

Quarterly Economic and Market Update

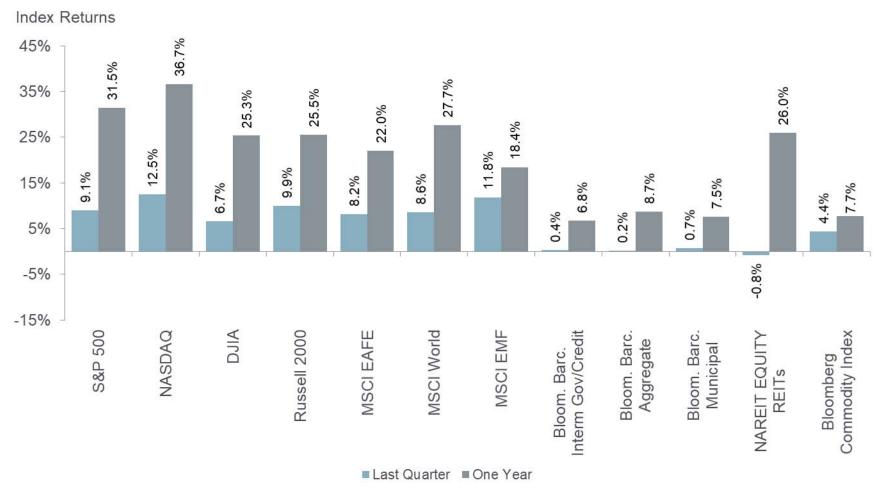
4th Quarter 2019

Presented by Global Manager Research



Market Returns

4th Quarter 2019 and Trailing 12 Months

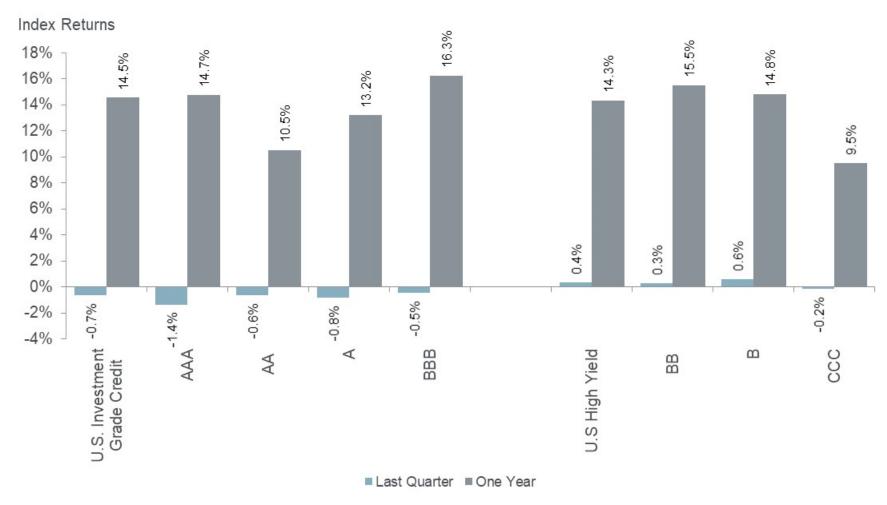


Returns represent total returns through 12/31/2019 Data Source: FactSet Research Systems.



Market Returns: Fixed Income

4th Quarter 2019 and Trailing 12 Months



Returns represent total returns through 12/31/2019. Data Source: FactSet Research Systems.

Investment and insurance products offered through RBC Wealth Management are not insured by the FDIC or any other federal government agency, are not deposits or other obligations of, or guaranteed by, a bank or any bank affiliate, and are subject to investment risks, including possible loss of the principal amount invested.



3

Market Returns: U.S. Credit

4th Quarter 2019 and Trailing 12 Months

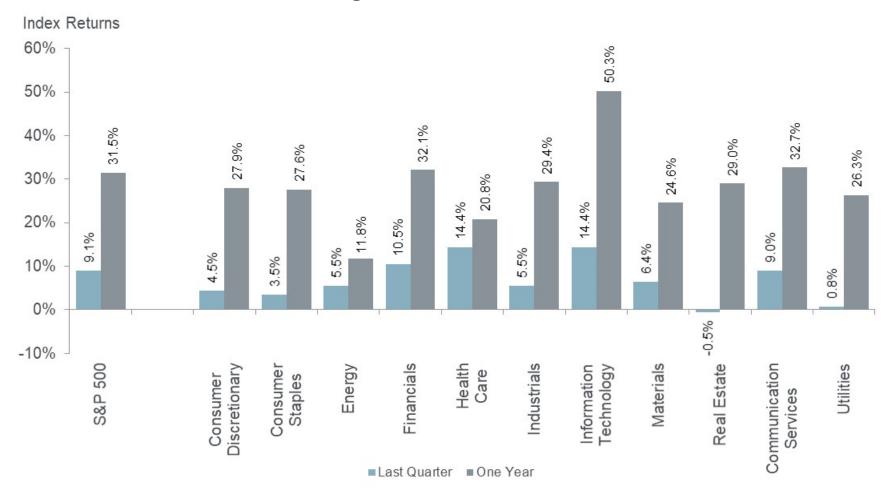


Returns represent total returns through 12/31/2019. Data Source: FactSet Research Systems.



Market Returns: U.S. Sectors

4th Quarter 2019 and Trailing 12 Months



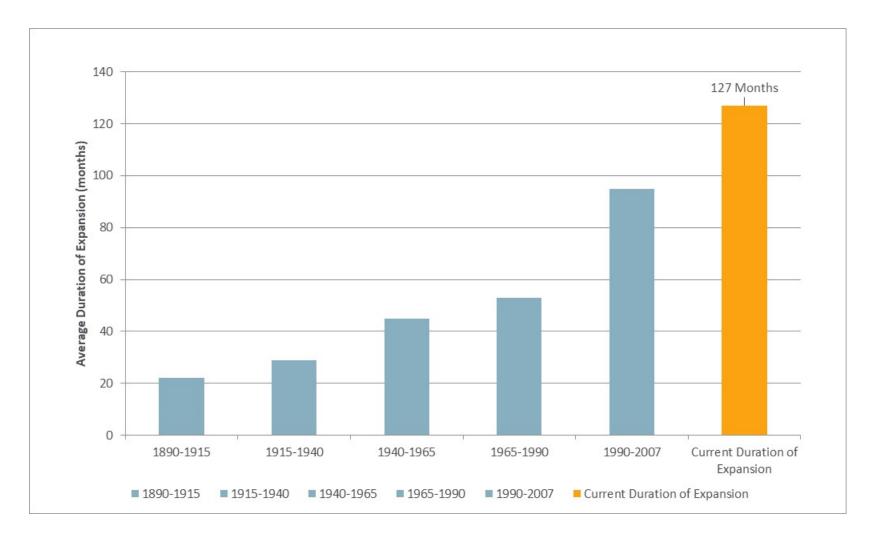
Returns represent total returns through 12/31/2019. Data Source: FactSet Research Systems, Standard and Poor's.

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5

Duration of Expansion in the U.S. Business Cycle



Data Source: National Bureau of Economic Research. Data through 12/31/2019.



S&P Index Calendar Year Total Returns

Since 1926

10% to -50% -40	0% to -30%	-30% to -20%	-20% to -10%	-10% to 0%	0% to 10%	10% to 20%	20% to 30%	30% to 40%	40% to 50%	50% to 60%
1931	1937	1930	1941	1929	1947	1926	1942	1927	1928	1933
	2008	1974	1957	1932	1948	1944	1943	1936	1935	1954
		2002	1966	1934	1956	1949	1951	1938	1958	
			1973	1939	1960	1952	1961	1945		
			2001	1940	1970	1959	1963	1950		
				1946	1978	1964	1967	1955		
				1953	1984	1965	1976	1975		
				1962	1987	1968	1982	1980		
			'	1969	1992	1971	1983	1985		
Negative Y	ears:	25		1977	1993	1972	1996	1989		
Positive Y	ears:	69		1981	1994	1979	1998	1991		
				1990	2005	1986	1999	1995		
				2000	2007	1988	2003	1997		
				2018	2011	2004	2009	2013		
					2015	2006	2017	2019		
						2010				
						2012				
						2014				
						2016				

Returns through 12/31/2019.

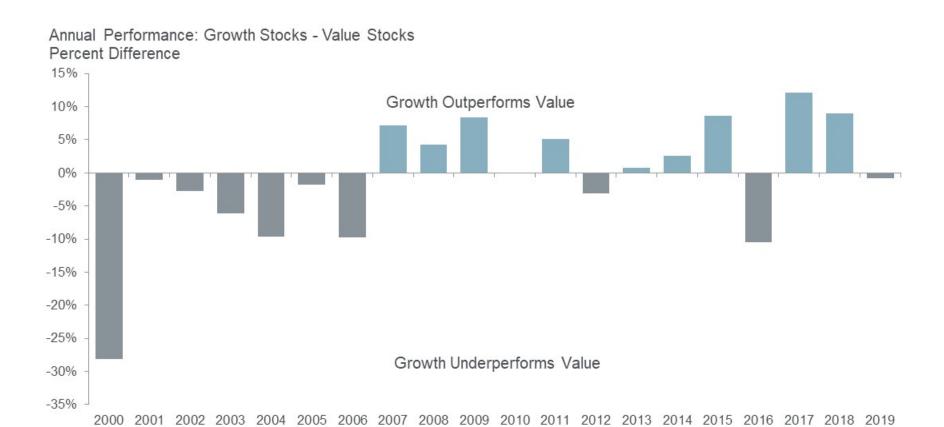
Data Source: Ibbotson Associates, Standard and Poor's and FactSet Research Systems.

Returns prior to 1974 are from Ibbotson Associates. Returns from 1974 to present are from FactSet Research Systems. The Ibbotson returns are computed as the S&P 90 From 1926 through 1956 and the S&P 500 thereafter.



U.S. Growth vs. U.S. Value

Calendar Year Returns



Returns through 12/31/2019.

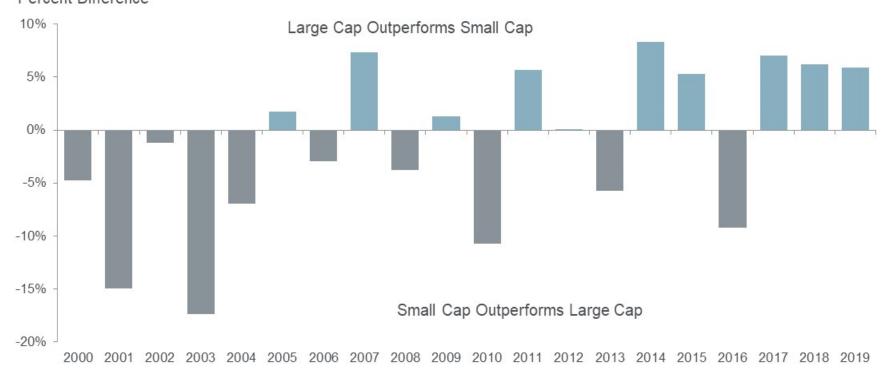
Growth represented by the S&P 500 Growth Index and Value represented by the S&P 500 Value Index. Data Source: FactSet Research Systems, Standard and Poor's.



U.S. Large Caps vs. U.S. Small Caps

Calendar Year Returns

Annual Performance: Large Cap Stocks - Small Cap Stocks Percent Difference



Returns through 12/31/2019.

Large Caps represented by the S&P 500 Index and Small Caps represented by the Russell 2000 Index. Data Source: FactSet Research Systems, Standard and Poor's.

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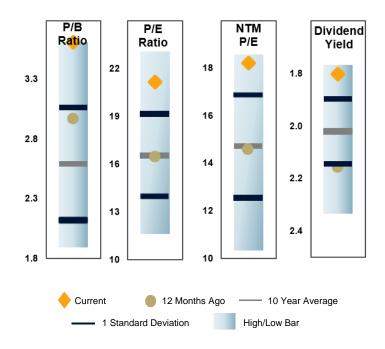


9

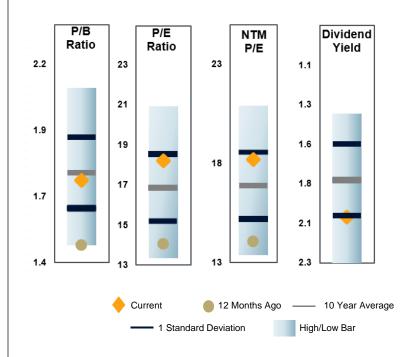
U.S. Large Caps vs. U.S. Small Caps

Market Valuations





Small Cap Valuation Ratios



Data through 12/31/2019.

Data Source: FactSet Research Systems, Standard and Poor's.

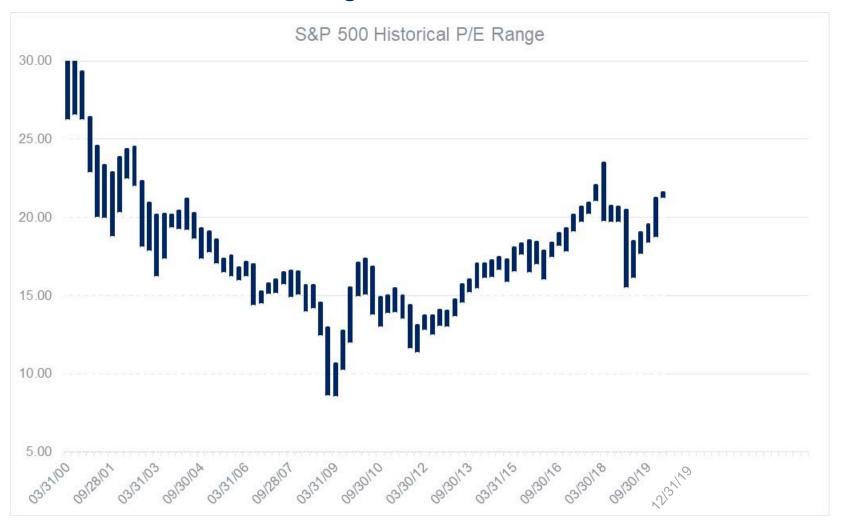
Large Caps represented by the S&P 500 Index and Small Caps represented by the S&P 600 Index.

Dividend Yield: Multiplies the DPS over the last year then divides the resulting figure by the price.

Price/Earnings: Reflects the closing price for the company at fiscal quarter end divided by earnings per share before extraordinary items for last twelve months. NTM P/PE: Price to Next Twelve Months Earnings. Calculated as the current market price over the estimated earnings for the next twelve months for the index. Price/Book: Displays the book value per share for the ending month divided by share price.



S&P 500 Historical P/E Range



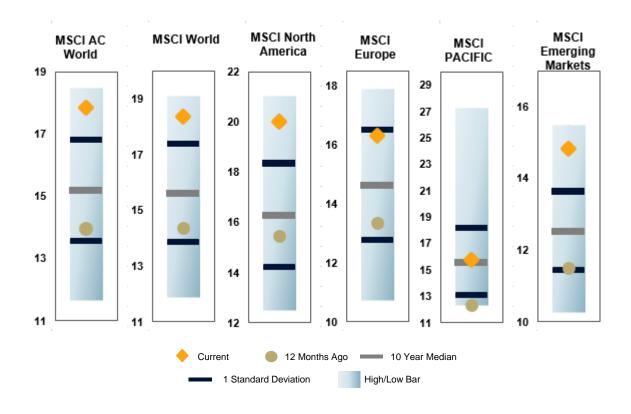
Data through 12/31/2019

Data Source: FactSet Research Systems



Regional Market Valuations

Trailing P/E



Trailing P/E: Price to Trailing Twelve Months Earnings. Calculated as the current market price over the trailing earnings for the prior twelve months for the index Note: The MSCI AC World index includes emerging market countries. The MSCI World index only includes developed market countries. Data through 12/31/2019 based on MSCI Market Indices.

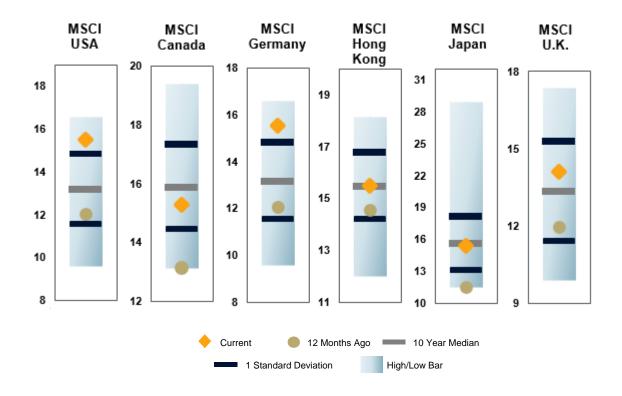
International investing involves risks not typically associated with U.S. investing, including currency fluctuation, foreign tax, political instability and different accounting standards.

Data Source: Morgan Stanley Capital International and FactSet Research Systems



Select Country Market Valuations

Trailing P/E



Trailing P/E: Price to Trailing Twelve Months Earnings. Calculated as the current market price over the trailing earnings for the prior twelve months for the index Data through 12/31/2019 based on MSCI Market Indices.

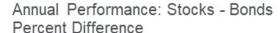
International investing involves risks not typically associated with U.S. investing, including currency fluctuation, foreign tax, political instability and different accounting standards.

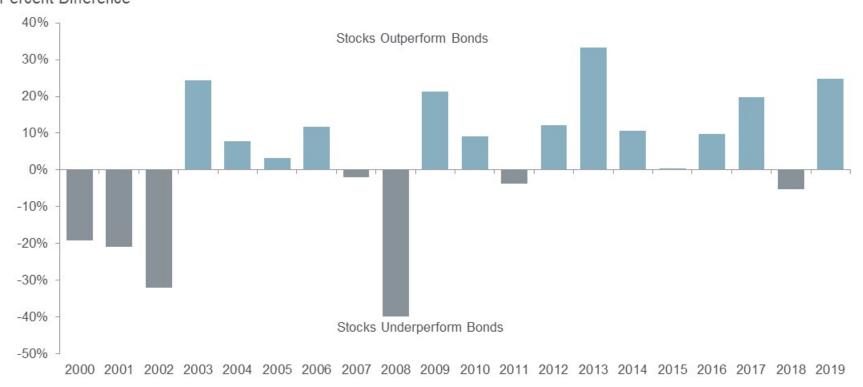
Data Source: Morgan Stanley Capital International and FactSet Research Systems.



U.S. Stock vs. U.S. Bonds

Calendar Year Returns





Returns through 12/31/2019.

U.S. Stocks represented by the S&P 500 Index.

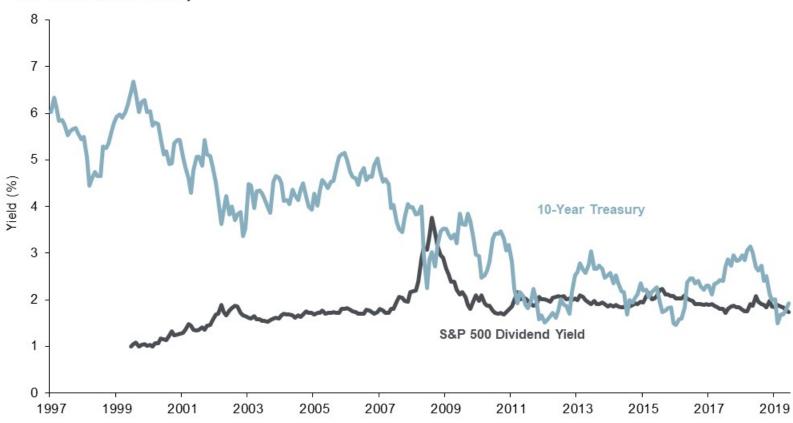
U.S. Bonds represented by the Bloomberg Barclays Intermediate Government Credit Index.

Data Source: FactSet Research Systems, Standard and Poor's



S&P 500 Div. Yield vs. 10-Year Treasury Yield





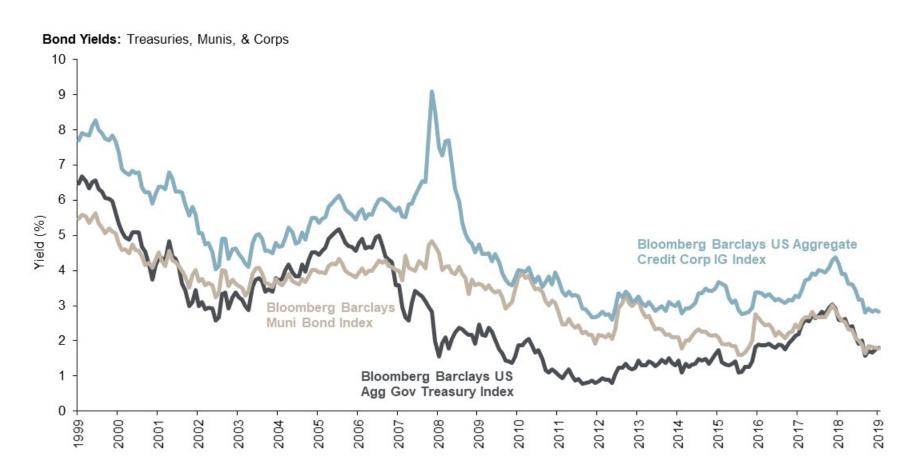
Before time period shown, the last historical point where the S&P 500 dividend yield was greater than the 10-Year Treasury yield was 1958. Data as of 12/31/2019.

Source: FactSet Research Systems, Standard and Poor's



Historical Yield

Since January 1999



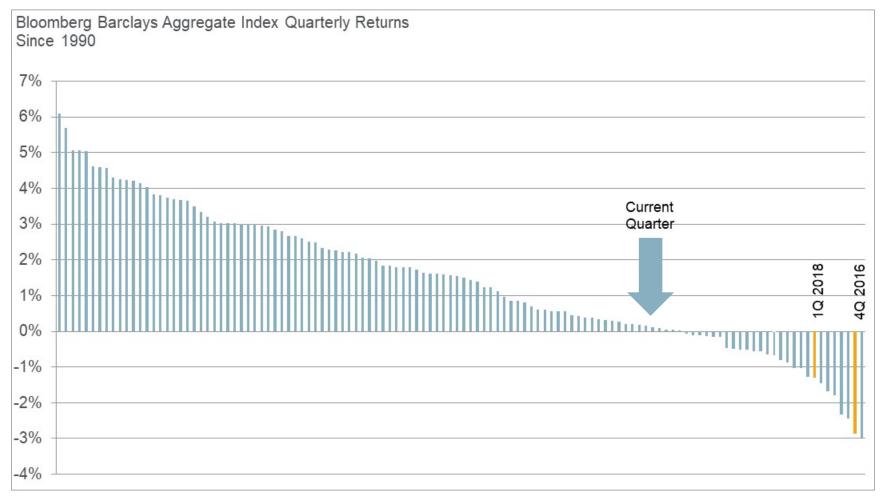
Data through 12/31/2019.

Data Source: FactSet Research Systems.



Bloomberg Barclays Agg. Index Quarterly Total Returns

Since 1990



Data Source: FactSet Research Systems Returns from 1/1/1990 through 12/31/2019.



U.S. Corporate Debt

Yield to Worst

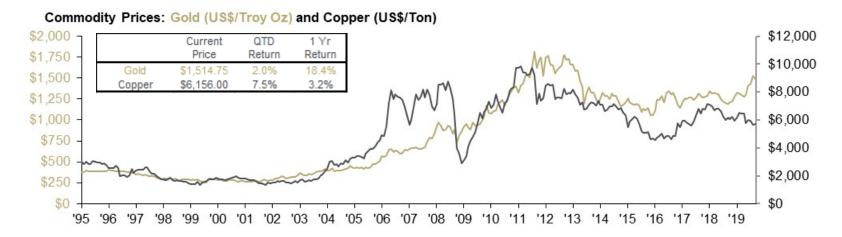
U.S. Intermediate Corporate Debt YTW

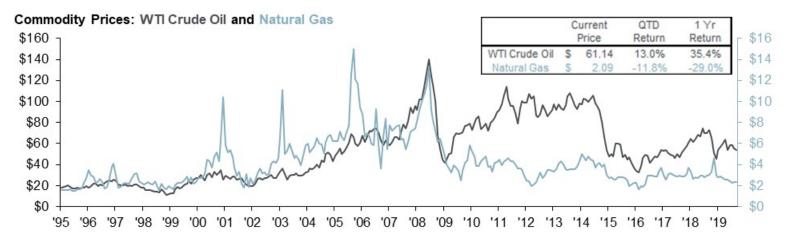


Data Source: Factset. Research Systems Data through 12/31/2019.



Commodity Prices



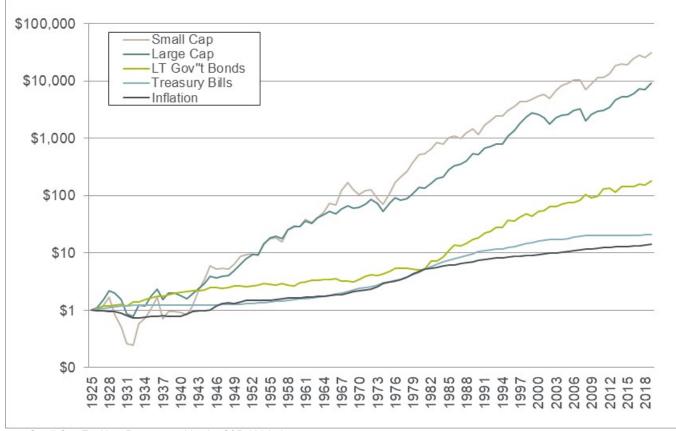


Data Source: FactSet Research Systems. Data through 12/31/2019.



Historical Growth of \$1

Since January 1923



Asset Class	Ending Balance	Annualized Return		
Small Cap	\$ 31,198	11.5%		
Large Cap	\$9,115	10.1%		
LT Gov"t Bonds	\$178	5.6%		
Treasury Bills	\$21	3.3%		
Inflation	\$14	2.8%		

Small Cap Equities: Represented by the S&P 600 Index. Large Cap Equities: Represented by the S&P 500 Index.

Long Term Gov't Bonds: Represented by the Citigroup USBIG Treasury 10+ Year Index.

Treasury Bills: Represented by the Citigroup 3-month T-Bill Index.

Inflation: Represented by the Consumer Price Index - All Urban Consumers (CPI-U).

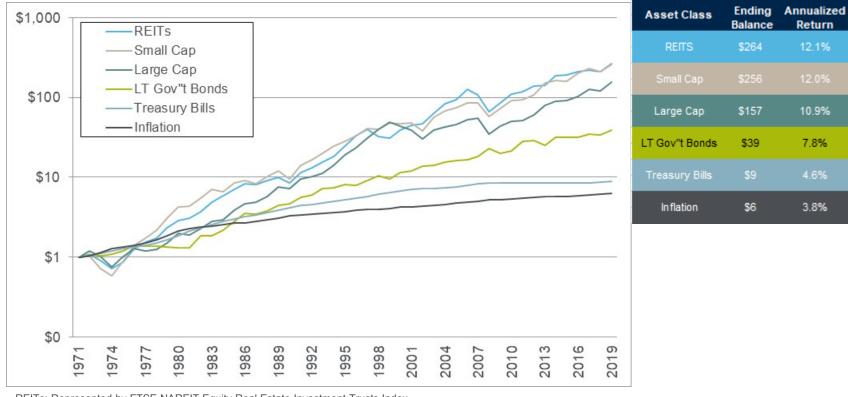
Past performance does not guarantee future results.

Data Source: FactSet Research Systems. Data through 12/31/2019.



Historical Growth of \$1 With REITs

Since January 1971



REITs: Represented by FTSE NAREIT Equity Real Estate Investment Trusts Index.

Small Cap Equities: Represented by the S&P 600 Index.

Large Cap Equities: Represented by the S&P 500 Index.

Long Term Gov't Bonds: Represented by the Citigroup USBIG Treasury 10+ Year Index.

Treasury Bills: Represented by the Citigroup 3-month T-Bill Index.

Inflation: Represented by the Consumer Price Index - All Urban Consumers (CPI-U).

See disclosures for more detailed information on the indices used in this chart.

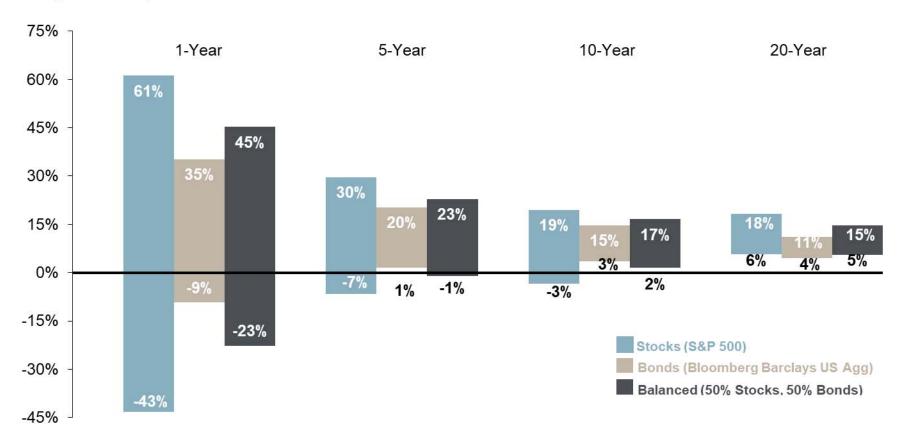
Past performance does not guarantee future results.

Data Source: FactSet Research Systems. Data through 12/31/2019.



Historical Returns by Holding Period

Range of Stock, Bond and Blended Total Returns Rolling Total Returns, Since 1979



Bar Chart Returns 1/1/1979 through 12/31/2019.

Data source: Ibbotson Associates and FactSet Research Systems



Historical 10 Year Rolling Returns



Returns through 12/31/2019.

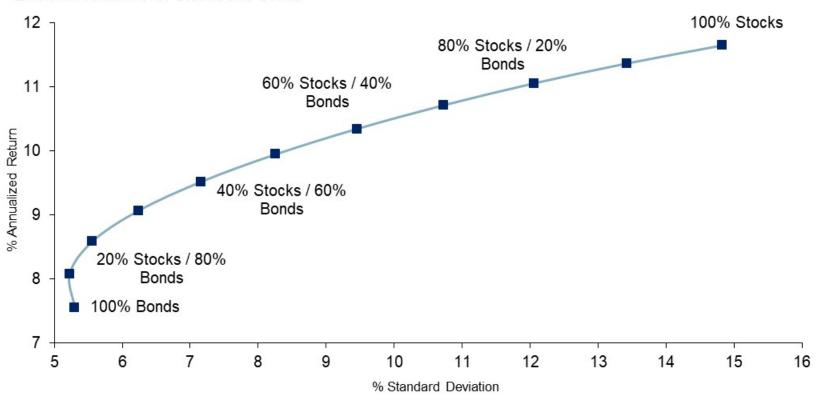
Data source: FactSet Research Systems



Efficient Frontier

Fixed Income Diversification Opportunities





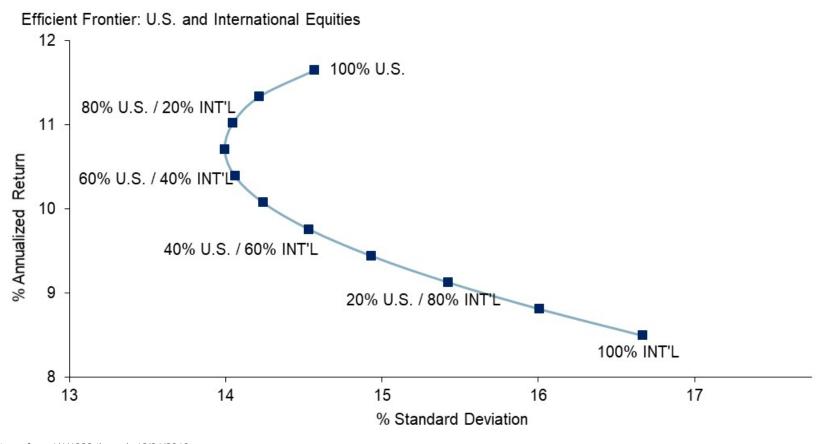
Data Source: FactSet Research Systems. Returns from 1/1/1980 through 12/31//2019.

Stocks represented by the S&P 500 Index. Bonds represented by the Bloomberg BarCap Aggregate Index



Efficient Frontier

International Diversification Opportunities



Returns from 1/1/1980 through 12/31/2019.

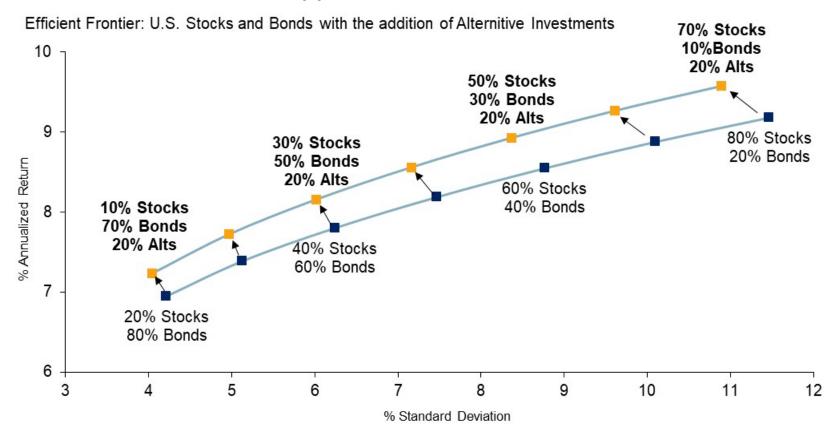
U.S. stocks represented by the S&P 500 Index. International stocks represented by the MSCI EAFE Index. International investing involves risks not typically associated with U.S. investing, including currency fluctuation, foreign tax, political instability and different accounting standards.

Data Source: FactSet Research Systems



Efficient Frontier

Alternative Investment Opportunities



Returns from 1/1/1980 through 12/31/2019.

Stocks represented by the S&P 500 Index. Bonds represented by the Bloomberg BarCap Aggregate Index. Alts represented by a 50/50 blend of alternative fixed income and alternative equities indexes. Alternative Equity - 60% HFRI Equity Hedge, 25% HFRI Event Driven, 15% HFRI Macro. Alternative Fixed Income – 15% HFRI Event Driven, 25% HFRI Macro. and 60% HFRI Relative Value.

Investing in alternative investments may be speculative and not suitable for all clients and is intended for investors who are willing and able to bear the unique economic risks of the investment. Investors should consider whether such investments are suitable in light of their individual financial situation.

Data Source: FactSet Research Systems.



Disclosures and Definitions

This information is not intended to be used as the primary basis of investment decisions. Because of individual client requirements, it should not be construed as advice designed to meet the particular investment needs of any investor. The figures presented have been obtained from sources we believe to be reliable and current as of December 31, 2019, but cannot be guaranteed as to accuracy and do not purport to be complete.

Index information provided has been calculated on a total return basis with dividends reinvested. The effects of taxes and/or expenses and fees normally associated with an investment account have not been considered. Returns are based on past performance which may or may not be similar to future returns, and are not meant to be representative of any specific investment. Although used as benchmarks for informational purposes, individual indices are not available for direct investment

Sources of Information:

Bloomberg: Bloomberg is a leading provider of data, analytics, electronic trading and financial news.

Ibbotson Associates: Ibbotson Associates is a leading authority on asset allocation, providing products and services to help investment professionals obtain, manage and retain assets.

Morningstar: Morningstar is provider of performance analysis and analytical software.

MSCI: Morgan Stanley Capital International indices are the most widely used benchmarks by global portfolio managers.

Standard & Poor's: Standard & Poor's is a provider of independent financial information and analytical services

St. Louis Federal Reserve: The Federal Reserve Bank of St. Louis disseminates economic, financial, and monetary data through its FRED website.

FactSet Research Systems: FactSet is a leading provider of global financial and economic information. FactSet also provides the tools to download, combine, and manipulate financial data for investment analysis.

U.S. Department of Labor: Bureau of Labor Statistics: The BLS is the principle fact-finding agency for the United States Government in the field of labor and economic statistics.

General Information:

CAPE: Cyclically Adjusted Price to Earnings. Calculated as the current market price over a 10 year average of real earnings.

Correlation: Correlation describes the strength of the relationship between two variables. Correlation can be any value between +1 and -1. A value of +1 indicates perfect positive correlation (meaning the variables move together in perfect unison) and -1 indicates perfect negative correlation (meaning the variables move together in perfect negative unison). Generally, combining assets that have low correlations with increase diversification.

Dividend Yield: Multiplies the DPS over the last year then divides the resulting figure by the price.

Fed Funds Rate: The interest rate at which banks lend to each other overnight.

Federal Open Market Committee (FOMC): The branch of the Federal Reserve Board that determines the direction of monetary policy.

Fed Tightening Campaign: Describes a period in which the FOMC raises the fed funds rate in an attempt to tighten the money supply, or decrease the amount of money available in the banking system.

EPS Growth: Historical annual EPS growth for the past five fiscal years as of the report date.

Housing Starts: Annualized number of privately owned housing units that have started construction. Start of construction occurs when excavation begins for the footings or foundations of a building.

Market Cap: Multiplies the price as of the ending day by the shares as of the ending month.

NTM P/PE: Price to Next Twelve Months Earnings. Calculated as the current market price over the estimated earnings for the next twelve months for the index.

Price/Book: Displays the book value per share for the ending month divided by share price.

Price/Earnings: Reflects the closing price for the company at fiscal quarter end divided by earnings per share before extraordinary items for last twelve months.

P/PE: Price to Peak Earnings, Calculated as the current market price over the prior peak earnings of the index.

Recession Shading: Recession dates are provided by the NBER

Sharpe Ratio: A measure of the risk-adjusted return of an investment. It is calculated using standard deviation and excess return to determine reward per unit of risk. The higher the Sharpe Ratio, the better the historical risk-adjusted performance of the investment.

Standard Deviation: A statistical measure of dispersion about and average, which, depicts how widely the returns varied over a certain period of time.

U6 Unemployment: Total unemployed persons plus all marginally attached workers plus total employed part time for economic reasons

Index Descriptions:

Bloomberg Commodity Index: Composed of futures contracts on 19 physical commodities. Component weightings are primarily determined by liquidity. No related group of commodities (e.g., energy, precious metals, livestock and grains) may constitute more than 33% of the index.

Citigroup 3-Month Treasury Bill: Represents the average yield of the most recent 3-month Treasury Bill issues.

Citigroup Treasury 10+ Year Index: The Treasury Index computes returns for the current 10-year and 30-year on-the-run Treasury that has been in existence for the entire month.

Consumer Price Index – All Urban Consumers (CPI-U): Measures the weighted average change in prices of a fixed basket of goods and services purchased by households defined as All Urban Consumers, a population group that represents around 87 percent of the total population in the United States. The cost-of-living or inflation indicator is computed from data collected by the U.S. Department of Labor's Bureau of Labor Statistics. Not seasonally-adjusted. Credit Suisse High Yield: Contains tradable below-investment-grade fixed-rate debt obligations, including cash-pay, deferred-interest, step-up, payment-in-kind and defaulted bonds chosen based on market size, liquidity and diversification criteria.



Disclosures and Definitions (cont.)

Barclay CTA Index: an industry benchmark of representative performance of commodity trading advisors. There were 533 programs included in the calculation of the Index for the year 2010. The Index is unweighted and rebalanced at the beginning of each year.

Bloomberg Barclays US Aggregate: A market-capitalization weighted index of investment-grade fixed-rate debt issues, including government, corporate, asset-backed and mortgage-backed securities, with maturities of at least one year.

Bloomberg Barclays Intermediate Government/Credit: A market value weighted performance benchmark for government and corporate fixed-rate debt issues with maturities between one and 10 years.

Bloomberg Barclays Municipal: A market capitalization-weighted index of investment grade municipal bonds with maturities of at least one year.

DJIA: Dow Jones Industrial Average is a price-weighted arithmetic average which covers 30 major NYSE industrial companies representing about 25 percent of the NYSE total market capitalization.

HRFI Equity Hedge: Composite Index represents an equally-weighted index of managers who maintain positions both long and short in primarily equity and equity derivative securities.

HRFI Event Driven: Composite Index represents an equally-weighted index of managers who maintain positions in companies currently or prospectively involved in corporate transactions...

HRFI Fund of Funds: Composite Index represents an equally-weighted index of more than 600 fund of hedge funds.

HRFI Macro: Composite Index represents an equally-weighted index of managers which trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables.

HRFI Relative Value: Composite Index represents an equally-weighted index of managers who maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy between securities.

Headline Unemployment: Number of unemployed persons as a percentage of the labor force.

ICE BofAML 10+ Yr Municipal Index: Consists of a subset of The Merrill Lynch US Municipal Securities Index including all securities with a remaining term to final maturity greater than or equal to 10 years.

ICE BofAML 10+ Yr US Corporate Index: Consists of a subset of The Merrill Lynch US Corporate Index including all securities with a remaining term to final maturity greater than or equal to 10 years.

ICE BofAML 10+ Yr US Treasury Index: Consists of a subset of The Merrill Lynch US Treasury Index Including all securities with remaining term to final maturity greater than or equal to 10 years.

BAML 7-10 Year French Government Index: Consists of EUR denominated sovereign debt publicly issued by the French government in the French domestic or eurobond market: with maturity greater than 7 years but less than 10.

ICE BAML 7-10 Year German Government Index: Consists of EUR denominated sovereign debt publicly issued by the German government in the German domestic or eurobond market: with maturity greater than 7 years but less than 10.

ICE BAML 7-10 Year Italian Government Index: Consists of EUR denominated sovereign debt publicly issued by the Italian government in the Italian domestic or eurobond market: with maturity greater than 7 years but less than 10.

ICE BAML 7-10 Year Japan Government Index: Consists of JPY denominated sovereign debt publicly issued by the Japan government in the Japan domestic market with maturity greater than 7 years but less than 10.

ICE BAML 7-10 Year Spanish Government Index: Consists of EUR denominated sovereign debt publicly issued by the Spain government in the Spain domestic or eurobond market: with maturity greater than 7 years but less than 10.

ICE BAML 7-10 Year US Government Index: Consists of USD denominated sovereign debt publicly issued by the USD government in the US domestic market with maturity greater than 7 years but less than 10.

MSCI EAFE: Morgan Stanley Capital International Europe, Australasia and Far East Index. An arithmetic, market value-weighted average of the performance of several securities listed on the stock exchanges of several developed markets around the world, excluding the United States.

MSCI Emerging Markets Free: A Capitalization-weighted index representing emerging markets in the free (open to non-local investors) world.

MSCI World: An arithmetic, market value-weighted average of the performance of approximately 1700 securities listed on the stock exchanges of several developed markets around the world, including the United States.

FTSE NAREIT Equity Real Estate Investment Trusts (REITs) Contains all tax qualified Equity Real Estate Investment Trusts (REITs) with common shares traded on the New York Stock Exchange, American Stock Exchange or NASDAQ National Market List. A company is classified as an Equity REIT if at least 75 percent of its gross invested book assets are invested in real properties. Preferred stocks, convertible preferred stocks, participating preferred stocks, convertible debentures, warrants, rights and operating partnership units are excluded. Free float-adjusted, market capitalization-weighted.

NASDAO: A capitalization-weighted index that measures all Nasdag listed domestic and foreign stocks.

Not in Labor Force, Want Job Now: Number of persons not currently in the labor force (i.e. have given up looking for employment) currently desiring employment.

PMI: A national survey of purchasing managers representative of the state of the manufacturing sector. A PMI above 50 indicates that the manufacturing economy is generally expanding; below 50 that it is generally contracting.

S&P 500: The index comprises 500 of the largest U.S. companies. The index is capitalization-weighted and calculated on a total return basis with dividends reinvested. Long-term performance is represented by the S&P 90 Index from 1926 through 1956, as provided by Ibbotson Associates, and the S&P 500 Index from 1957 to present.

S&P 500 Growth: S&P Style Indices divide the complete market capitalization of each parent index into growth and value segments. Growth stocks are measured using three factors: sales growth, the ratio of earnings change to price, and momentum.

S&P 500 Value: S&P Style Indices divide the complete market capitalization of each parent index into growth and value segments. Value stocks are measured using three factors: the ratios of book value, earnings, and sales to price. S&P Midcap 400: The index comprises 400 companies selected as broadly representative of companies with midrange market capitalization (market valuation of between 200 million and 5 billion). The index is capitalization-weighted and calculated on a total return basis with dividends reinvested.

S&P Midcap 400 Growth: S&P Style Indices divide the complete market capitalization of each parent index into growth and value segments. Growth stocks are measured using three factors: sales growth, the ratio of earnings change to price, and momentum.

S&P Midcap 400 Value: S&P Style Indices divide the complete market capitalization of each parent index into growth and value segments. Value stocks are measured using three factors: the ratios of book value, earnings, and sales to price.

S&P SmallCap 600: The index comprises 600 companies seeking to measure the small-cap segment of the U.S. equity market. The index requires specific inclusion criteria to ensure that companies are liquid and financially viable. The index is capitalization-weighted and calculated on a total return basis with dividends reinvested.

S&P SmallCap 600 Growth: S&P Style Indices divide the complete market capitalization of each parent index into growth and value segments. Growth stocks are measured using three factors: sales growth, the ratio of earnings change to price, and momentum.

S&P SmallCap 600 Value: S&P Style Indices divide the complete market capitalization of each parent index into growth and value segments. Value stocks are measured using three factors: the ratios of book value, earnings, and sales to price.



Thank you

Non-deposit investment products offered through RBC Wealth Management are not FDIC insured, are not a deposit or other obligation of, or guaranteed by, a bank, and are subject to investment risks, including possible loss of the principal amount invested.

