Inception date
		1 Year	3 Years	5 Years	10 Years	20 Years		
CANADIAN STOCKS								
Large Cap	S&P/TSX 60	12.38	4.07	9.36	4.04	7.19	8.57	Feb-87
Small Cap	MSCI Canadian Small	5.03	-1.77	5.57	2.12	6.24	8.54	Jul-90
Growth	MSCI Canadian Growth	6.81	2.76	7.66	2.21	5.97	7.09	Jan-82
Value	MSCI Canadian Value	15.95	2.16	9.04	4.76	8.63	10.87	Jan-82
US STOCKS								
Large Cap	S&P 500	18.32	16.99	20.31	9.31	6.82	11.27	Feb-51
Small Cap	Russell 2000	25.05	14.58	19.34	9.04	7.65	11.89	Jan-79
Growth	Russell 3000 Growth	21.15	18.28	20.91	10.98	6.27	11.30	Jan-79
Value	Russell 3000 Value	16.63	14.54	19.53	7.69	7.43	12.48	Jan-79
INTERNATIONAL STOCKS								
Large Cap	MSCI EAFE (net div.)	20.70	7.95	14.08	3.03	3.97	9.26	Jan-70
Small Cap	MSCI EAFE Small Cap (net div.)	23.18	12.81	18.54	5.49	6.00	6.97	Jan-93
Growth	MSCI EAFE Growth (net div.)	16.11	9.73	14.60	4.09	3.29	9.18	Jan-75
Value	MSCI EAFE Value (net div.)	25.45	6.09	13.48	1.90	4.50	11.82	Jan-75
Emerging Markets	MSCI Emerging Markets (net div.)	23.75	7.98	9.11	3.97	5.14	10.78	Jan-88
REAL ESTATE								
Global REITs	S&P Global REIT (net div.)	-2.35	11.69	12.91	4.73	7.68	8.56	Jul-89
FIXED INCOME								
Canadian Bills	Canadian 1-Month T-Bills	0.50	0.59	0.73	1.04	2.33	6.10	Jun-73
Canadian Short-Term Bonds	FTSE TMX Canada Short-Term Bond	0.20	1.72	1.94	3.53	4.38	7.65	Jan-80
Canadian Bonds	FTSE TMX Canada Universe Bond	0.02	3.79	3.29	5.11	5.76	8.86	Jan-80
Global Bonds (hedged)	Citi World Government Bond Index 1-5 Years	-0.06	1.48	1.80	2.92	3.84	6.21	Jan-85

Data is in Canadian dollars. MSCI EAFE Small Cap Index return is price-only prior to January 1999 data inception. MSCI Emerging Markets Index return is gross dividends prior to January 1999 data inception. S&P Global REIT Index return is gross dividends prior to January 2001 data inception. S&P/TSX data provided by S&P/TSX. MSCI data copyright MSCI 2017, all rights reserved. The S&P data are provided by Standard & Poor's Index Services Group. Russell data copyright © Russell Investment Group 1995-2017, all rights reserved. Canadian fixed income data provided by FTSE TMX Global Debt Capital Markets Inc., all rights reserved. Citigroup bond indexes copyright 2017 by Citigroup. Indexes are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results.

Value of Stock Markets around the World

January 1990–June 2017

	Number of Countries	Number of Stocks	Total Value	Weights		
				June 30, 2017	Change from Previous Year	01/90-06/17 Average
Canada	1	316	1.66 Trillion	3.2%	↓ -2.3%	3.1%
United States	1	2,473	27.31 Trillion	52.2%	↓ -1.6%	46.8%
Developed Markets	21	3,192	16.99 Trillion	32.5%	↑ +1.6%	43.3%
Emerging Markets	24	2,686	6.34 Trillion	12.1%	↑ +3.3%	6.9%
Total	47	8,667	52.31 Trillion	100.0%		



Global market capitalization weights are not static; they change across time.

Data is in US dollars and values are beginning of month. The proxies for the Canadian and US equity markets are based on the respective country markets from the MSCI All Country World IMI Index. The international developed market proxy is the MSCI All Country World IMI ex USA ex Canada Index. The proxy for emerging markets is the MSCI All Country World IMI Index (Emerging Markets). MSCI data copyright MSCI 2017, all rights reserved.

The Randomness of Quarterly Returns

June 30, 2017

This table shows from top to bottom the highest returning asset classes each quarter over the last 15 quarters. Each asset class is color coded based on the legend below.

	Q2 2013	Q3 2013	Q4 2013	Q1 2014	Q2 2014	Q3 2014	Q4 2014	Q1 2015	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Q1 2017	Q1 2017	Q2 2017	Q3 2017
Highest Return	6.31	9.26	13.67	11.38	6.41	4.99	13.77	14.37	0.14	6.26	10.18	4.54	9.02	10.68	6.68	10.37	3.48	?
	2.52	6.25	9.01	6.12	4.16	1.31	9.16	13.00	0.02	0.66	8.75	1.39	6.41	8.05	4.54	6.21	3.48	?
	0.24	4.15	7.29	6.06	2.87	1.06	2.70	11.49	-0.71	0.15	8.56	1.13	5.60	5.98	1.64	4.73	1.11	?
	-0.14	3.58	5.00	4.76	1.99	0.71	0.70	11.01	-0.79	0.12	4.36	0.38	5.11	5.45	0.12	2.41	0.45	?
	-1.02	0.68	2.09	3.62	1.21	0.50	0.23	4.15	-1.26	-0.91	0.98	0.12	4.93	1.29	-0.56	1.24	0.23	?
	-2.36	0.26	0.45	2.77	0.79	0.23	0.02	2.58	-1.63	-4.10	0.11	-0.77	3.31	1.19	-1.90	0.47	0.13	?
	-4.08	0.11	0.38	0.78	0.45	-0.59	-0.94	0.82	-1.71	-7.86	-0.06	-5.23	3.11	0.12	-2.86	0.21	-0.99	?
Lowest Return	-4.84	-2.23	0.24	0.20	0.23	-1.19	-1.47	0.20	-9.19	-12.28	-1.40	-8.96	1.41	0.06	-3.44	0.13	-1.64	?

Canadian Stocks
US Stocks
International Developed Markets
Emerging Markets
Global REITs
Canadian 1-Month T-Bills
Canadian Bonds
Global Bonds

The lack of a pattern indicates that picking which asset classes will be the best or worst performers is virtually impossible.

Portfolios combining these various investments will avoid extreme returns.

Data is in Canadian dollars. Indexes represented as follows: Canadian stocks (S&P/TSX Composite Index), US stocks (Russell 3000 Index), International Developed Markets (MSCI EAFE Index), Emerging Markets (MSCI Emerging Markets Index), Global REIT (S&P Global REIT Index), Canadian 1-Month T-Bills, Canadian Bonds (FTSE TMX Canada Universe Bond Index), Global Bonds (Citi World Government Bond Index Canada 1-5 Years). Indexes are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results.





S&P/TSX data provided by S&P/TSX. MSCI data copyright MSCI 2017, all rights reserved. The S&P data are provided by Standard & Poor's Index Services Group. Russell data copyright © Russell Investment Group 1995-2017, all rights reserved. Canadian fixed income data provided by FTSE TMX Global Debt Capital Markets Inc., all rights reserved. Citigroup bond indexes copyright 2017 by Citigroup.

Currency

June 30, 2017

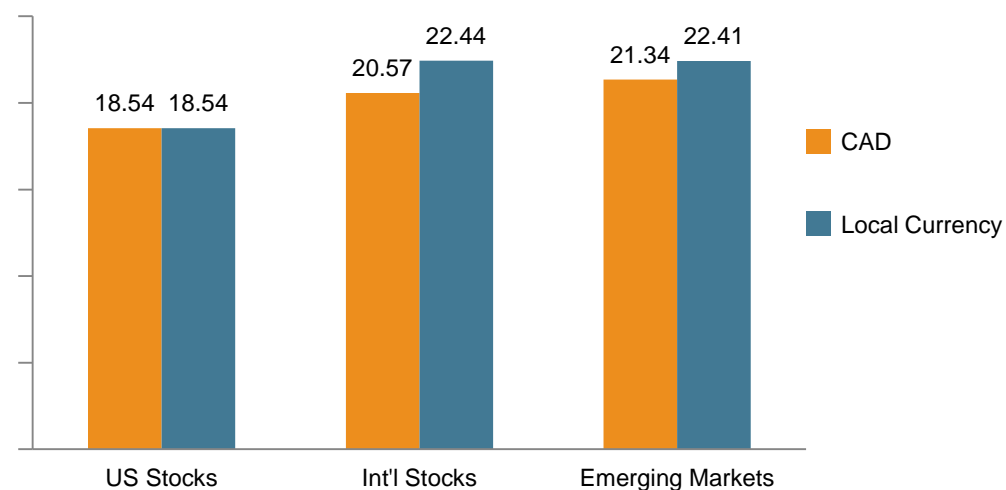
CHANGE IN FOREIGN EXCHANGE RATES (%)

\$CAD/FX

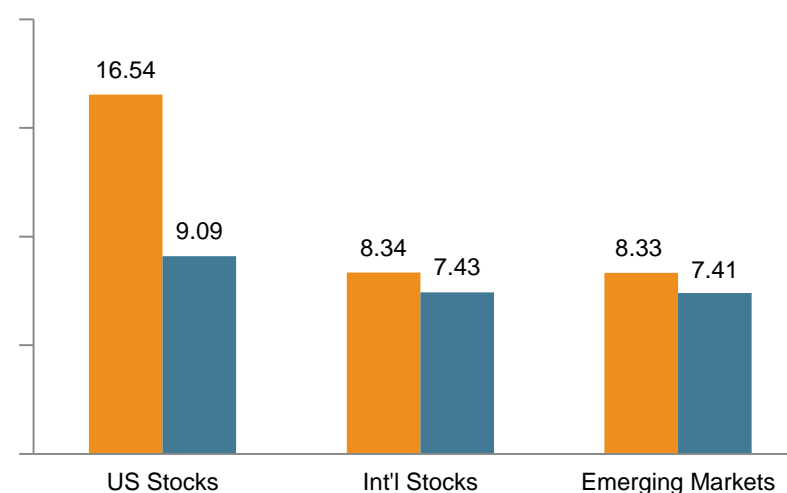
Currency	Q2 2017	One Year	Three Years
 \$ US Dollars	2.76%	0.22%	-17.67%
 € Euro	-4.17%	-2.85%	-1.37%
 £ Pounds	-1.06%	1.95%	8.07%
 ¥ Yen	3.71%	9.68%	-8.63%

IMPACT OF CURRENCY FLUCTUATIONS

Annual Returns in CAD and Local Currency



Three-Year Annualized Returns in CAD and Local Currency





Data is in Canadian dollars. The market for the United States, International Developed Markets, and Emerging Markets is defined as: Russell 3000 Index, MSCI EAFE Index, and MSCI Emerging Markets Index, respectively. The S&P data are provided by Standard & Poor's Index Services Group. Russell data copyright © Russell Investment Group 1995-2017, all rights reserved. MSCI data copyright MSCI 2017, all rights reserved. Indexes are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results. FX Rates courtesy of Federal Reserve of New York.



MSCI Country Returns in Canadian Dollars and Local Currency

June 30, 2017

Second Quarter 2017 RETURNS

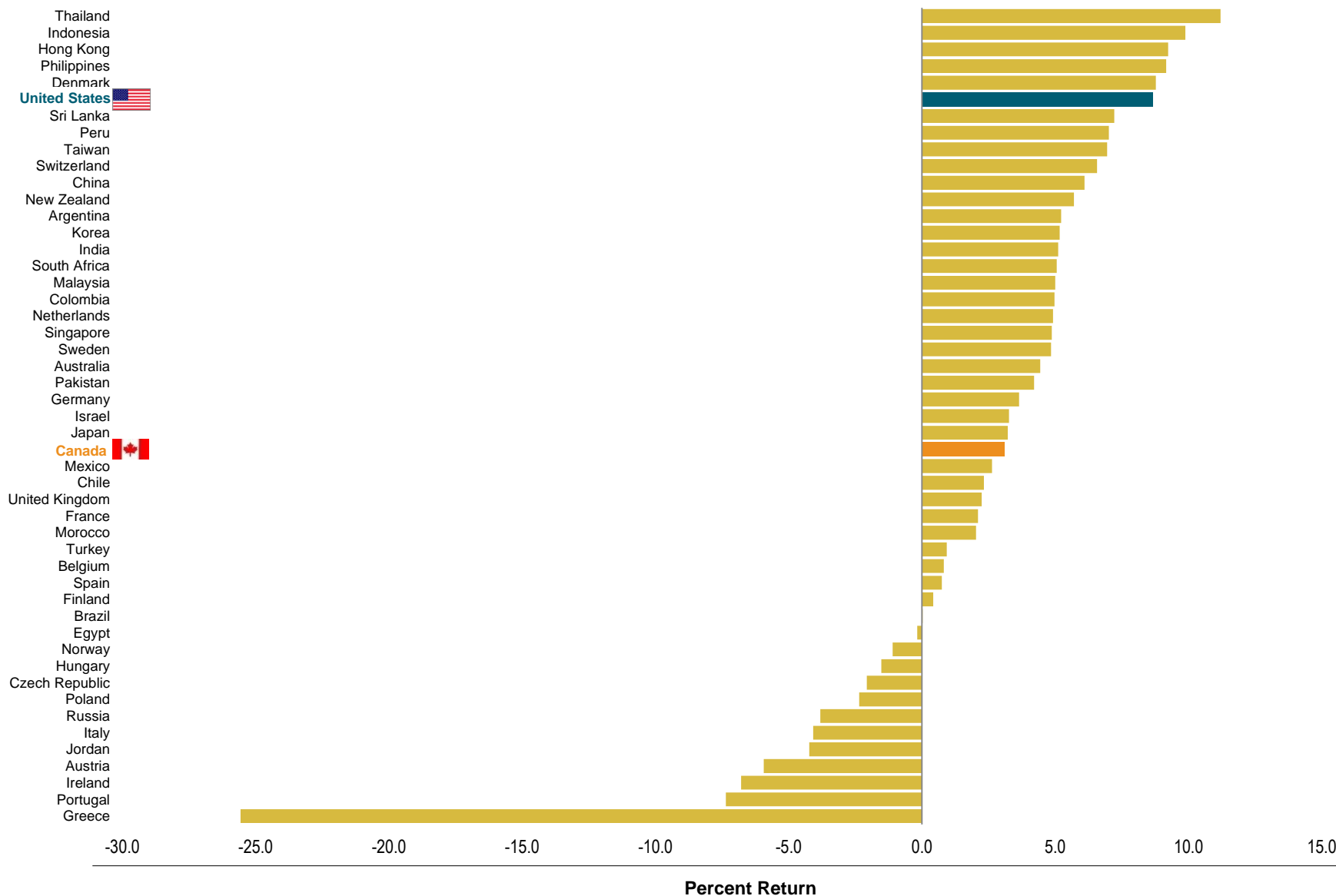
	Return in CAD	Return in Local Currency	Impact of Currency
1. Greece	30.85%	26.00%	4.84%
2. Turkey	15.82%	15.04%	0.77%
.			
.			
.			
.			
 35. United States	0.28%	2.98%	-2.70%
.			
 41. Canada	-1.96%	-1.96%	0.00%
.			
46. Pakistan	-12.26%	-8.75%	-3.51%
47. Qatar	-13.54%	-10.74%	-2.80%

ONE YEAR RETURNS IN CAD AND LOCAL CURRENCY

	Return in CAD	Return in Local Currency	Impact of Currency
1. Greece	54.65%	50.64%	4.01%
2. Austria	54.62%	50.61%	4.01%
.			
.			
 20. United States	18.42%	18.42	0.00%
.			
 36. Canada	11.33%	11.33%	0.00%
.			
.			
46. Egypt	-5.63%	1.22%	-6.84%
47. Pakistan	-12.26%	-8.75%	-3.51%

MSCI Country Returns

Country Rankings—Ten-Year Annualized Returns as of June 30, 2017



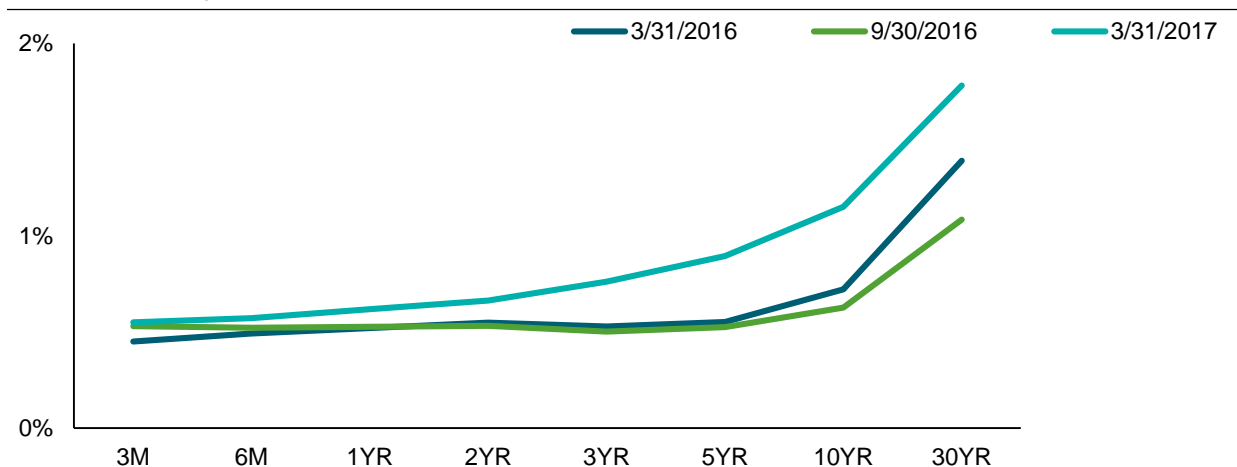
Data in Canadian dollars gross of fees. MSCI data copyright MSCI 2017, all rights reserved. Indexes are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results.

Bond Returns

June 30, 2017

Index	Return (%)		
	Q2 2017	One Year	Three Years Annualized
Canadian 1-Month T-Bills	0.13%	0.50%	0.59%
FTSE TMX Canada Short-Term Bond Index	-0.42%	0.20%	1.72%
FTSE TMX Canada Mid-Term Bond Index	-0.13%	-0.93%	3.79%
FTSE TMX Canada Long-Term Bond Index	4.11%	0.40%	6.69%
FTSE TMX Canada Universe Bond Index	1.11%	0.02%	3.79%
Citi World Government Bond Index 1-5 Years (hedged to CAD)	0.23%	-0.06%	1.48%

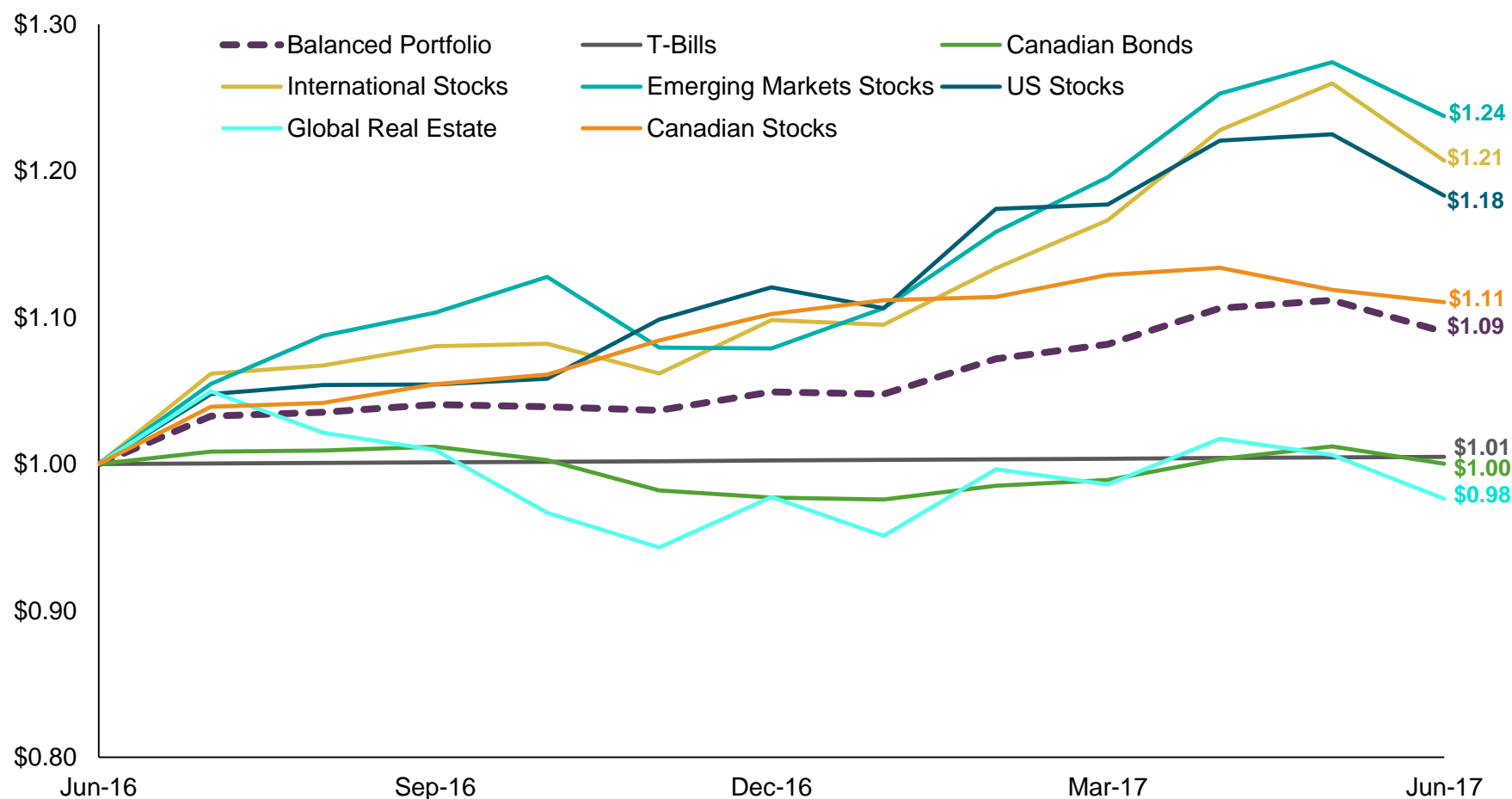
CAN Treasury Yield Curve



Data is in Canadian dollars. Canadian fixed income data provided by FTSE TMX Global Debt Capital Markets Inc., all rights reserved. Data provided by Citibank. Treasury yield data provided by Bank Of Canada; copyright © 1995-2017, Bank of Canada.

Growth of Wealth

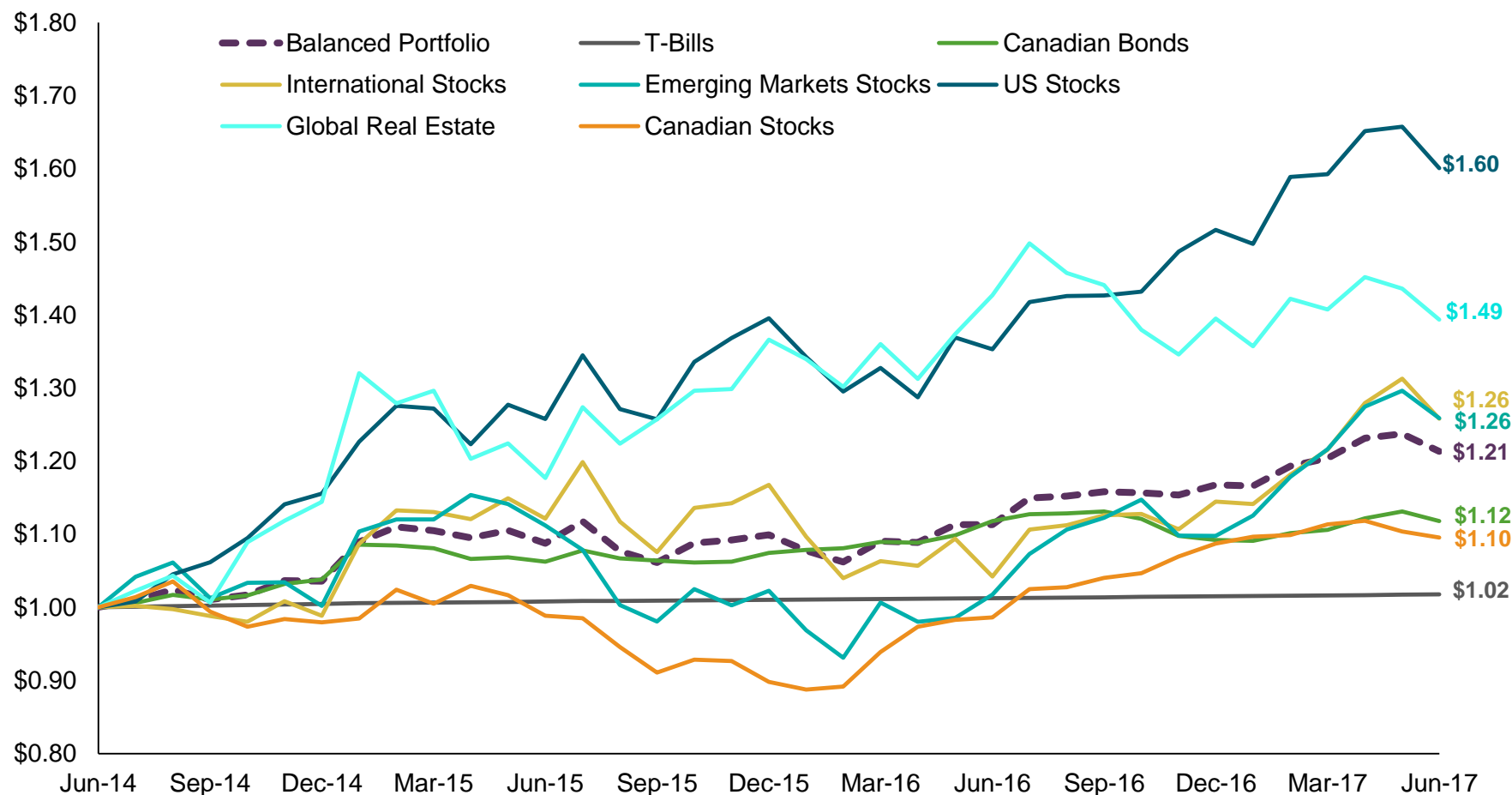
One Year as of June 30, 2017



In Canadian dollars. T-Bills is Canadian 1-Month T-Bills, Canadian Bonds is FTSE TMX Canada Universe Bond Index, International Stocks is MSCI EAFE Index (net div.), Emerging Markets Stocks is MSCI Emerging Markets Index (gross div.) from 01/1988 to 12/1998 and MSCI Emerging Markets Index (net div.) from 01/1999, US Stocks is S&P 500 Index, Global Real Estate is S&P Global REIT Index (gross div.) from 07/1989 to 12/2000 and S&P Global REIT (net div.) from 01/2001 and Canadian Stocks is S&P/TSX Composite Index. Balanced Portfolio is 10% T-Bills, 30% Canadian Bonds, 20% Canadian Stocks, 15% US Stocks, 15% International Stocks, 5% Emerging Markets Stocks and 5% Global Real Estate. Canadian fixed income data provided by FTSE TMX Global Debt Capital Markets Inc., all rights reserved. MSCI data copyright MSCI 2017, all rights reserved. The S&P data are provided by Standard & Poor's Index Services Group. S&P/TSX data provided by S&P/TSX. Indexes are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results.

Growth of Wealth

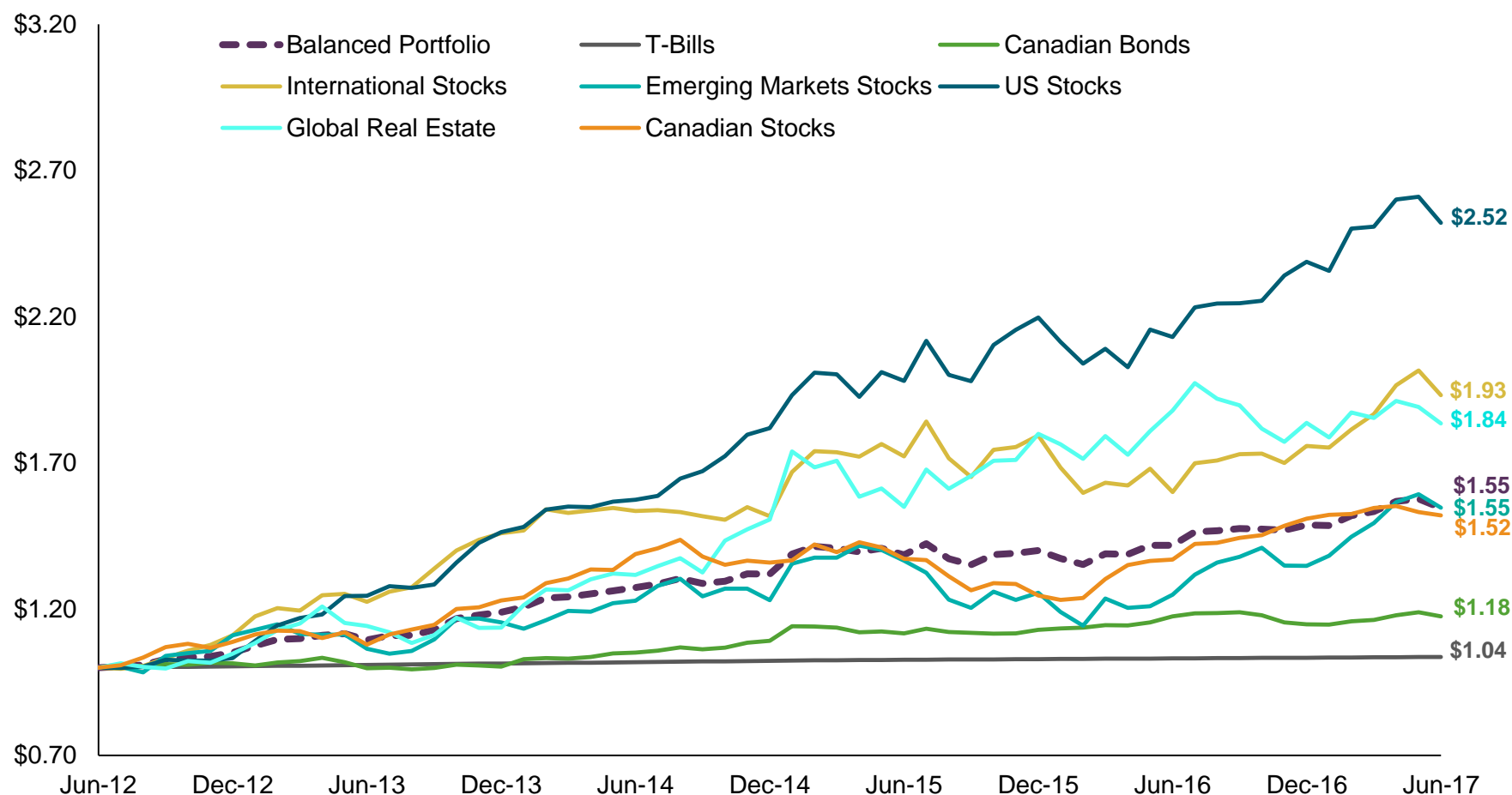
Three Years as of June 30, 2017



In Canadian dollars. T-Bills is Canadian 1-Month T-Bills, Canadian Bonds is FTSE TMX Canada Universe Bond Index, International Stocks is MSCI EAFE Index (net div.), Emerging Markets Stocks is MSCI Emerging Markets Index (gross div.) from 01/1988 to 12/1998 and MSCI Emerging Markets Index (net div.) from 01/1999, US Stocks is S&P 500 Index, Global Real Estate is S&P Global REIT Index (gross div.) from 07/1989 to 12/2000 and S&P Global REIT (net div.) from 01/2001 and Canadian Stocks is S&P/TSX Composite Index. Balanced Portfolio is 10% T-Bills, 30% Canadian Bonds, 20% Canadian Stocks, 15% US Stocks, 15% International Stocks, 5% Emerging Markets Stocks and 5% Global Real Estate. Canadian fixed income data provided by FTSE TMX Global Debt Capital Markets Inc., all rights reserved. MSCI data copyright MSCI 2017, all rights reserved. The S&P data are provided by Standard & Poor's Index Services Group. S&P/TSX data provided by S&P/TSX. Indexes are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results.

Growth of Wealth

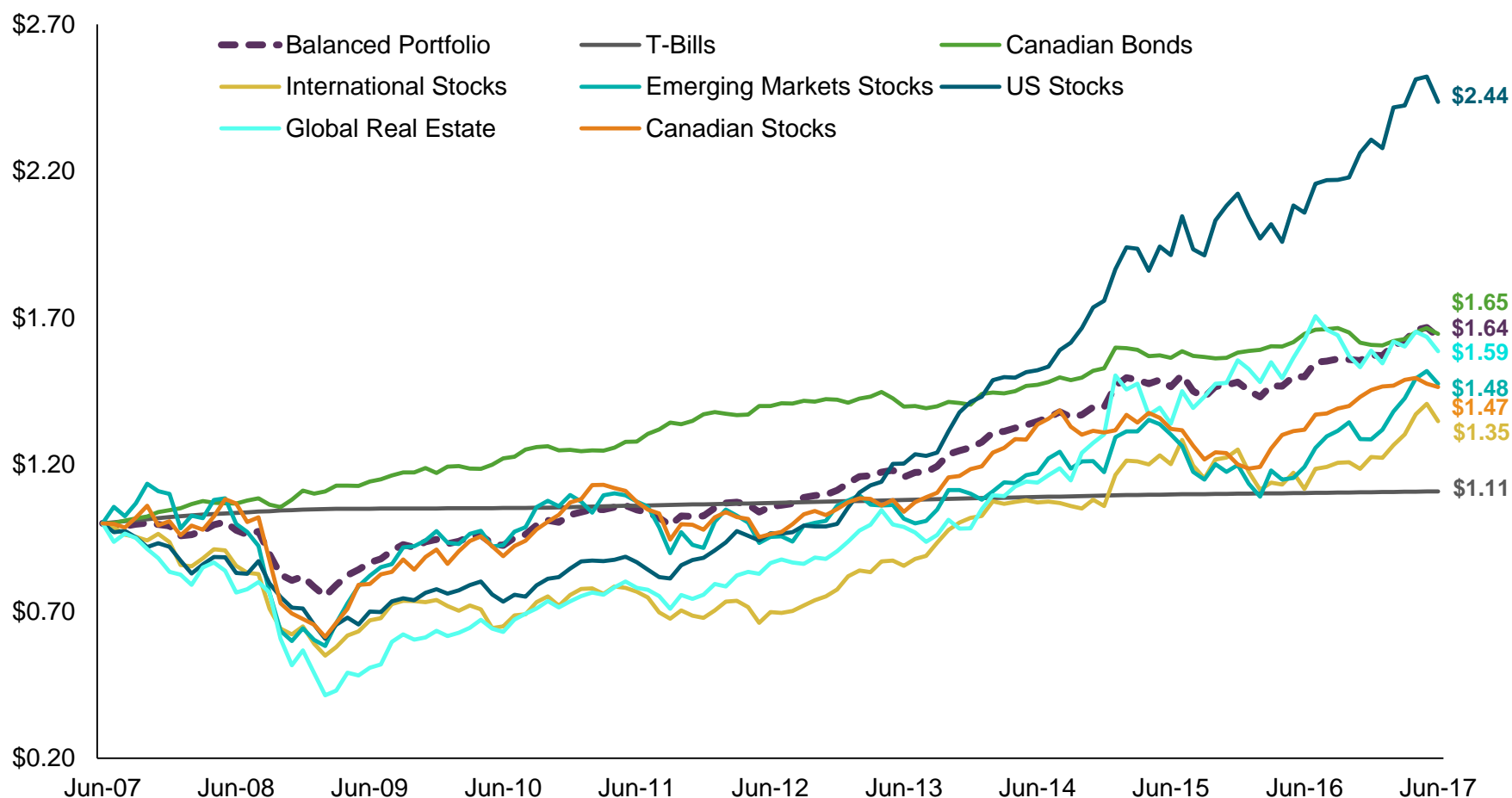
Five Years as of June 30, 2017



In Canadian dollars. T-Bills is Canadian 1-Month T-Bills, Canadian Bonds is FTSE TMX Canada Universe Bond Index, International Stocks is MSCI EAFE Index (net div.), Emerging Markets Stocks is MSCI Emerging Markets Index (gross div.) from 01/1988 to 12/1998 and MSCI Emerging Markets Index (net div.) from 01/1999, US Stocks is S&P 500 Index, Global Real Estate is S&P Global REIT Index (gross div.) from 07/1989 to 12/2000 and S&P Global REIT (net div.) from 01/2001 and Canadian Stocks is S&P/TSX Composite Index. Balanced Portfolio is 10% T-Bills, 30% Canadian Bonds, 20% Canadian Stocks, 15% US Stocks, 15% International Stocks, 5% Emerging Markets Stocks and 5% Global Real Estate. Canadian fixed income data provided by FTSE TMX Global Debt Capital Markets Inc., all rights reserved. MSCI data copyright MSCI 2017, all rights reserved. The S&P data are provided by Standard & Poor's Index Services Group. S&P/TSX data provided by S&P/TSX. Indexes are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results.

Growth of Wealth

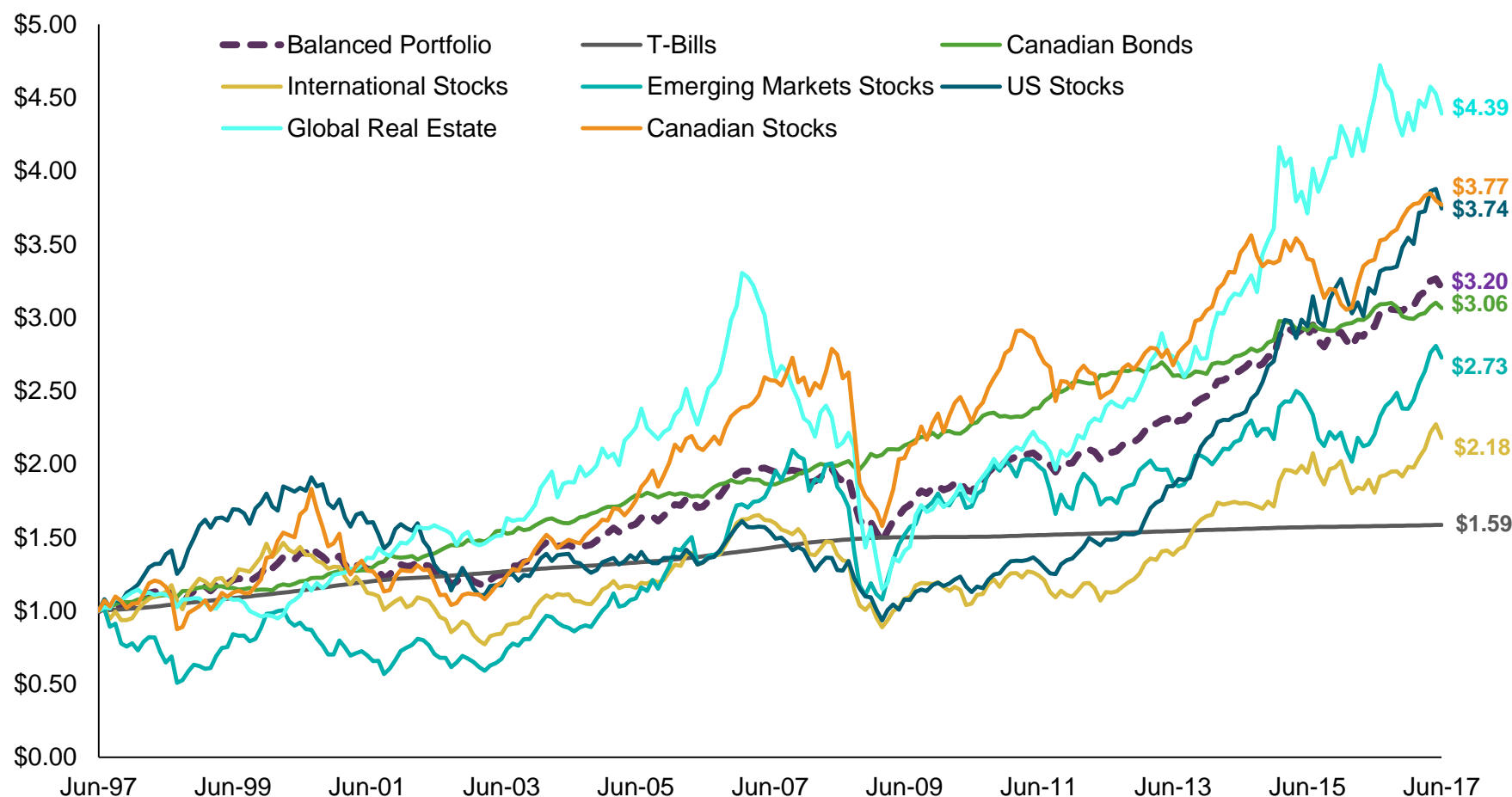
Ten Years as of June 30, 2017



In Canadian dollars. T-Bills is Canadian 1-Month T-Bills, Canadian Bonds is FTSE TMX Canada Universe Bond Index, International Stocks is MSCI EAFE Index (net div.), Emerging Markets Stocks is MSCI Emerging Markets Index (gross div.) from 01/1988 to 12/1998 and MSCI Emerging Markets Index (net div.) from 01/1999, US Stocks is S&P 500 Index, Global Real Estate is S&P Global REIT Index (gross div.) from 07/1989 to 12/2000 and S&P Global REIT (net div.) from 01/2001 and Canadian Stocks is S&P/TSX Composite Index. Balanced Portfolio is 10% T-Bills, 30% Canadian Bonds, 20% Canadian Stocks, 15% US Stocks, 15% International Stocks, 5% Emerging Markets Stocks and 5% Global Real Estate. Canadian fixed income data provided by FTSE TMX Global Debt Capital Markets Inc., all rights reserved. MSCI data copyright MSCI 2017, all rights reserved. The S&P data are provided by Standard & Poor's Index Services Group. S&P/TSX data provided by S&P/TSX. Indexes are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results.

Growth of Wealth

Twenty Years as of June 30, 2017



In Canadian dollars. T-Bills is Canadian 1-Month T-Bills, Canadian Bonds is FTSE TMX Canada Universe Bond Index, International Stocks is MSCI EAFE Index (net div.), Emerging Markets Stocks is MSCI Emerging Markets Index (gross div.) from 01/1988 to 12/1998 and MSCI Emerging Markets Index (net div.) from 01/1999, US Stocks is S&P 500 Index, Global Real Estate is S&P Global REIT Index (gross div.) from 07/1989 to 12/2000 and S&P Global REIT (net div.) from 01/2001 and Canadian Stocks is S&P/TSX Composite Index. Balanced Portfolio is 10% T-Bills, 30% Canadian Bonds, 20% Canadian Stocks, 15% US Stocks, 15% International Stocks, 5% Emerging Markets Stocks and 5% Global Real Estate. Canadian fixed income data provided by FTSE TMX Global Debt Capital Markets Inc., all rights reserved. MSCI data copyright MSCI 2017, all rights reserved. The S&P data are provided by Standard & Poor's Index Services Group. S&P/TSX data provided by S&P/TSX. Indexes are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results.

When Rates Go Up, Do Stocks Go Down?



Second Quarter 2017

Should stock investors worry about changes in interest rates?

Research shows that, like stock prices, changes in interest rates and bond prices are largely unpredictable.¹ It follows that an investment strategy based upon attempting to exploit these sorts of changes isn't likely to be a fruitful endeavor. Despite the unpredictable nature of interest rate changes, investors may still be curious about what might happen to stocks if interest rates go up.

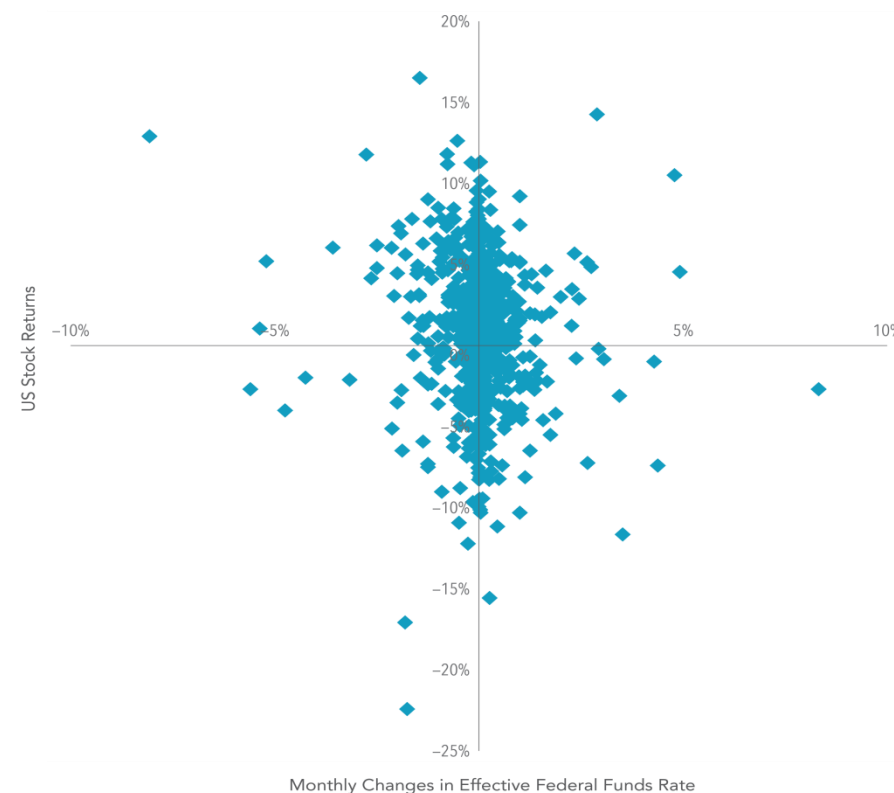
Unlike bond prices, which tend to go down when yields go up, stock prices might rise or fall with changes in interest rates. For stocks, it can go either way because a stock's price depends on both future cash flows to investors and the discount rate they apply to those expected cash flows. When interest rates rise, the discount rate may increase, which in turn could cause the price of the stock to fall. However, it is also possible that when interest rates change, expectations about future cash flows expected from holding a stock also change. So, if theory doesn't tell us what the overall effect should be, the next question is what does the data say?

Recent Research

Recent research performed by Dimensional Fund Advisors helps provide insight into this question.² The research examines the correlation between monthly US stock returns and changes in interest rates.³

Exhibit 1 shows that while there is a lot of noise in stock returns and no clear pattern, not much of that variation appears to be related to changes in the effective federal funds rate.⁴

Exhibit 1. Monthly US Stock Returns against Monthly Changes in Effective Federal Funds Rate, August 1954–December 2016



Monthly US stock returns are defined as the monthly return of the Fama/French Total US Market Index and are compared to contemporaneous monthly changes in the effective federal funds rate. Bond yield changes are obtained from the Federal Reserve Bank of St. Louis.

1. See, for example, Fama 1976, Fama 1984, Fama and Bliss 1987, Campbell and Shiller 1991, and Duffee 2002.

2. Wei Dai, "Interest Rates and Equity Returns" (Dimensional Fund Advisors, April 2017).

3. US stock market defined as Fama/French Total US Market Index.

4. The federal funds rate is the interest rate at which depository institutions lend funds maintained at the Federal Reserve to another depository institution overnight.

When Rates Go Up, Do Stocks Go Down? Manulife Securities

(continued from page 14)

Manulife Securities Incorporated

For example, in months when the federal funds rate rose, stock returns were as low as -15.56% and as high as 14.27%. In months when rates fell, returns ranged from -22.41% to 16.52%. Given that there are many other interest rates besides just the federal funds rate, Dai also examined longer-term interest rates and found similar results.

So to address our initial question: when rates go up, do stock prices go down? The answer is yes, but only about 40% of the time. In the remaining 60% of months, stock returns were positive. This split between positive and negative returns was about the same when examining all months, not just those in which rates went up. In other words, there is not a clear link between stock returns and interest rate changes.

CONCLUSION

There's no evidence that investors can reliably predict changes in interest rates. Even with perfect knowledge of what will happen with future interest rate changes, this information provides little guidance about subsequent stock returns. Instead, staying invested and avoiding the temptation to make changes based on short-term predictions may increase the likelihood of consistently capturing what the stock market has to offer.

GLOSSARY

Discount Rate: Also known as the “required rate of return,” this is the expected return investors demand for holding a stock.

Correlation: A statistical measure that indicates the extent to which two variables are related or move together. Correlation is positive when two variables tend to move in the same direction and negative when they tend to move in opposite directions.

INDEX DESCRIPTIONS

Fama/French Total US Market Index: Provided by Fama/French from CRSP securities data. Includes all US operating companies trading on the NYSE, AMEX, or Nasdaq NMS. Excludes ADRs, investment companies, tracking stocks, non-US incorporated companies, closed-end funds, certificates, shares of beneficial interests, and Berkshire Hathaway Inc. (Permco 540).

Source: Dimensional Fund Advisors LP.

Results shown during periods prior to each Index's index inception date do not represent actual returns of the respective index. Other periods selected may have different results, including losses. Backtested index performance is hypothetical and is provided for informational purposes only to indicate historical performance had the index been calculated over the relevant time periods. Backtested performance results assume the reinvestment of dividends and capital gains.

Eugene Fama and Ken French are members of the Board of Directors for and provide consulting services to Dimensional Fund Advisors LP.

There is no guarantee investment strategies will be successful. Investing involves risks including possible loss of principal.

All expressions of opinion are subject to change. This article is distributed for informational purposes, and it is not to be construed as an offer, solicitation, recommendation, or endorsement of any particular security, products, or services.