Welcome to
Parkhurst Financial Services, Inc.
2018 Market Update Seminar and Luncheon

Presented by:
James H. Parkhurst, CLU, ChFC, Jon J. Parkhurst, CPA, CFP®
Parkhurst Financial Services
10950 Pearl Rd, Suite A6
Strongsville, OH 44136
&
SEI Private Trust Company, Franklin Templeton,
J.P. Morgan Asset Management, Russell Investments and AssetMark

Agenda

11:30 - 12:00	Registration, Seating and Lunch Order (lunch will be served during presentation)
12:00 - 2:00	Individual Presentations SEI Private Trust, Russell Investments and JP Morgan. Followed by round table and Q & A.
2:00 - 2:15	Jon Parkhurst, CPA, CFP® -Closing and Q&A

Matthew Potter, CFA®

Matthew Potter, CFA®
Director, Investment Services
SEI Advisor Network

Matt Potter is Director, Investment Services Team, within the SEI Advisor Network and is responsible for supporting the delivery of advice-driven asset management solutions for SEI's advisors and their clients. This includes custom investment case analysis and proposal support for SEI advisors, as well as technical investment support for SEI's advisors and relationship managers. Matt is also a regular speaker at SEI and advisor-sponsored events on topics such as the economy and financial markets.

Matt has been with SEI since 2013. He has nearly 25 years of experience in the financial services industry. Prior to joining SEI, Matt was a principal and head of client service for Lockwell Investments, a boutique small cap value investment manager. Previously, he was a client portfolio manager for Invesco, a portfolio specialist for Morgan Stanley Investment Management, and a performance analyst for Janney Montgomery Scott.

Matt is a CFA charterholder, and is a member of the CFA Institute and the CFA Society of Philadelphia. He received a Bachelor of Arts in psychology from Haverford College and a Master of Arts in psychology from the University of Pennsylvania.

Outside of SEI, Matt is an avid sports fan, particularly football, track & field, and college wrestling. He also enjoys reading non-fiction, although his two teenage children, two cats, and dog tend to keep him and his wife quite busy.

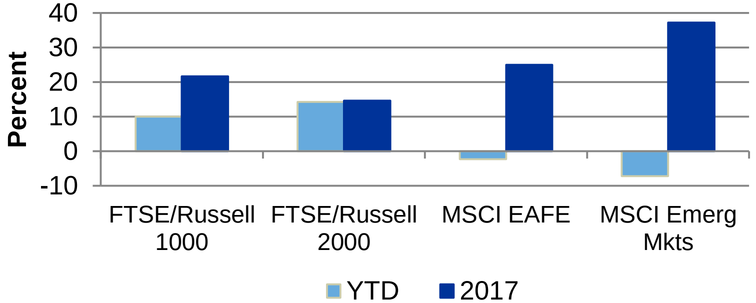
B.B.A., Finance & Investments, Bernard M. Baruch College at City University of New York University
CFA Charterholder, CFA Institute

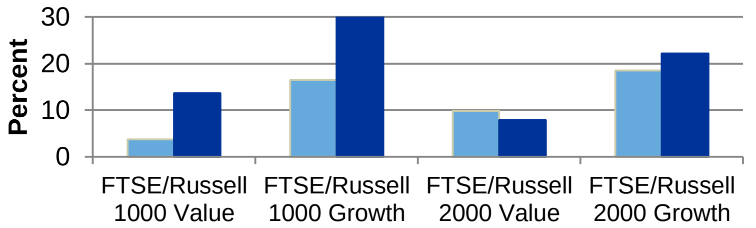

SEI
New ways.
New answers.®

Equity Market Review

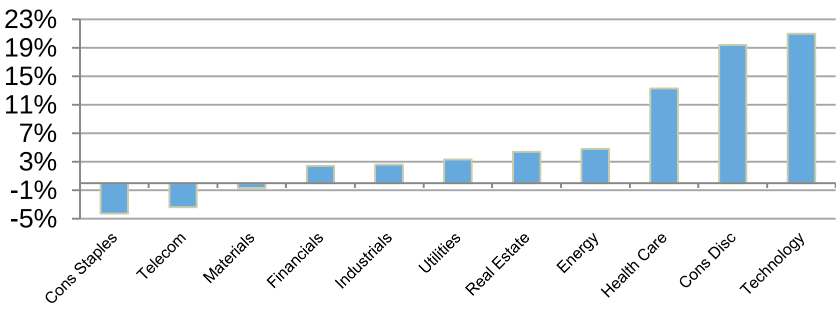
- U.S. equity leadership transitioned from large cap stocks to their smaller cap counterparts in 2018.
- Growth continued its dominance over value, however, with the FTSE/Russell 3000 Growth Index outperforming the FTSE/ Russell 3000 Value Index by over 1,400 basis points (27.5% vs. 13.0%) over the trailing 12 months.
- Developed international markets lagged the U.S., generating a slightly negative YTD return.
- Emerging markets, the best performing major asset class last year, fell over -7% on trade war fears, among other concerns.
- We still think this old bull has some life left in it. That said, the risks to the equity market now seem more balanced rather than skewed to the bullish side.

Total Returns by Region, Size and Style





S&P 500 Sector Performance – YTD 2018

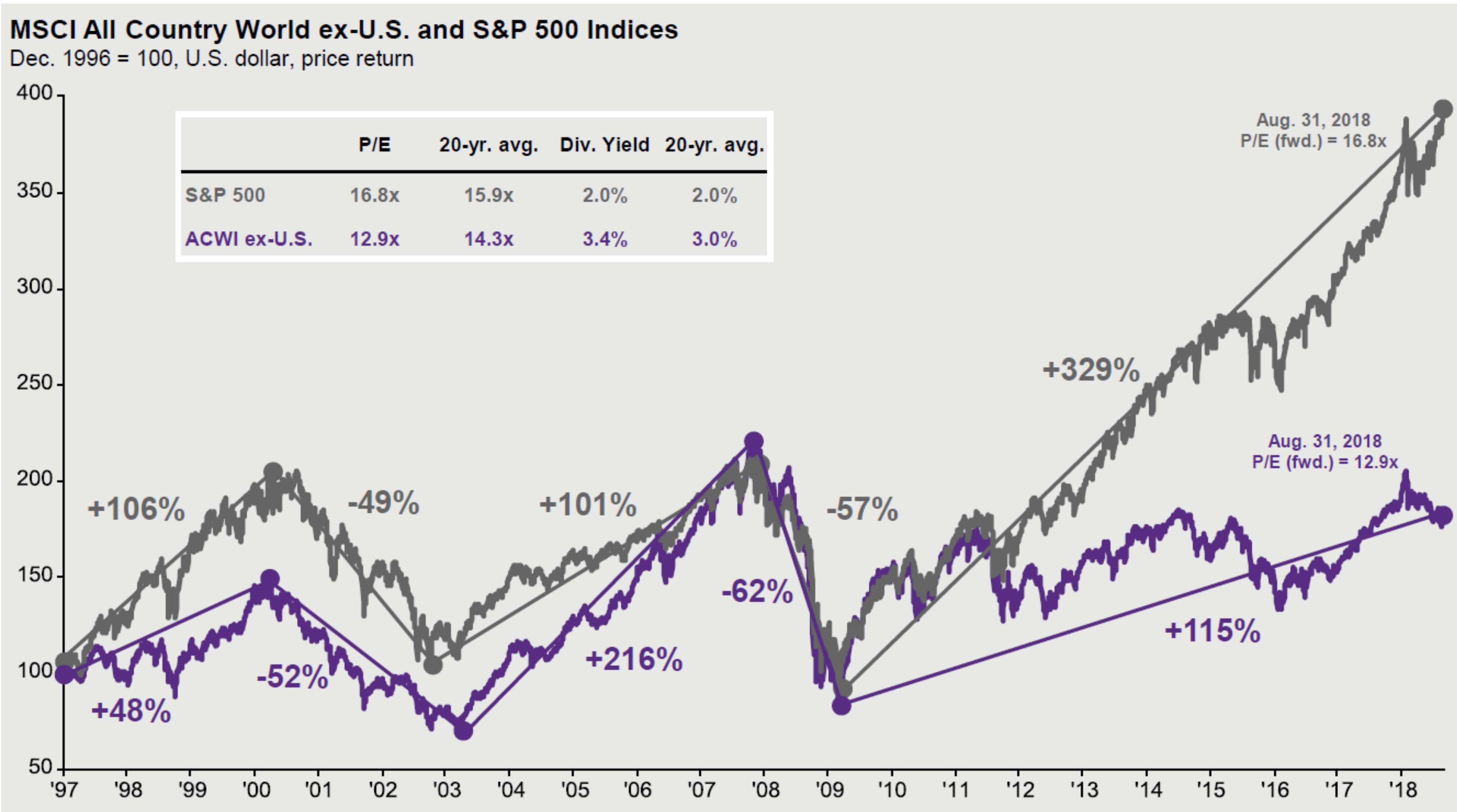


Sector Exposures

- Similar to 2017, technology has continued to be the best performing sector YTD. Consumer discretionary and health care have also been strong this year.
- Lagging sectors consisted largely of those with more defensive characteristics and/or higher dividend yields.

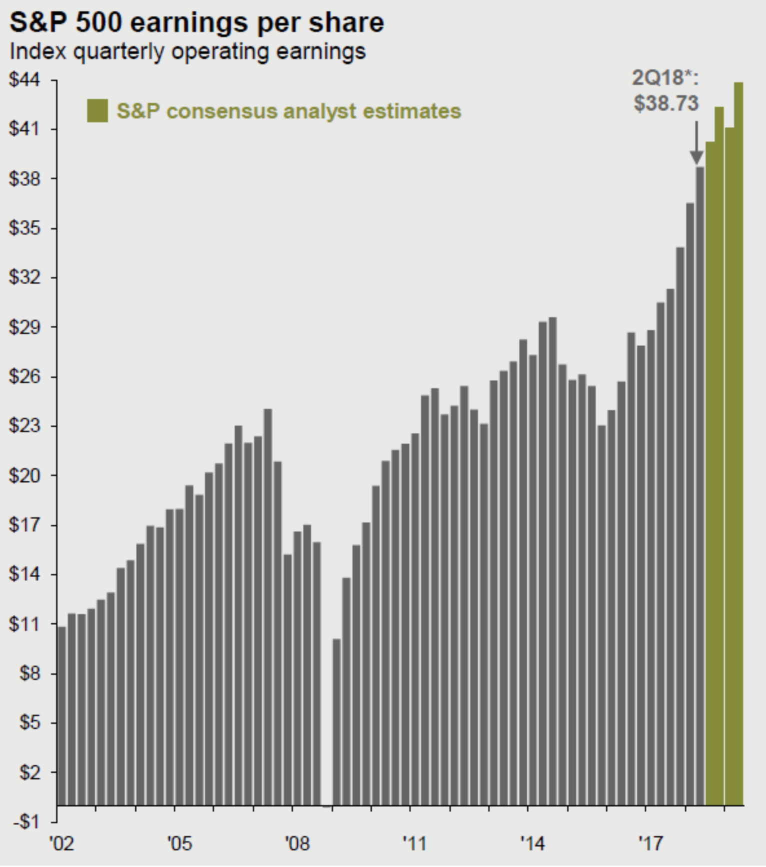
Source (all charts): FactSet, SEI Data Portal. US LC = FTSE/Russell 1000 Index, US SC = FTSE/Russell 2000 Index, EAFE = MSCI EAFE Index, EM = MSCI Emerging Markets Index. Index returns are for illustrative purposes only and do not represent actual fund performance. Index performance returns do not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index. Past performance is no guarantee of future results. Data as of 8/31/18.

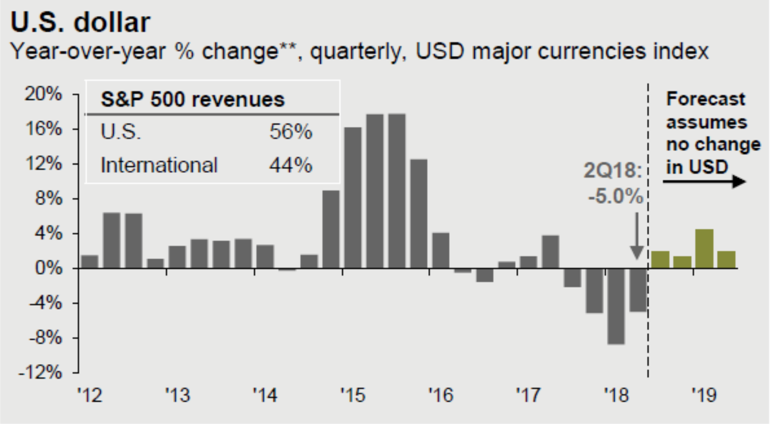
Equity Returns Domestic and International

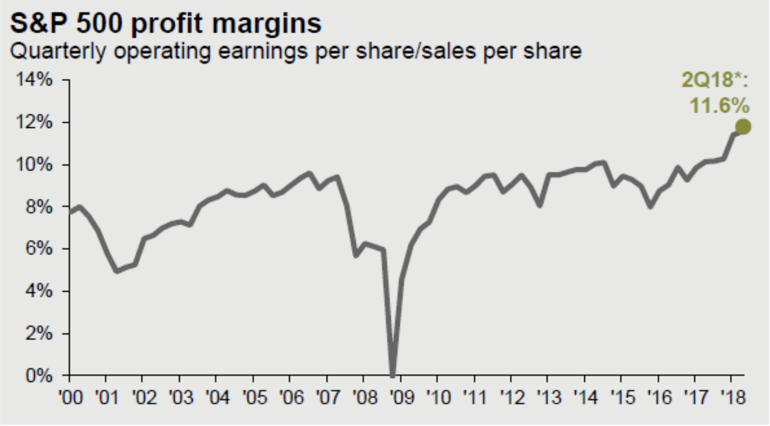


Source: FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management.
Forward price to earnings ratio is a bottom-up calculation based on the most recent index price, divided by consensus estimates for earnings in the next 12 months (NTM), and is provided by FactSet Market Aggregates. Returns are cumulative and based on price movement only, and do not include the reinvestment of dividends. Dividend yield is calculated as consensus estimates of dividends for the next 12 months, divided by most recent price, as provided by FactSet Market Aggregates. Past performance is not a reliable indicator of current and future results.
Guide to the Markets – U.S. Data are as of August 31, 2018.

Corporate Profits

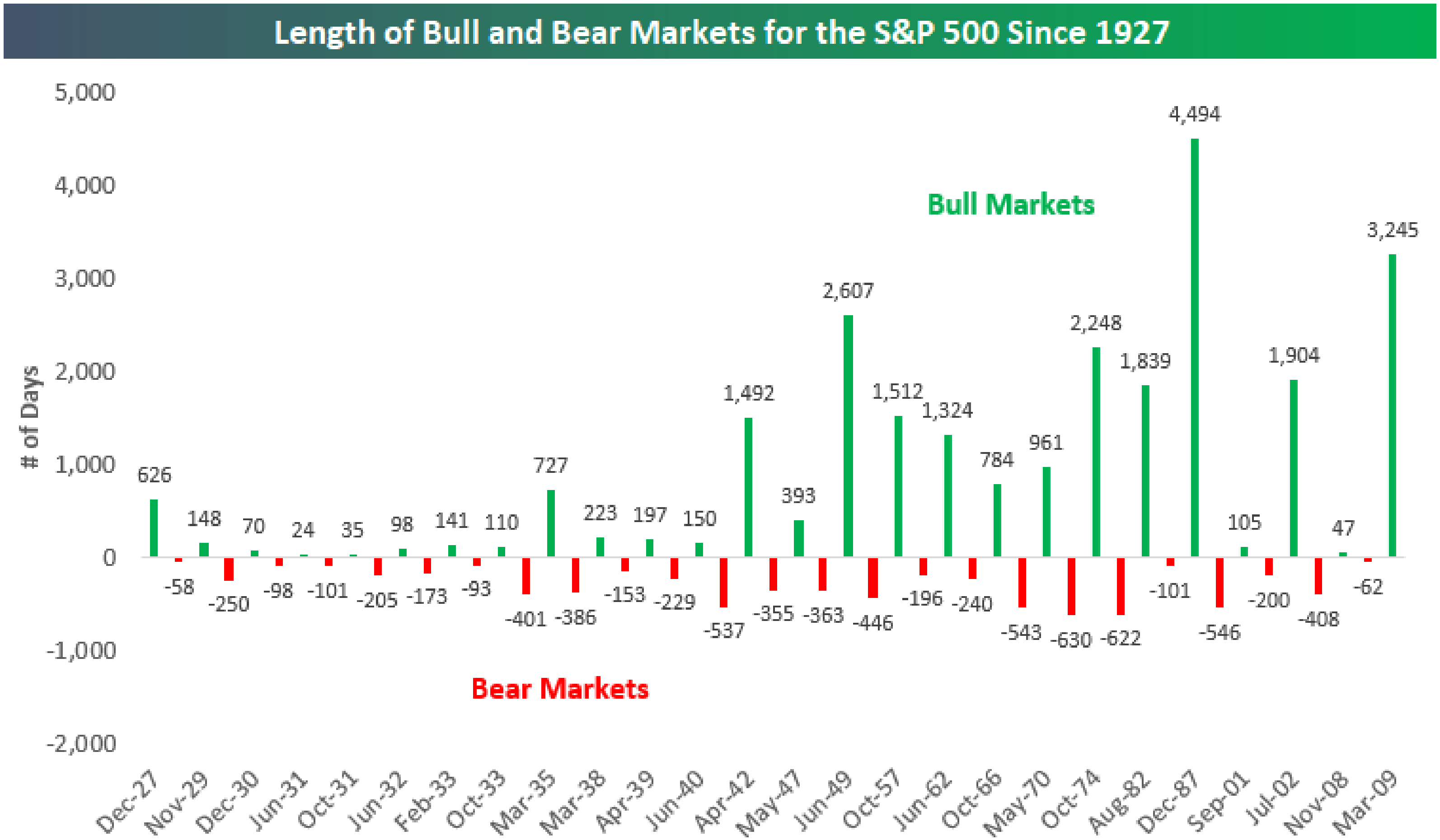






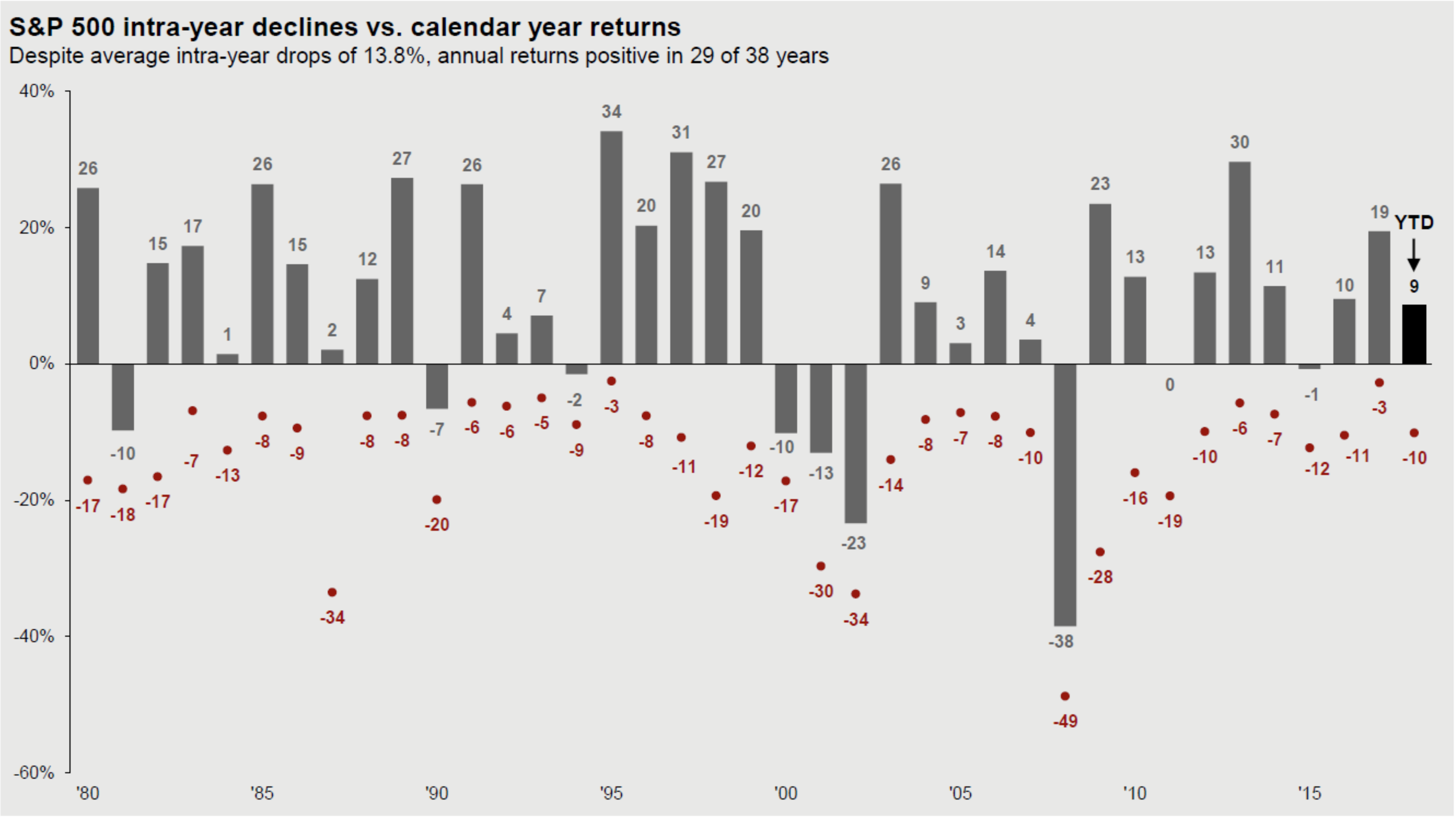
Source: Compustat, FactSet, Standard & Poor's, J.P. Morgan Asset Management; (Top right) Federal Reserve, S&P 500 individual company 10k filings, S&P Index Alert.
EPS levels are based on operating earnings per share. Earnings estimates are Standard & Poor's consensus analyst expectations. Past performance is not indicative of future returns. Currencies in the Trade Weighted U.S. Dollar Major Currencies Index are: Australian dollar, British pound, Canadian dollar, euro, Japanese yen, Swedish krona and Swiss franc. *2Q18 earnings are calculated using actual earnings for 97.8% of S&P 500 market cap and earnings estimates for the remaining companies. **Year-over-year change is calculated using the quarterly average for each period. USD forecast assumes no change in the U.S. dollar from its August 31, 2018 level. S&P 500 revenue breakdown comes from Standard & Poor's S&P 500 2017: Global Sales report as of June 2018.
Guide to the Markets – U.S. Data are as of August 31, 2018.

The Current Bull Market



Data are computed from the S&P 500 since 1957 and S&P 90 from 1926 to 1957.
Index returns are for illustrative purposes only and do not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index. Past performance does not guarantee future results.
Source: Bespoke Investment Report 8/16/18

Equity Returns and Volatility



Source: FactSet, Standard & Poor's, J.P. Morgan Asset Management.
Returns are based on price index only and do not include dividends. Intra-year drops refers to the largest market drops from a peak to a trough during the year. For illustrative purposes only. Returns shown are calendar year returns from 1980 to 2017, over which time period the average annual return was 8.8%.
Guide to the Markets – U.S. Data are as of August 31, 2018.

The Outlook: The Market Plot Takes a New Twist

The good news

- Growth in the global economy remains solid, with the U.S. accelerating lately while other major developed and emerging economies experiencing a modest slowing.
- U.S. companies are enjoying strong profits growth, aided not just by lower tax rates but also accelerating revenue growth.
- As the U.S. labor market tightens beyond the full-employment threshold, lower-income households are finally enjoying a notable recovery in hourly earnings.
- Although inflation has picked up, especially at the headline Consumer Price Index level (owing to rising energy prices), there does not seem to be any danger of it accelerating in a worrisome way in the months ahead.
- The Fed will likely continue to hike its policy interest rate in a slow and gradual fashion, while other major central banks drag their feet until inflation in their countries/regions begins to run closer to target.

The bad news

- Global equity and currency markets continue to be volatile, with the U.S. outperforming other markets in the year-to-date.
- Tensions over trade have risen sharply in recent months as the imposition of tariffs by the U.S. results in retaliatory moves by other nations.
- The economic impact of the tariffs put in place by the end of June should be minimal, but further measures threatened by the U.S. – including tariffs on autos and a vastly larger amount of Chinese goods – could severely disrupt global manufacturers' supply chains.
- The sharp correction in emerging-market currencies and stock markets may prove to be an overreaction to idiosyncratic events within different countries, although the impact of a global trade war would certainly be problematic.
- The risks to the equity market in the U.S. and elsewhere now seem more balanced rather than skewed to the bullish side.

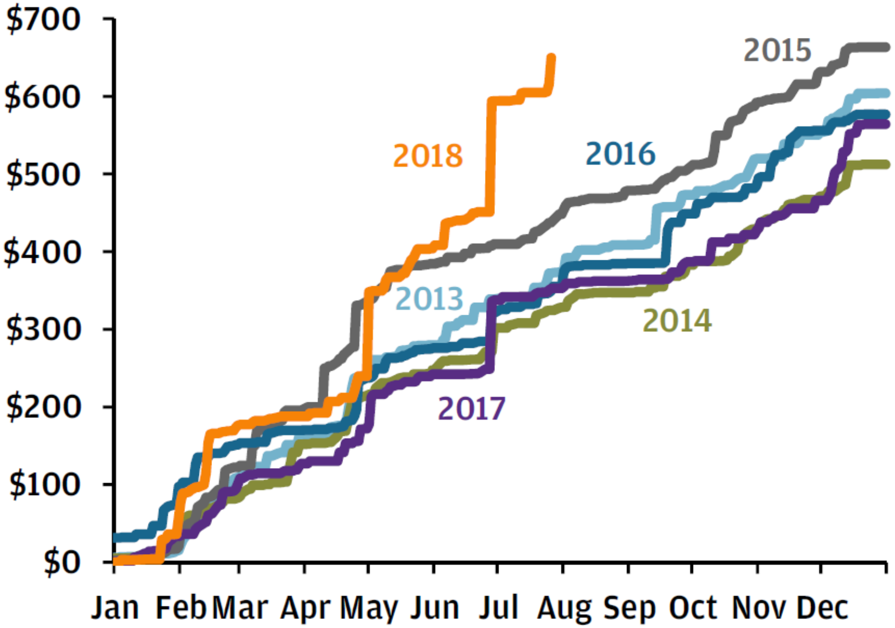
Data as of 6/30/2018 unless otherwise noted

Tax Reform Implications & Corporate Uses of Cash:

Share Repurchases, Mergers & Acquisitions

EXHIBIT 2: BENEFITS FROM TAX REFORM HAVE PROVIDED A SIGNIFICANT BOOST TO BUYBACKS

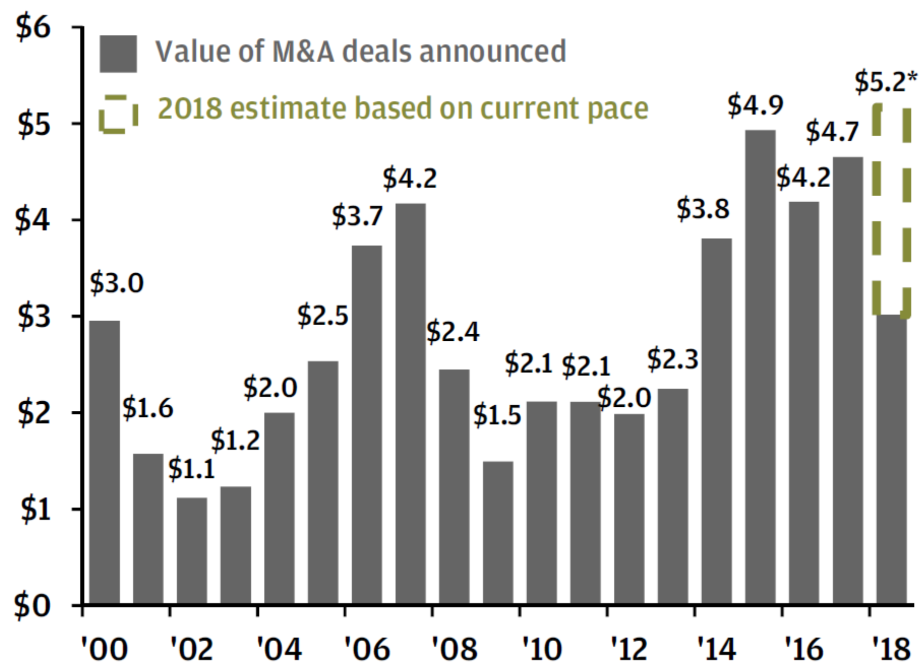
S&P 500 announced buybacks, $bn



Source: Bloomberg, Standard & Poor's, J.P. Morgan Asset Management. Based on company announcements. Data are as of 7/26/2018.

EXHIBIT 3: M&A IS ALSO POISED TO HAVE A RECORD YEAR

Announced M&A transactions globally, $bn



Source: Bloomberg, J.P. Morgan Asset Management. *2018 estimate is based on current pace of M&A through 7/26/2018. Data are as of 7/26/2018.

Current Political Landscape Ahead of the Midterms

› House of Representatives:

- 236 Republicans, 193 Democrats, 6 Vacancies

  (218 needed for a majority)

- All 435 seats to be contested in November

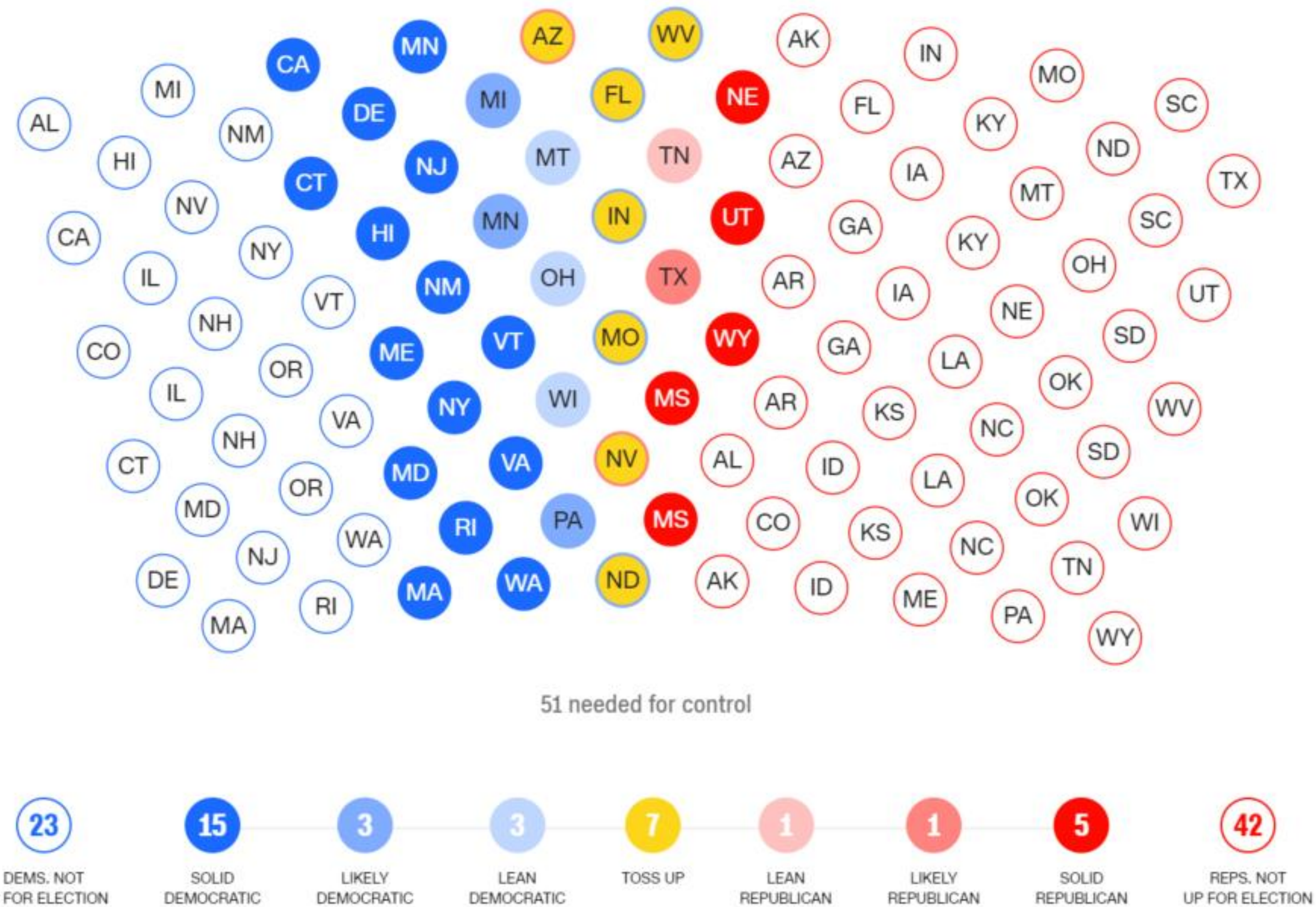
› Senate:

- 51 Republicans, 49 Democrats, V.P. Pence = tiebreaker
- (50 R's / 51 D's needed for a majority)
- 35 of the 100 seats will be contested
- Democrats defending 26* seats, Republicans defending 9

*includes Independents Angus King (ME) and Bernie Sanders (VT)

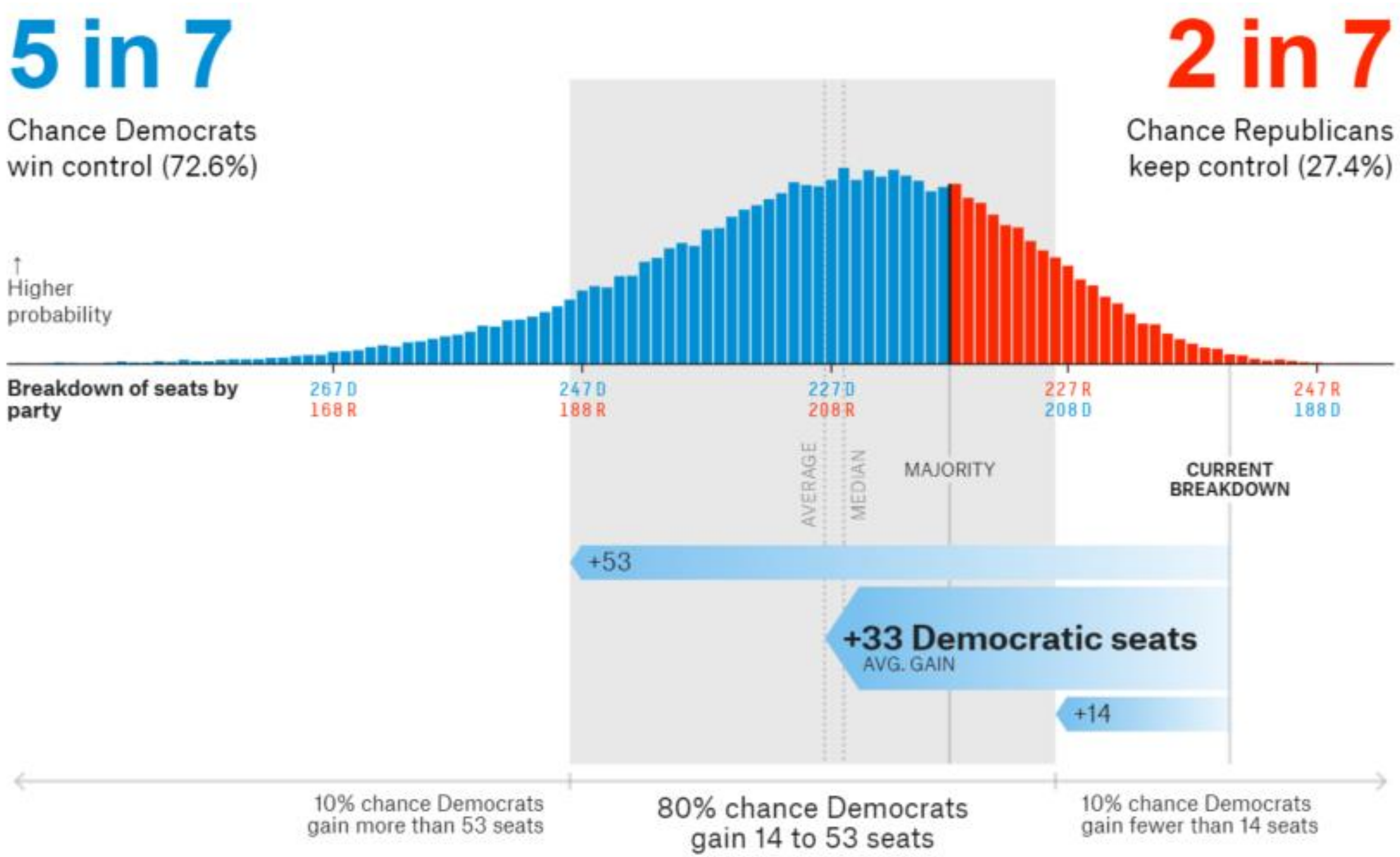
Sources: www.cnn.com, 8/23/18; political science class

Forecasting the race for the Senate



Source: www.cnn.com, 8/31/18

Forecasting the race for the House



Source: www.fivethirtyeight.com, 9/07/18

The Elephant in the Room (if Democrats win the House)

Impeachment?

- House creates Articles of Impeachment, then Senate votes to convict/acquit; requires 2/3 majority (67 votes) to convict

- “If I ever got impeached, I think the market would crash. I think everybody would be very poor.” – President Trump, Fox News appearance, 8/23/18

- Recent history: S&P 500 rose for 5 consecutive months leading up to President Clinton’s Feb., 1999 acquittal

Other Potential Political Issues

Possible Democratic Initiatives?

- Reverse elements of recent tax reform legislation
- *e.g., raise corporate tax rate, capital gains rates, undo SALT limit*
- Infrastructure spending
- Minimum wage increase

Possible Republican Initiatives?

- Tax Cuts 2.0
- Enhance retirement plans (RMDs, small business options)
- Index capital gains (cost basis) to inflation
- Revise/update trade agreements (instead of tariffs?)

Index Definitions

All indexes are unmanaged and an individual cannot invest directly in an index. Index returns do not include fees or expenses.

Equities:

The **Dow Jones Industrial Average** is a price-weighted average of 30 actively traded blue-chip U.S. stocks.

The **MSCI ACWI (All Country World Index)** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets.

The **MSCI EAFE Index (Europe, Australasia, Far East)** is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the US & Canada.

The **MSCI Emerging Markets Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets.

The **MSCI Europe Index** is a free float-adjusted market capitalization index that is designed to measure developed market equity performance in Europe.

The **MSCI Pacific Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the Pacific region.

The **Russell 1000 Index®** measures the performance of the 1,000 largest companies in the Russell 3000.

The **Russell 1000 Growth Index®** measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

The **Russell 1000 Value Index®** measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.

The **Russell 2000 Index®** measures the performance of the 2,000 smallest companies in the Russell 3000 Index.

The **Russell 2000 Growth Index®** measures the performance of those Russell 2000 companies with higher price-to-book ratios and higher forecasted growth values.

The **Russell 2000 Value Index®** measures the performance of those Russell 2000 companies with lower price-to-book ratios and lower forecasted growth values.

The **Russell 3000 Index®** measures the performance of the 3,000 largest U.S. companies based on total market capitalization.

The **Russell Midcap Index®** measures the performance of the 800 smallest companies in the Russell 1000 Index.

The **Russell Midcap Growth Index ®** measures the performance of those Russell Midcap companies with higher price-to-book ratios and higher forecasted growth values. The stocks are also members of the Russell 1000 Growth index.

The **Russell Midcap Value Index ®** measures the performance of those Russell Midcap companies with lower price-to-book ratios and lower forecasted growth values. The stocks are also members of the Russell 1000 Value index.

The **S&P 500 Index** is widely regarded as the best single gauge of the U.S. equities market. The index includes a representative sample of 500 leading companies in leading industries of the U.S. economy. The **S&P 500 Index** focuses on the large-cap segment of the market; however, since it includes a significant portion of the total value of the market, it also represents the market.

Fixed income:

The **Barclays 1-3 Month U.S. Treasury Bill Index** includes all publicly issued zero-coupon US Treasury Bills that have a remaining maturity of less than 3 months and more than 1 month, are rated investment grade, and have $250 million or more of outstanding face value. In addition, the securities must be denominated in U.S. dollars and must be fixed rate and non convertible.

The **Barclays Global High Yield Index** is a multi-currency flagship measure of the global high yield debt market. The index represents the union of the US High Yield, the Pan-European High Yield, and Emerging Markets (EM) Hard Currency High Yield Indices. The high yield and emerging markets sub-components are mutually exclusive. Until January 1, 2011, the index also included CMBS high yield securities.

The **Barclays Municipal Index**: consists of a broad selection of investment- grade general obligation and revenue bonds of maturities ranging from one year to 30 years. It is an unmanaged index representative of the tax-exempt bond market.

The **Barclays US Dollar Floating Rate Note (FRN) Index** provides a measure of the U.S. dollar denominated floating rate note market.

The **Barclays US Corporate Investment Grade Index** is an unmanaged index consisting of publicly issued US Corporate and specified foreign debentures and secured notes that are rated investment grade (Baa3/BBB or higher) by at least two ratings agencies, have at least one year to final maturity and have at least $250 million par amount outstanding. To qualify, bonds must be SEC-registered.

The **Barclays US High Yield Index** covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (sovereign rating of Baa1/BBB+/BBB+ and below using the middle of Moody's, S&P, and Fitch) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included.

The **Barclays US Mortgage Backed Securities Index** is an unmanaged index that measures the performance of investment grade fixed-rate mortgage backed pass-through securities of GNMA, FNMA and FHLMC.

The **Barclays US TIPS Index** consists of Inflation-Protection securities issued by the U.S. Treasury.

The **J.P. Morgan Emerging Market Bond Global Index (EMBI)** includes U.S. dollar denominated Brady bonds, Eurobonds, traded loans and local market debt instruments issued by sovereign and quasi-sovereign entities.

The **J.P. Morgan Domestic High Yield Index** is designed to mirror the investable universe of the U.S. dollar domestic high yield corporate debt market.

The **J.P. Morgan Corporate Emerging Markets Bond Index Broad Diversified (CEMBI Broad Diversified)** is an expansion of the **J.P. Morgan Corporate Emerging Markets Bond Index (CEMBI)**. The CEMBI is a market capitalization weighted index consisting of U.S. dollar denominated emerging market corporate bonds.

The **J.P. Morgan Emerging Markets Bond Index Global Diversified (EMBI Global Diversified)** tracks total returns for U.S. dollar-denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities: Brady bonds, loans, Eurobonds. The index limits the exposure of some of the larger countries.

The **J.P. Morgan GBI EM Global Diversified** tracks the performance of local currency debt issued by emerging market governments, whose debt is accessible by most of the international investor base.

The **U.S. Treasury Index** is a component of the U.S. Government index.

Index Definitions

Other asset classes:

The **Alerian MLP Index** is a composite of the 50 most prominent energy Master Limited Partnerships (MLPs) that provides investors with an unbiased, comprehensive benchmark for the asset class.

The **Bloomberg Commodity Index** and related sub-indices are composed of futures contracts on physical commodities and represents twenty two separate commodities traded on U.S. exchanges, with the exception of aluminum, nickel, and zinc

The **Cambridge Associates U.S. Global Buyout and Growth Index®** is based on data compiled from 1,768 global (U.S. & ex – U.S.) buyout and growth equity funds, including fully liquidated partnerships, formed between 1986 and 2013.

The **CS/Tremont Hedge Fund Index** is compiled by Credit Suisse Tremont Index, LLC. It is an asset-weighted hedge fund index and includes only funds, as opposed to separate accounts. The Index uses the Credit Suisse/Tremont database, which tracks over 4500 funds, and consists only of funds with a minimum of US$50 million under management, a 12-month track record, and audited financial statements. It is calculated and rebalanced on a monthly basis, and shown net of all performance fees and expenses. It is the exclusive property of Credit Suisse Tremont Index, LLC.

The **HFRI Monthly Indices (HFRI)** are equally weighted performance indexes, utilized by numerous hedge fund managers as a benchmark for their own hedge funds. The HFRI are broken down into 4 main strategies, each with multiple sub strategies. All single-manager HFRI Index constituents are included in the HFRI Fund Weighted Composite, which accounts for over 2200 funds listed on the internal HFR Database.

The **NAREIT EQUITY REIT Index** is designed to provide the most comprehensive assessment of overall industry performance, and includes all tax-qualified real estate investment trusts (REITs) that are listed on the NYSE, the American Stock Exchange or the NASDAQ National Market List.

The **NFI-ODCE**, short for NCREIF Fund Index - Open End Diversified Core Equity, is an index of investment returns reporting on both a historical and current basis the results of 33 open-end commingled funds pursuing a core investment strategy, some of which have performance histories dating back to the 1970s. The NFI-ODCE Index is capitalization-weighted and is reported gross of fees. Measurement is time-weighted.

Definitions:

Investing in **alternative assets** involves higher risks than traditional investments and is suitable only for sophisticated investors. Alternative investments involve greater risks than traditional investments and should not be deemed a complete investment program. They are not tax efficient and an investor should consult with his/her tax advisor prior to investing. Alternative investments have higher fees than traditional investments and they may also be highly leveraged and engage in speculative investment techniques, which can magnify the potential for investment loss or gain. The value of the investment may fall as well as rise and investors may get back less than they invested.

Bonds are subject to interest rate risks. Bond prices generally fall when interest rates rise.

Investments in **commodities** may have greater volatility than investments in traditional securities, particularly if the instruments involve leverage. The value of commodity-linked derivative instruments may be affected by changes in overall market movements, commodity index volatility, changes in interest rates, or factors affecting a particular industry or commodity, such as drought, floods, weather, livestock disease, embargoes, tariffs and international economic, political and regulatory developments. Use of leveraged commodity-linked derivatives creates an opportunity for increased return but, at the same time, creates the possibility for greater loss.

Derivatives may be riskier than other types of investments because they may be more sensitive to changes in economic or market conditions than other types of investments and could result in losses that significantly exceed the original investment. The use of derivatives may not be successful, resulting in investment losses, and the cost of such strategies may reduce investment returns.

Investments in **emerging markets** can be more volatile. The normal risks of investing in foreign countries ar heightened when investing in emerging markets. In addition, the small size of securities markets and the low trading volume may lead to a lack of liquidity, which leads to increased volatility. Also, emerging markets ma not provide adequate legal protection for private or foreign investment or private property.

The price of **equity** securities may rise, or fall because of changes in the broad market or changes in a company's financial condition, sometimes rapidly or unpredictably. These price movements may result from factors affecting individual companies, sectors or industries, or the securities market as a whole, such as changes in economic or political conditions. Equity securities are subject to "stock market risk" meaning that stock prices in general may decline over short or extended periods of time.

Equity market neutral strategies employ sophisticated quantitative techniques of analyzing price data to ascertain information about future price movement and relationships between securities, select securities for purchase and sale. Equity Market Neutral Strategies typically maintain characteristic net equity market exposure no greater than 10% long or short.

Global macro strategies trade a broad range of strategies in which the investment process is predicated or movements in underlying economic variables and the impact these have on equity, fixed income, hard currency and commodity markets.

International investing involves a greater degree of risk and increased volatility. Changes in currency exchange rates and differences in accounting and taxation policies outside the U.S. can raise or lower returns. Some overseas markets may not be as politically and economically stable as the United States and other nations.

There is no guarantee that the use of **long and short positions** will succeed in limiting an investor's exposure to domestic stock market movements, capitalization, sector swings or other risk factors. Using long and short selling strategies may have higher portfolio turnover rates. Short selling involves certain risks, including additional costs associated with covering short positions and a possibility of unlimited loss on certa short sale positions.

Merger arbitrage strategies which employ an investment process primarily focused on opportunities in equity and equity related instruments of companies which are currently engaged in a corporate transaction.

Mid-capitalization investing typically carries more risk than investing in well-established "blue-chip" companies. Historically, mid-cap companies' stock has experienced a greater degree of market volatility thar the average stock.

Price to forward earnings is a measure of the price-to-earnings ratio (P/E) using forecasted earnings. **Price to book value** compares a stock's market value to its book value. **Price to cash flow** is a measure of the market's expectations of a firm's future financial health. **Price to dividends** is the ratio of the price of a shar on a stock exchange to the dividends per share paid in the previous year, used as a measure of a company's potential as an investment.

Real estate investments may be subject to a higher degree of market risk because of concentration in a specific industry, sector or geographical sector. Real estate investments may be subject to risks including, bu not limited to, declines in the value of real estate, risks related to general and economic conditions, changes in the value of the underlying property owned by the trust and defaults by borrower.

Relative Value Strategies maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities.

Small-capitalization investing typically carries more risk than investing in well-established "blue-chip" companies since smaller companies generally have a higher risk of failure. Historically, smaller companies' stock has experienced a greater degree of market volatility than the average stock.

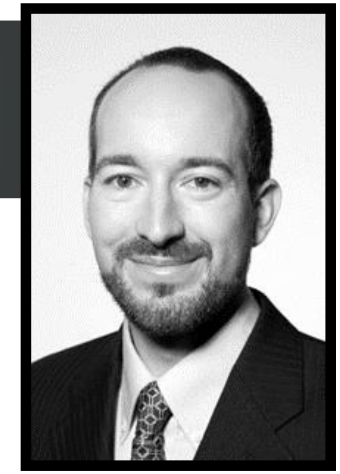
Disclosures

- This material represents an assessment of the market environment at a specific point in time and is not intended to be a forecast of future events, or a guarantee of future results. This information should not be relied upon by the reader as research or investment advice. This information is for educational purposes only.
- Index returns are for illustrative purposes only and do not represent actual fund performance. Index performance returns do not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index. Past performance does not guarantee future results.
- There are risks involved with investing, including loss of principal. Current and future portfolio holdings are subject to risks as well. Diversification may not protect against market risk. There is no assurance the goals of the strategies discussed will be met. International investments may involve risk of capital loss from unfavorable fluctuation in currency values, from differences in generally accepted accounting principles or from economic or political instability in other nations. Emerging markets involve heightened risks related to the same factors as well as increased volatility and lower trading volume. Narrowly focused investments and smaller companies typically exhibit higher volatility. Bonds and bond funds will decrease in value as interest rates rise. High yield bonds involve greater risks of default or downgrade and are more volatile than investment grade securities, due to the speculative nature of their investments. In addition to the normal risks associated with investing, real estate and REIT investments are subject to changes in economic conditions, credit risk and interest rate fluctuations. TIPS can provide investors a hedge against inflation, as the inflation adjustment feature helps preserve the purchasing power of the investment. Because of this inflation adjustment feature, inflation protected bonds typically have lower yields than conventional fixed rate bonds.
- **To determine if the Funds are an appropriate investment for you, carefully consider the investment objectives, risk factors and charges and expenses before investing. This and other information can be found in the Funds' summary and full prospectuses, which may be obtained by calling 1-800-DIAL-SEI. Read it carefully before investing.**
- SEI Investments Management Corporation (SIMC) is the adviser to the SEI funds, which are distributed by SEI Investments Distribution Co (SIDCO). SIMC and SIDCO are wholly owned subsidiaries of SEI Investments Company. Neither SEI nor its subsidiaries is affiliated with your financial advisor.

Neither SEI nor its affiliates provide tax advice. Please note that (i) any discussion of U.S. tax matters contained in this communication cannot be used by you for the purpose of avoiding tax penalties; (ii) this communication was written to support the promotion or marketing of the matters addressed herein: and (iii) you should seek advice based on your particular circumstances from an independent tax advisor.

For those SEI Funds which employ the 'manager of managers' structure, SEI Investments Management Corporation (SIMC) has ultimate responsibility for the investment performance of the Funds due to its responsibility to oversee the sub-advisers and recommend their hiring, termination and replacement.

Robert Kuharic, CFA®



Robert Kuharic, CFA®
Investment Strategist
Russell Investment Division

Robert Kuharic is the Investment Strategist for Tax Managed Solutions at Russell Investments. In his role, Rob implements model strategies into client portfolios and helps set strategic asset allocation targets while driving product innovation on not only the private client side of the business but also globally.

Prior to assuming this role in 2014, Rob was a portfolio manager on the Multi-Asset team focused on Tax Managed Solutions. He also served as the Portfolio Manager on Russell's Tax Managed Equity portfolios and separately managed accounts (SMAs) in the Tax Managed space at Russell Investments starting in 2002. In 2010, Rob managed Russell Investments' Small Cap Funds; he implemented and managed a Small Cap separate account for the Korean National Pension System. His Russell Investments career started as an analyst in Russell Investments Proprietary Research (RPR), a division within Russell Investments trading group. Prior to Russell Investments, Rob worked at ING Group and Furman Selz Capital Management, performing research and performance analysis, as well as quantitative and risk analysis.

Rob is a principal spokesperson for Russell Investments' investment process and frequently speaks to clients, contributes to Russell Investments "Helping Advisors" blog, and presents at industry conferences to help clients understand the potential benefits of Tax Managed investing.

Rob holds a B.B.A. in Finance & Investments from Bernard M. Baruch College at City University of New York University. He is a member of the Seattle Chapter of Financial Analysts and is also a CFA® Charterholder.

B.B.A., Finance & Investments, Bernard M. Baruch College at City University of New York University, CFA Charterholder, CFA Institute

Goal: Growing After-Tax Wealth

Tax-Managed Investing

[[PresenterName]], [[AD_HOC:PresenterTitle]]

[[AD_HOC:DATE]]

Important Information & disclosures

Please remember that all investments carry some level of risk, including the potential loss of principal invested. They do not typically grow at an even rate of return and may experience negative growth. As with any type of portfolio structuring, attempting to reduce risk and increase return could, at certain times, unintentionally reduce returns.

Income from funds managed for tax-efficiency may be subject to an alternative minimum tax, and/or any applicable state and local taxes.

Indexes and/or benchmarks are unmanaged and cannot be invested in directly. Past performance is not indicative of future results.

The Morningstar Large Cap Equity Blend universe are fairly representative of the overall U.S. stock market in size, growth rates, and price. Stocks in the top 70% of the capitalization of the U.S. equity market are defined as large-cap. The blend style is assigned to portfolios where neither growth nor value characteristics predominate. These portfolios tend to invest across the spectrum of U.S. industries, and owing to their broad exposure, the portfolios' returns are often similar to those of the S&P 500 Index.

Historical data shown not an indicator of future results. Other universes/indexes will produce different results.

End investors should consult with their financial and tax advisors before investing.

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Not FDIC Insured
May Lose Value
No Bank Guarantee

“The hardest thing to understand in the world is the income tax.”

—Albert Einstein

Taxes are hard

272

1,458

783,000

11,400

3,000,000

Word Count

GETTYSBURG ADDRESS

DECLARATION OF INDEPENDENCE

BIBLE

TAX LAW 1913

TAX LAW TODAY

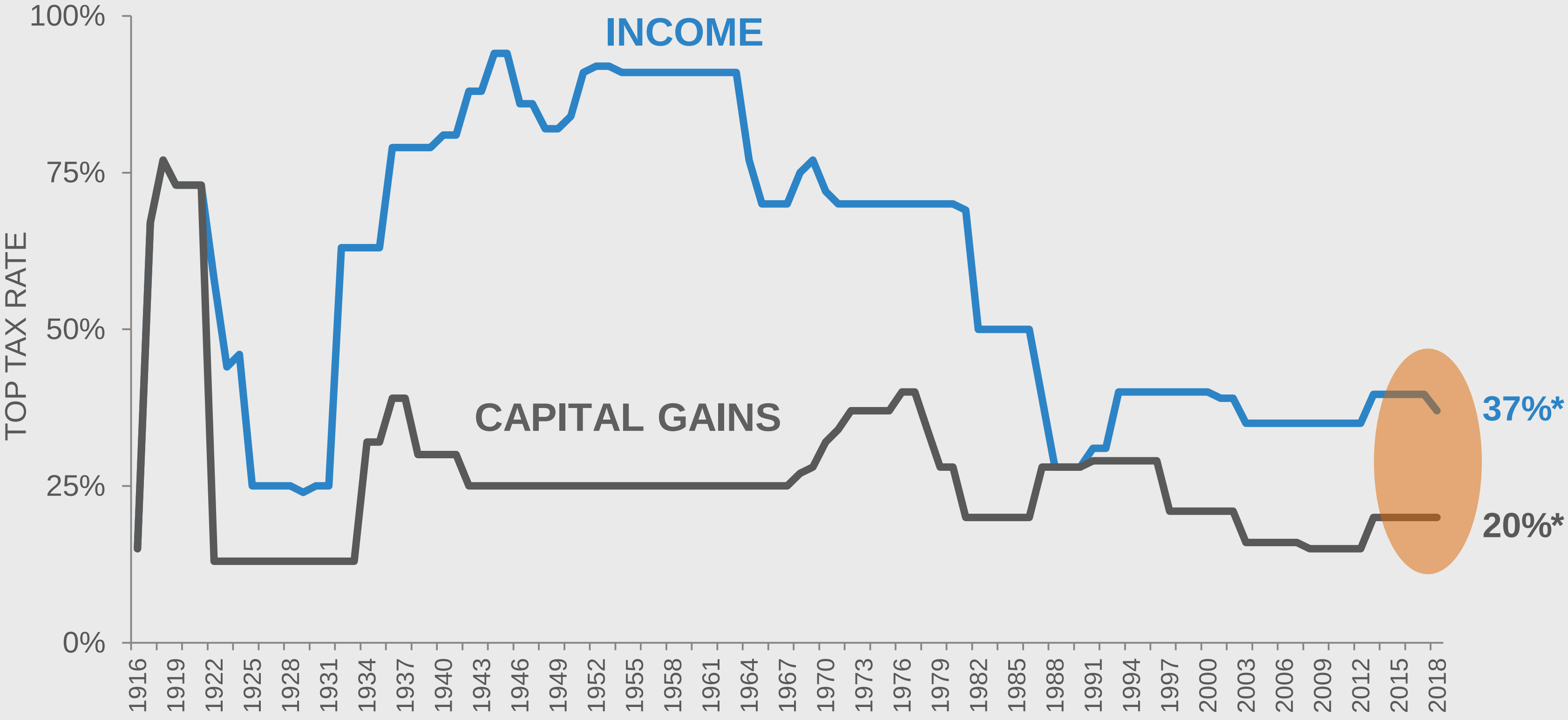
1 Taxes: The impact on investment returns

2 Tax-Managed investing: Introduction to after-tax wealth

3 The opportunity: Improving after-tax wealth

Where are tax rates today?

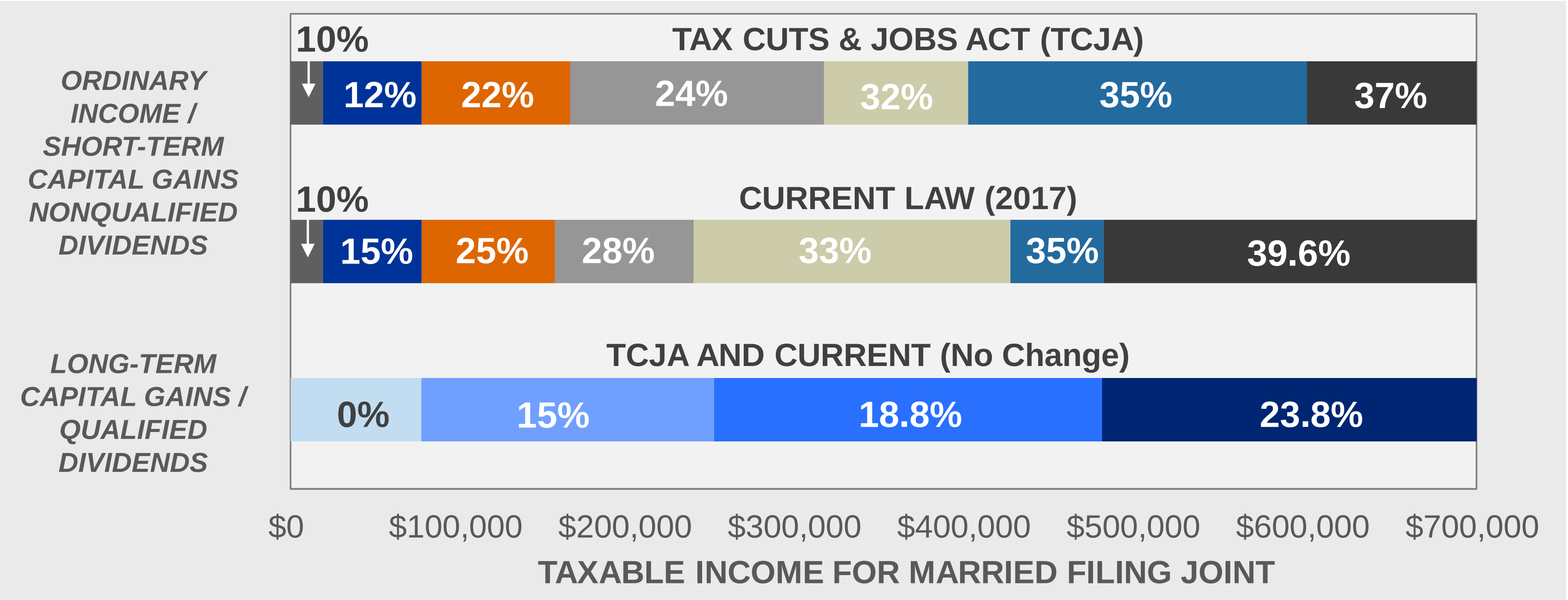
1916-2018



Yes, tax rates have changed. Make the tax conversation productive and focus on what you can control: How you invest.

* Does not include 3.8% tax for investment income
Source: http://www.taxpolicycenter.org/taxfacts/displayafact.cfm?Docid=543

Individual investor tax code changes



WHAT'S NOT CHANGING?

- Tax rates/thresholds for long-term capital gains / qualified dividends
- 3.8% Net Investment Income Tax (NIIT)
- Treatment of municipal bond interest
- Cost Basis Rules: No FIFO rules

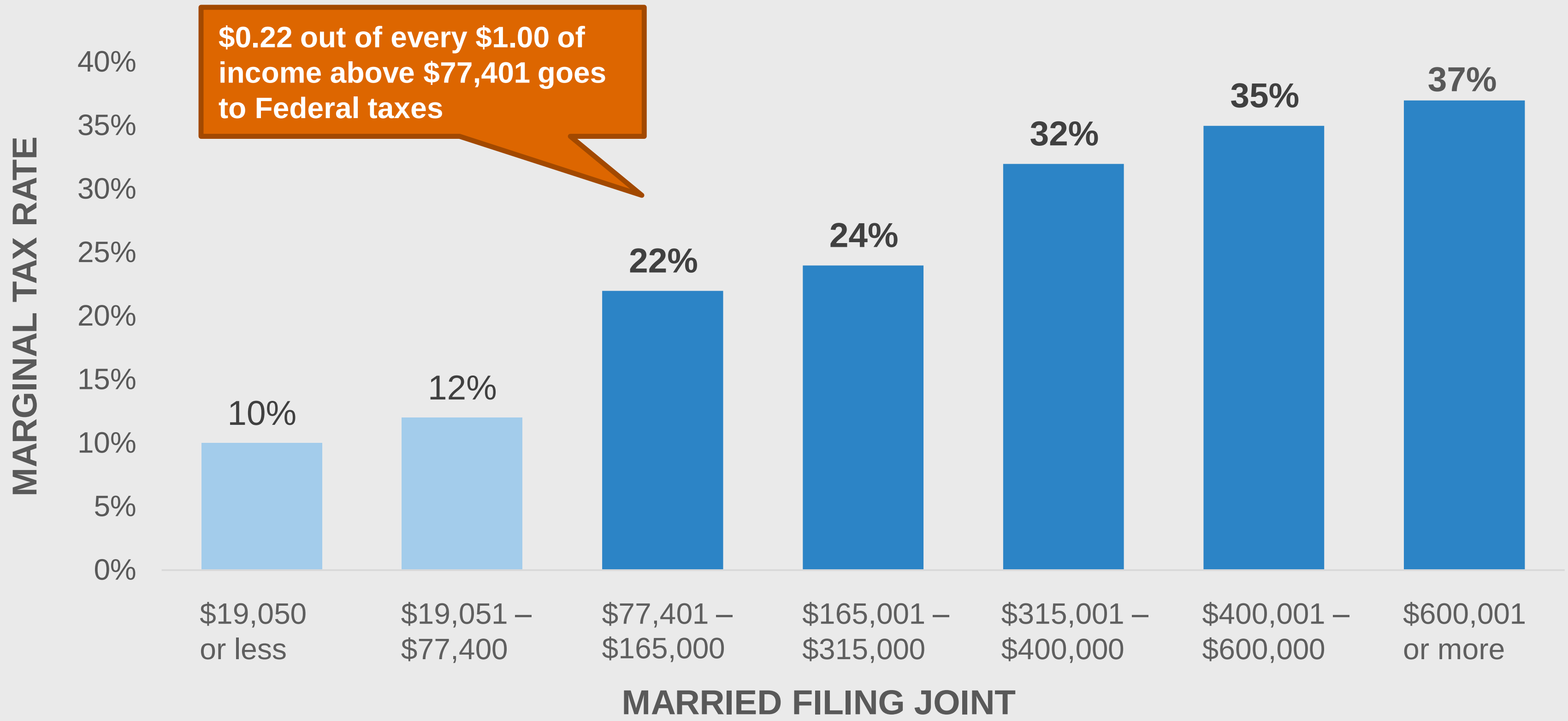
WHAT IS CHANGING?

- Lower rates/new income thresholds
- Higher std. deduction/no personal exemption*
- Reduced limits to mortgage interest deduction
- $10k limit state/local taxes & property taxes
- Treatment of pass-through income
- Individual changes sunset after 2025

https://www.congress.gov/bill/115th-congress/house-bill/1/text. *Reduced Personal Exemption if legally blind, or over 65 years of age.

Who should care about the impact of taxes on investments?

2018 MARGINAL TAXABLE INCOME RATES (PAYABLE IN 2019)



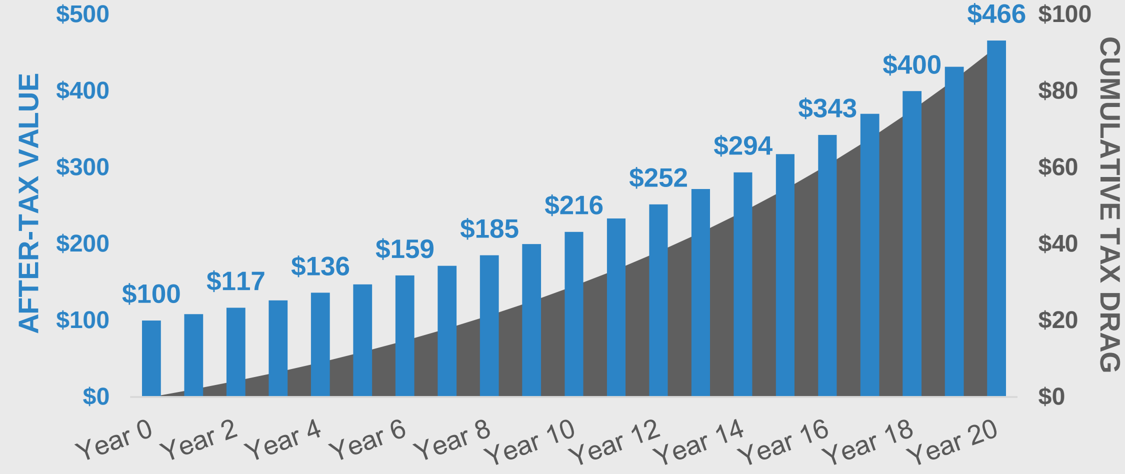
You don't need to be in the top bracket to feel the pinch of taxes

Source: Internal Revenue Service

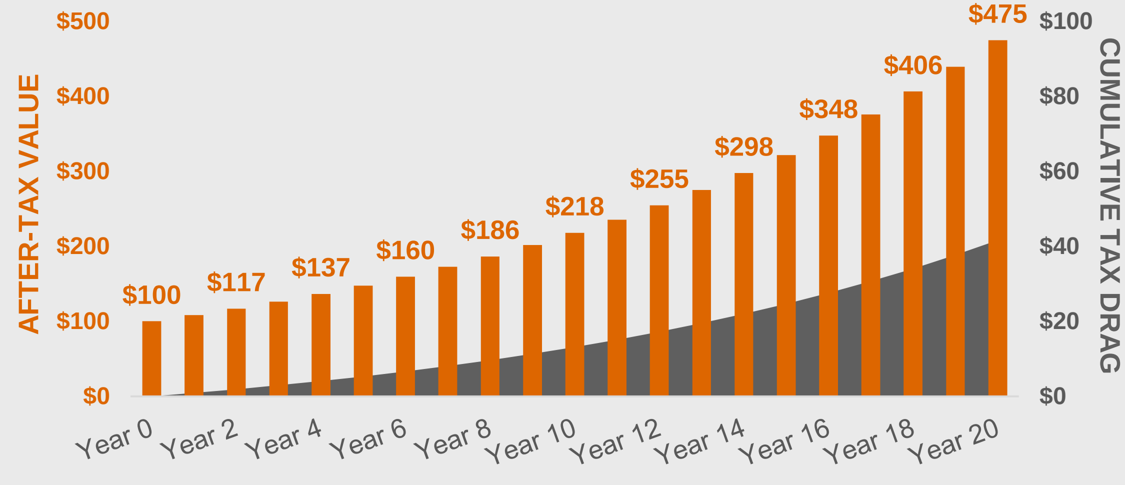
Tax-Managed Investing

AN INTRODUCTION

FUND A



FUND B



CONSIDER TWO INVESTMENTS:

1. **Fund A** averages a pre-tax return of **10% per year**
2. **Fund B** averages a pre-tax return of **9% per year**

HOWEVER:

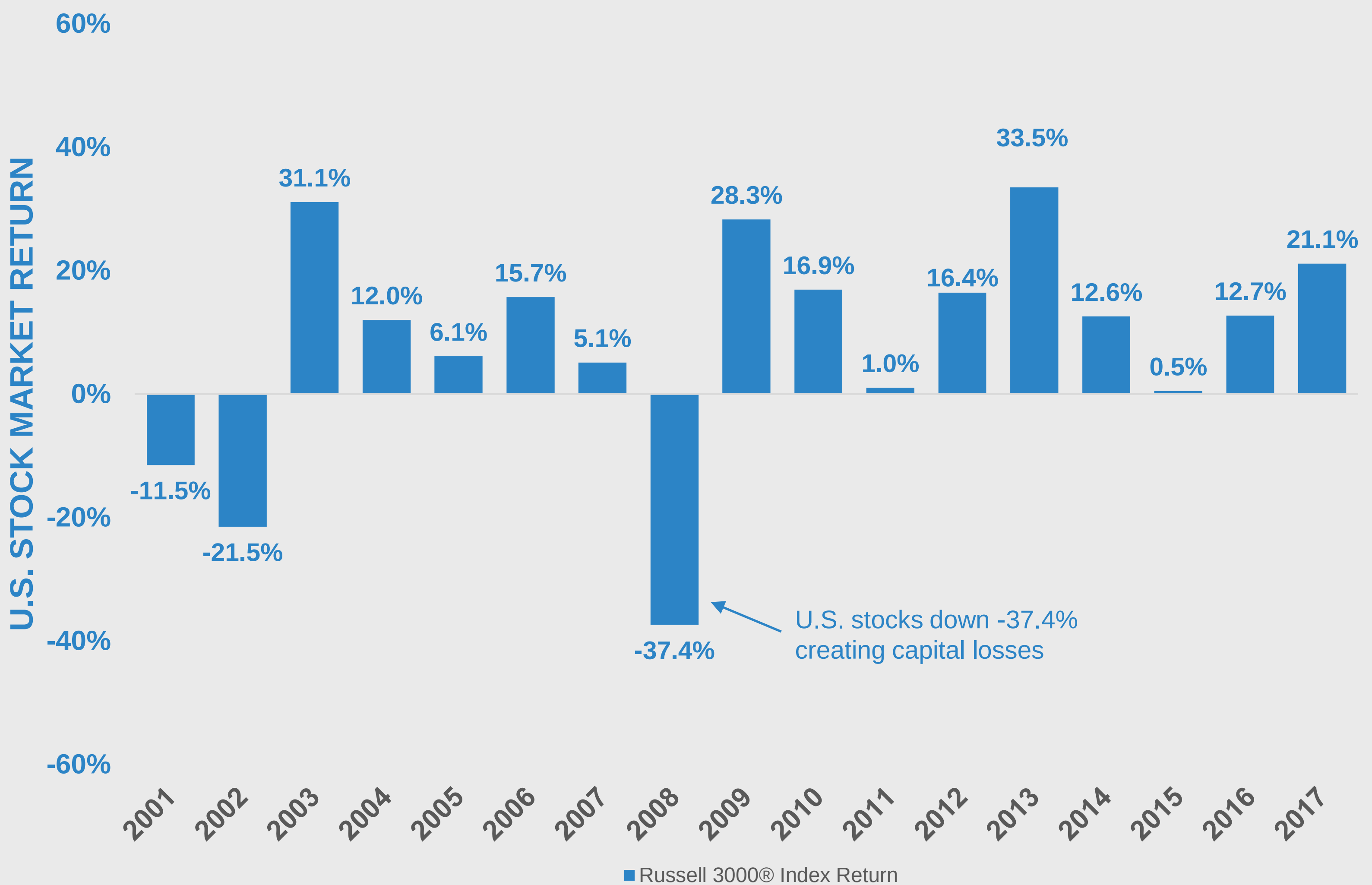
1. **Fund A** is **80% tax-efficient**
2. **Fund B** is **90% tax-efficient**

- Tax Efficiency = After-tax Return / Pre-tax Return
- ***Which investment would you choose?***

This hypothetical example is for illustration only and is not intended to reflect the return of any actual investment. Investments do not typically grow at an even rate of return and may experience negative growth.

Why is this important today?

U.S. EQUITY RETURNS

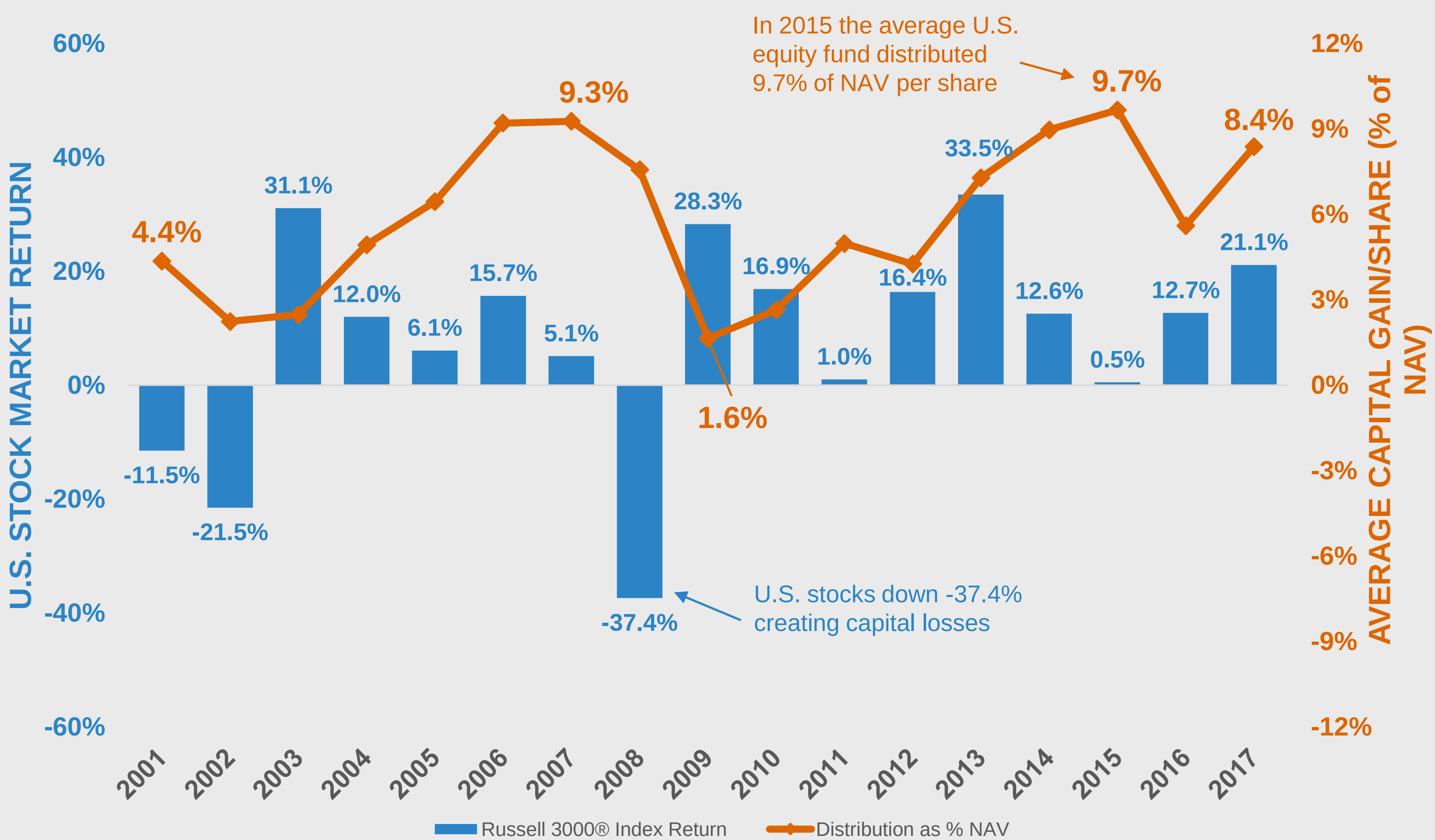


Source: U.S. Stock market represented by Russell 3000® Index. Indexes are unmanaged and cannot be invested in directly. Returns represent past performance, are not a guarantee of future performance, and are not indicative of any specific investment.

Russell Investments and Wells Fargo Advisors are not legal or tax advisors. Investors should contact their own legal and tax advisors before making any decision that may involve tax consequences.

Why is this important today?

U.S. EQUITY RETURNS & CAPITAL GAIN DISTRIBUTIONS



Sources: U.S. equity market return: Russell 3000® Index. Indexes are unmanaged and cannot be invested in directly. Returns represent past performance, are not a guarantee of future performance, and are not indicative of any specific investment.

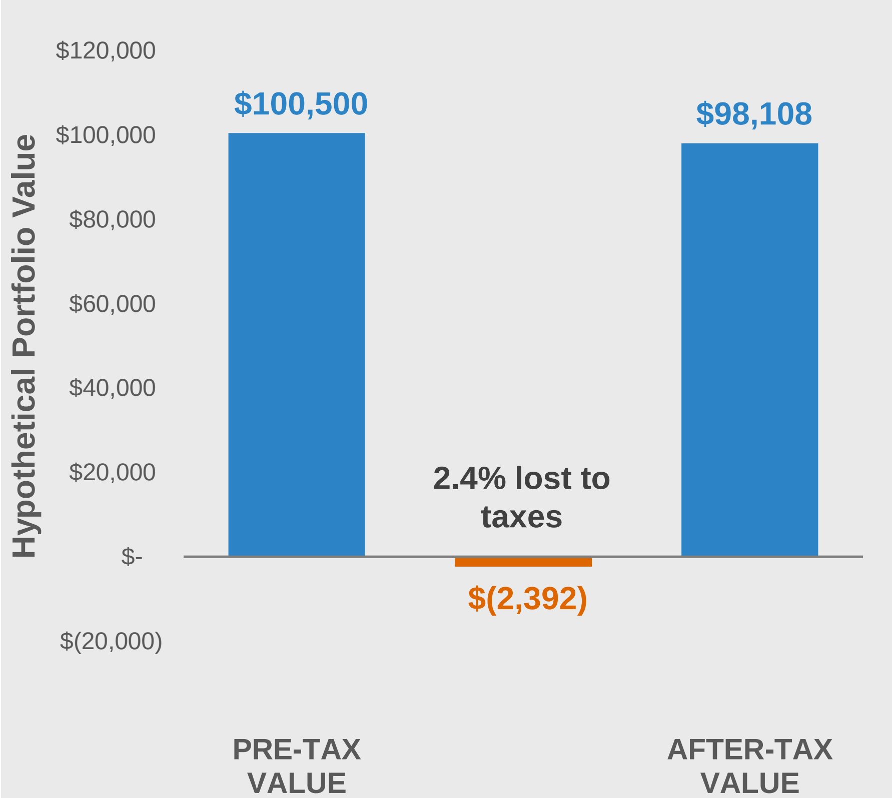
Average Capital Gains/Share (% of NAV): Based on Morningstar U.S. OE Mutual Funds and ETFs. % = Calendar Year Cap Gain Distributions / Year-End NAV. For years 2001 through 2013, used oldest share class. 2014 forward includes all share classes.

A tale of two years

TAX IMPACT ON HYPOTHETICAL $100K PORTFOLIO IN LOW & HIGH RETURN U.S. EQUITY MARKETS

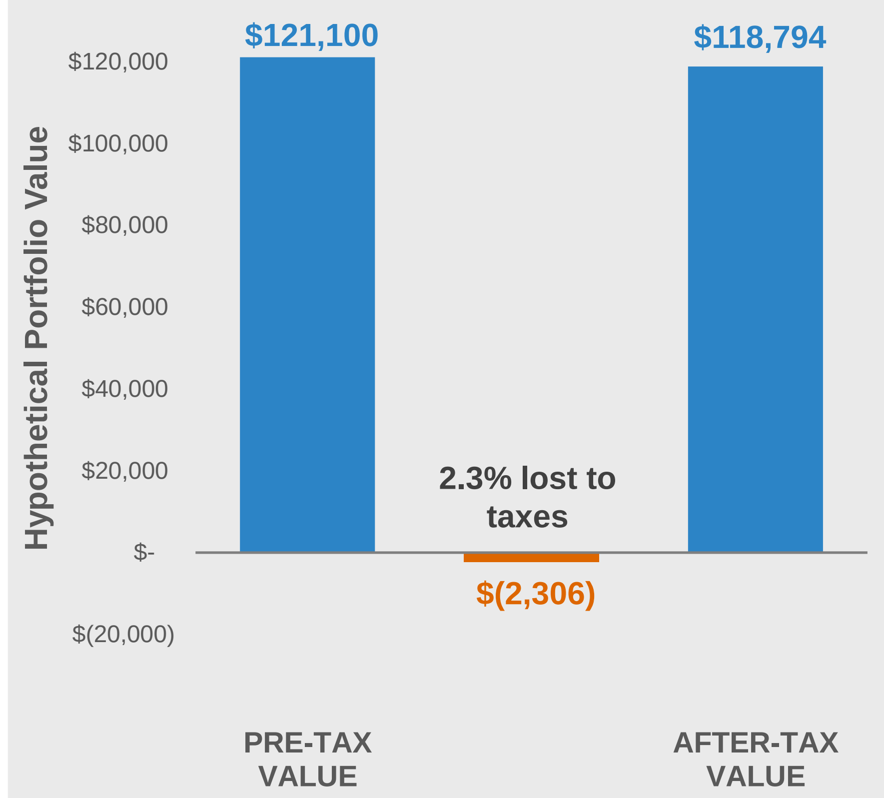
2015

- **U.S. equity market return: 0.5%**
- **Avg. U.S. equity fund distribution: 10%**



2017

- **U.S. equity market return: 21.1%**
- **Avg. U.S. equity fund distribution: 8%**



Calculation methodology: Assumed starting hypothetical portfolio value of $100,000. U.S. equity m ket return applied to starting value to arrive at ending pre-tax value. Percent lost to taxes is the estimated taxes due divided by $100k. This amount is then subtracted from the ending pre-tax valu shown to arrive at final after-tax value.

Sources: U.S. equity market return: Russell 3000® Index. Index returns represent past performance, are not a guarantee of future performance, and are not indicative of any specific investment. Indexes are unmanaged and cannot be invested in directly.

Average U.S. Equity Fund Distribution: Capital Gains/Share (% of NAV) based on Morningstar U.S. OE Mutual Funds and ETFs. % = Calendar Year Cap Gain Distributions / Year-End NAV. Distribution is assumed to be made at last day of year and reinvested. Tax rate is 23.8% (Max LT Cap Gain 20% + Net Investment Income 3.8%).

Russell Investments

How much return is lost to taxes (annual tax drag)?

U.S. EQUITY	U.S. FIXED INCOME
5 Years Ending June 2018:	5 Years Ending June 2018:
180 bps	**115** bps

Taxable investors hold $8.6 trillion of the $18.7 trillion invested in open-end mutual funds[1]

Morningstar U.S. Equity Mutual Funds, Universes; Morningstar Taxable Bond Fund Universes, Tax Drag: Morningstar Tax Cost Ratio (see appendix at end of presentation for methodology). Morningstar's tax cost ratio assumes the highest possible applicable tax rates, including the 3.8% net investment income tax. Many investors are not subject to the highest rates. Note that tax drag calculations only apply to taxable accounts.

[1]2018 ICI Factbook.

Potential tax impact on portfolio

A MEANINGFUL PERCENT OF TOTAL RETURN LOST TO TAXES

FUND CATEGORY Average annualized 5-years ending June 30, 2018	PRE-TAX RETURN %	TAX DRAG %	AFTER-TAX RETURN %
U.S. Stocks	12.0%	*1.8%*	*10.2%*
U.S. Bonds	2.7%	*1.2%*	*1.5%*
50% Stock / 50% Bond Portfolio	7.4%	*1.5%*	*5.9%*

- Portfolio surrenders 20% of pre-tax return going from 7.4% to 5.9%
- 1.5% tax drag has the same impact as 1.5% fee

Source: Morningstar. Data as of 06/30/2018. Morningstar US Fund categories include Mutual Funds & ETFs; U.S. Stocks = Large Blend, Large Value, Large Growth, Mid-Cap Blend, Mid-Cap Value, Mid-Cap Growth, Small Blend, Small Value, & Small Growth; U.S. Bonds = Corporate Bond, High Yield Bond, Intermediate Government, Intermediate-Term Bond, Long Government, Long-Term Bond, Short Government, Short-Term Bond, Ultrashort Bond. Tax Drag: Morningstar Tax Cost Ratio (see appendix at end of presentation for methodology). Index returns represent past performance, are not a guarantee of future performance, and are not indicative of any specific investment.

Not all tax efficiency is equal. How do you assess?

TAX EFFICIENCY

Tax-Oblivious	Inherently Efficient	Tax-Aware	Tax-Active	Tax-Oriented

› Most mutual funds	› Most index funds › Most ETFs	› Tax-aware mutual funds › Tax-managed separate accounts	› Municipal bonds › Deferred annuities

\- TIME & EFFORT +

Managing taxes so you keep more of your return

"WORST"

- Non-qualified dividend income
- Short-term capital gains
- Interest income

Top Tax Rate

40.8%

"BETTER"

- Qualified dividends
- Long-term capital gains

Top Tax Rate

23.8%

"BEST"

- Municipal bond interest*
- Unrealized capital appreciation

Top Tax Rate

0.0%

Not all return is equal: Understanding source may help in growing after-tax wealth

Applies to federal taxes only.
*Generally for municipal bonds, only interest from bonds issued within the state is exempt from that state's income taxes. Municipal bond interest income may impact taxation of Social Security benefits.

Key beliefs driving Russell Investments tax-managed equity investing

MANAGER RESEARCH

TAX LOSS HARVESTING

MANAGE HOLDING PERIOD

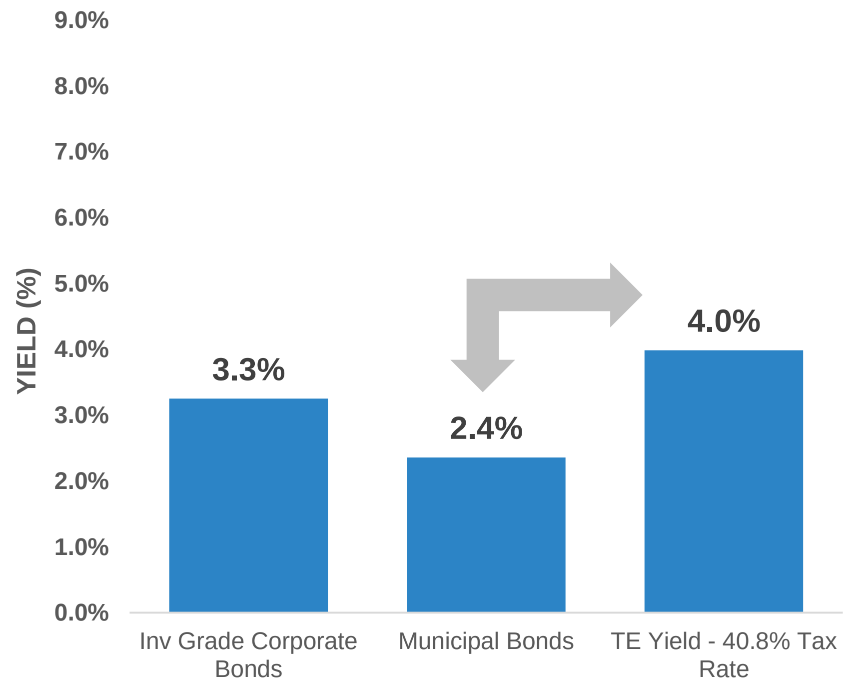
MINIMIZE WASH SALES

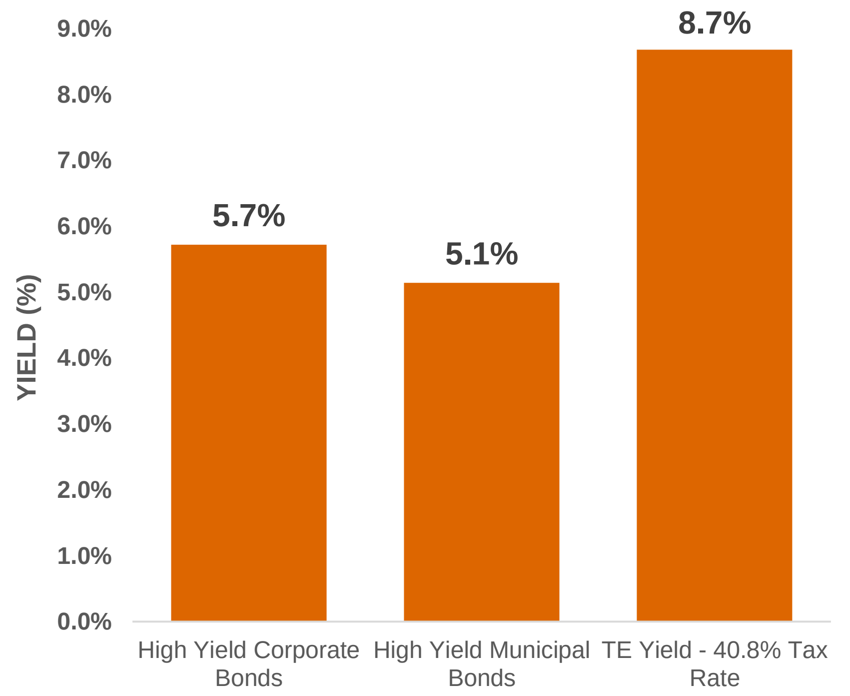
MANAGE FUND'S YIELD

TRANSITION MANAGEMENT

Municipal bonds can be beneficial for tax-sensitive investors

- Tax-equivalent yield matters: $\dfrac{\text{(Yield)}}{\text{(1-Marginal Tax Rate)}}$
- An investor in the top tax bracket would need to ***earn a taxable yield of 4.0% to match the 2.4% yield*** of municipal bonds

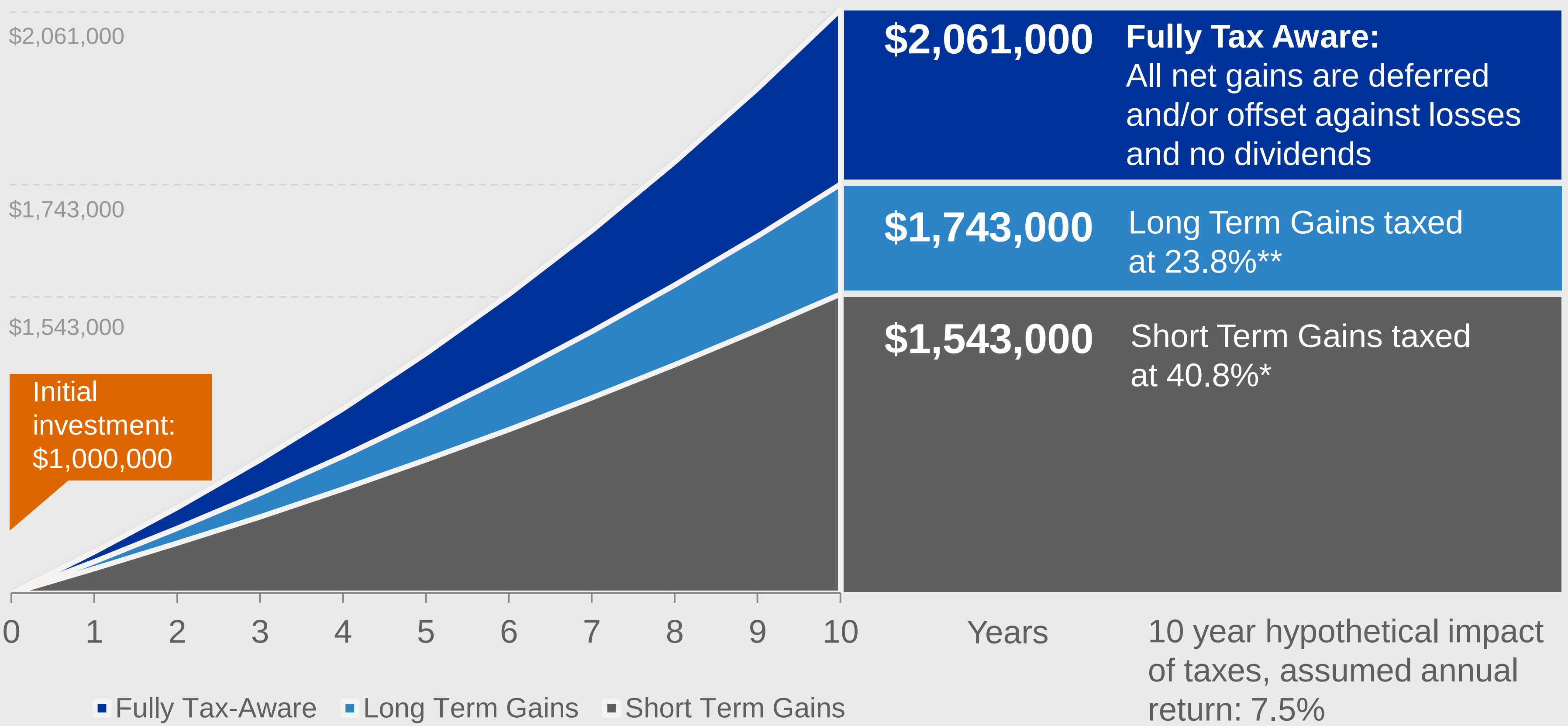




Source: Barclays Live. Data as of 12/31/2017. Yield quoted represents the Yield-to-Worst on the following Bloomberg Barclays indices: Inv Grade Corporate Bond = U.S. Corporate Investment Grade Index; Municipal Bonds = Municipal Bond Index; High Yield Corporate Bonds = U.S. Corporate High Yield Index; High Yield Municipal Bonds = High Yield Municipal Bond Index. Marginal Tax Rate used is 40.8% (37.0% + 3.8%).
Index returns represent past performance, are not a guarantee of future performance, and are not indicative of any specific investment. Indexes are unmanaged and cannot be invested in directly.

Understanding the impact of taxes on client portfolios

Hypothetical growth of $1,000,000 over 10 years



*40.8% Tax rate: Top marginal rate of 37.0% + 3.8% Net Investment Income Tax, ** LT Cap Gain rate of 20% + 3.8%% Net Investment Income Tax. This example does not reflect the deduction of state income taxes. If it had, returns would have been lower.

This is a hypothetical illustration and not meant to represent an actual investment strategy.

Taxes may be due at some point in the future and tax rates may be different when they are.

How are mutual fund capital gains distributed/taxed?

Assumptions

- Mutual fund with $10 Net Asset Value (NAV) per share
- 10% capital gain distribution
- Entire distribution is both long-term in nature and qualified
- Distribution is reinvested

	NAV	SHARES	TOTAL VALUE
Value before distribution	$10	100	$1,000
10% LT capital gain distribution	$1	100	$100
Value after distribution	$9	100	$900
Reinvest distribution at new NAV	$9	11	$100
Value after redistribution	$9	111	$1,000
Investor owes tax on $100 distribution @ 23.8%			($24)
True after-tax value			**$976**

10% capital gain distribution is taxable

Distribution is reinvested; NAV goes to 9, but you now have more shares

While the total investment value is still $1,000 you now owe the IRS $24

Taxes are often paid from a different account. Make sure you connect taxes to investment returns for true measure of return.

For illustrative purposes only.

Don’t wait until tax time to take action

PROACTIVE TAX MANAGEMENT IS A BETTER SOLUTION

Income

Attach Form(s) W-2 here. Also attach Forms W-2G and 1099-R if tax was withheld.

If you did not get a W-2, see instructions.

7	Wages, salaries, tips, etc. Attach Form(s) W-2		7
8a	**Taxable** interest. Attach Schedule B if required		8a
b	**Tax-exempt** interest. **Do not** include on line 8a	8b	
9a	Ordinary dividends. Attach Schedule B if required		9a
b	Qualified dividends	9b	
10	Taxable refunds, credits, or offsets of state and local income taxes		10
11	Alimony received		11
12	Business income or (loss). Attach Schedule C or C-EZ		12
13	Capital gain or (loss). Attach Schedule D if required. If not required, check here ▶ ☐		13
14	Other gains or (losses). Attach Form 4797		14
15a	IRA distributions	15a **b** Taxable amount	15b
16a	Pensions and annuities	16a **b** Taxable amount	16b
17	Rental real estate, royalties, partnerships, S corporations, trusts, etc. Attach Schedule E		17
18	Farm income or (loss). Attach Schedule F		18
19	Unemployment compensation		19
20a	Social security benefits	20a **b** Taxable amount	20b
21	Other income. List type and amount		21
22	Combine the amounts in the far right column for lines 7 through 21. This is your **total income** ▶		22

8a: TAXABLE INTEREST

- Interest income
- Can be taxed at individual’s highest marginal rate
- *What is the after-tax yield?*

9a/b: DIVIDENDS
(Qualified vs. non-qualified)

- From mutual funds and/or individual stocks
- *Know the difference (unqualified rate can be 82% higher)*

13: CAPITAL GAINS
(Often supported by Schedule D)

- Includes capital gain distributions from mutual funds
- *Is the distribution high in relation to amount invested?*

AFTER-TAX RETURN =

Investment pre-tax return – Tax impact (both Federal and State)

For illustrative purposes only.

Opportunity: Tax-managed investing for trusts

PROGRESSIVE TRUST TAX RATES REQUIRES TAX-SMART INVESTING

- Trusts cross top marginal rate at $12,500 vs. $600,000 for couples (MFJ*)
- Trusts pay 3.8% Net Investment Income Tax** at $12,500 vs. $250,00 for couples (MFJ)

What account size could pay top rate?	
Assumed mutual fund account balance	$125,000
Fund declares 10% capital gain distribution	10%
Taxable gain	$12,500

Trust with only $125,000 could qualify for top marginal rate of:

- 40.8% if ST Capital Gain
- 23.8% if LT Capital Gain

(includes Net Investment Income Tax of 3.8%)

*Married Filing Jointly, federal amounts payable in 2018   **Net Investment Income Tax based upon Modified Adjusted Gross Income. All tax rates and tax stats form the Internal Revenue Service.

A framework for making the switch from non-tax-managed to tax-managed

WHAT MATTERS = PAYBACK PERIOD

1. Tax Cost to switch
2. Potential improvement in after-tax returns
3. Investor time horizon

EXAMPLE

1. 3 years in U.S. Market ~ 32%
   - 24% post tax (8% tax cost switch)
2. Assume 2% tax increase after-tax returns
3. Payback period ~ 3.6 years

Payback Period is the number of years to recoup the tax-cost of switching portfolios.
Hypothetical example for illustrative purposes only. Market return: Russell 1000® Index. Tax rate assumed = long term rate at highest marginal rate (23.8% = (Max ST Cap Gain 20% + Net Investment Income 3.8%). Payback period assumes 2% per annum compound excess returns after tax of a tax managed solution relative to non-tax managed

Tax-management strategies to employ year round

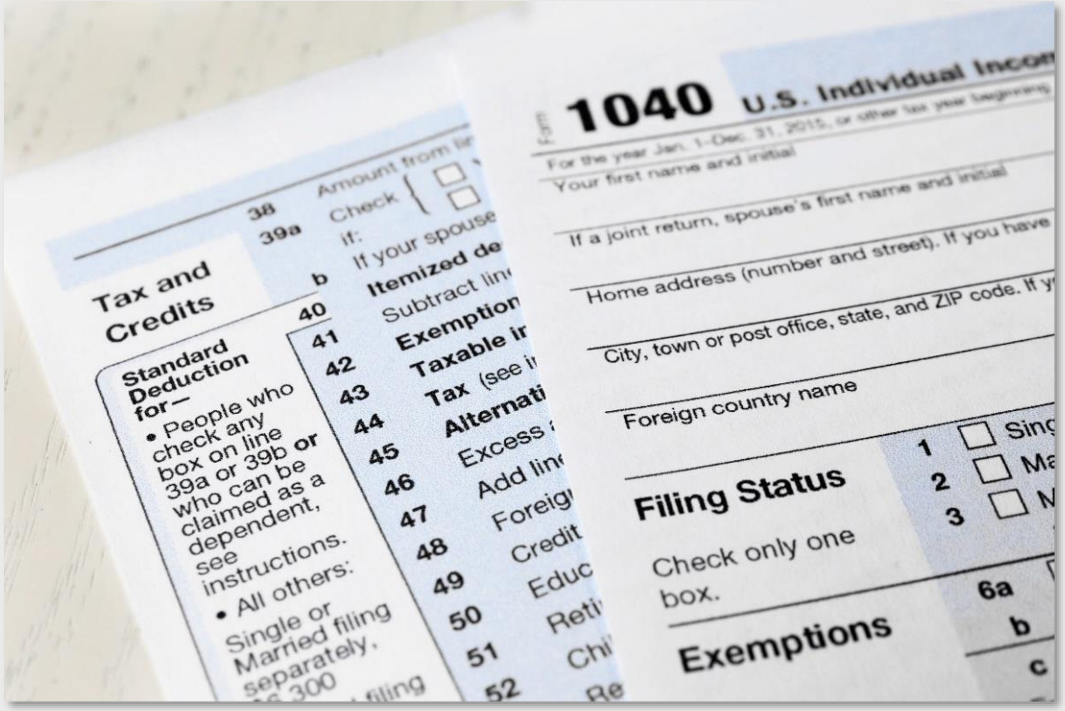
- Asset location matters (IRA, 401k, taxable, etc.)
- Pay attention to the holding period
- Understand turnover
- Select tax lots / Avoid wash sales
- Manage portfolio yield
- Harvest losses throughout year (not just year-end)
- Centralize the portfolio management of multiple managers
- Diversify different sources/types of municipal bond interest*

Strategies should strive to defer gain recognition

*Generally for municipal bonds, only interest from bonds issued within the state is exempt from that state's income taxes.

Helping to achieve long-term financial goals

- It’s not about tax avoidance, but higher after-tax wealth
- Taxes can definitely have an impact on achieving long-term financial goals
- There are steps you can take to help manage the impact of taxes



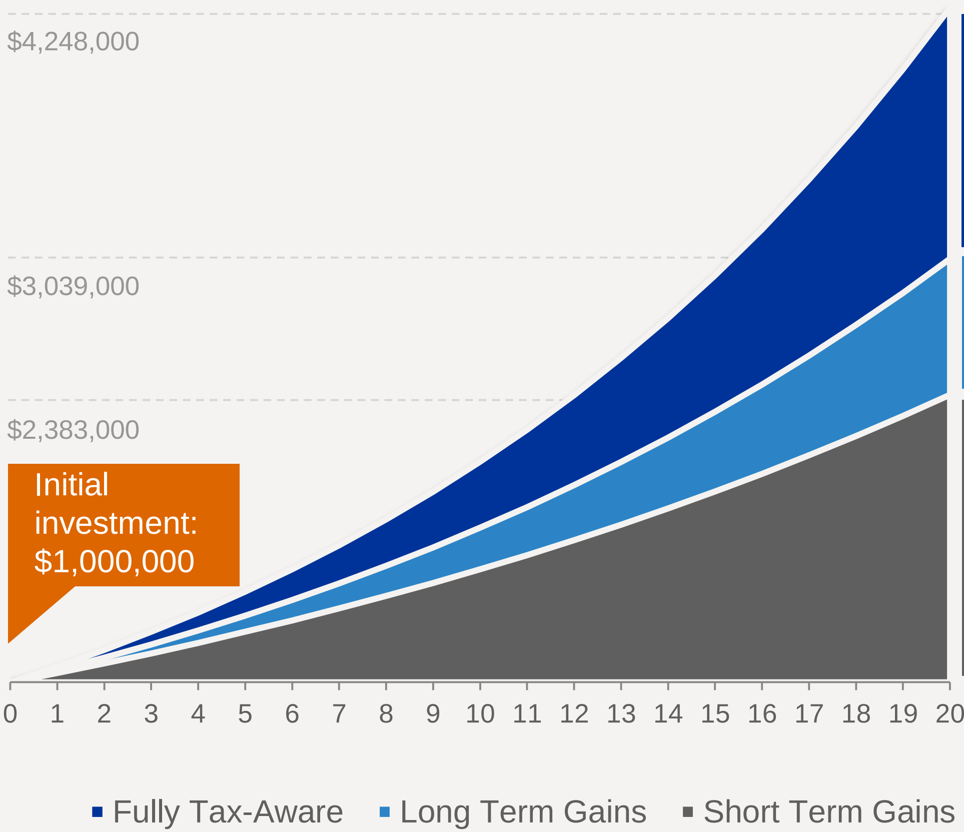
It’s not about what you earn, but what you keep!

Appendix

Longer-term view: 20 years

THE POWER OF COMPOUNDING

Hypothetical growth of $1,000,000 over 20 years



$4,248,000 **Fully Tax Aware:** All net gains are deferred and/or offset against losses and no dividends

$3,039,000 Long Term Gains taxed at 23.8%**

$2,383,000 Short Term Gains taxed at 40.8%*

Years

20 year hypothetical impact of taxes, assumed annual return: 7.5%

*40.8% Tax rate: Top marginal rate of 37.0% + 3.8% Net Investment Income Tax, ** LT Cap Gain rate of 20% + 3.8%% Net Investment Income Tax. This example does not reflect the deduction of state income taxes. If it had, returns would have been lower.

This is a hypothetical illustration and not meant to represent an actual investment strategy.

Taxes may be due at some point in the future and tax rates may be different when they are.

Mutual Funds and Capital Gains

CONSIDER THE TIMING OF FUND PURCHASES AND SALES RELATIVE TO DISTRIBUTIONS

- If you **purchase** before year-end distribution:
  - You risk "Buying the Distribution"
  - Distributions apply to all existing shareholders equally
  - You will have to pay taxes on any fund gains incurred throughout the entire year. *This is true even if you didn't hold the fund the entire year*
  - Could be a significant tax impact that is due even if you reinvest the capital gains distribution
  - When fund goes ex-dividend the market price drops by the amount of the dividend

- If you **sell** prior to year-end distribution:
  - You will be taxed on the market value changes from date of purchase value to date of sale value (minus any return of capital)

Additional disclosures

Morningstar Category Definitions:

Large-blend portfolios are fairly representative of the overall U.S. stock market in size, growth rates, and price. Stocks in the top 70% of the capitalization of the U.S. equity market are defined as large-cap. The blend style is assigned to portfolios where neither growth nor value characteristics predominate. These portfolios tend to invest across the spectrum of U.S. industries, and owing to their broad exposure, the portfolios' returns are often similar to those of the S&P 500 Index.

Large-growth portfolios invest primarily in big U.S. companies that are less expensive or growing more slowly than other large-cap stocks. Stocks in the top 70% of the capitalization of the U.S. equity market are defined as large cap. Value is defined based on low valuations (low price ratios and high dividend yields) and slow growth (low growth rates for earnings, sales, book value, and cash flow).

Large-value portfolios invest primarily in big U.S. companies that are projected to grow faster than other large-cap stocks. Stocks in the top 70% of the capitalization of the U.S. equity market are defined as large cap. Growth is defined based on fast growth (high growth rates for earnings, sales, book value, and cash flow) and high valuations (high price ratios and low dividend yields). Most of these portfolios focus on companies in rapidly expanding industries.

Mid-Cap blend portfolios invest in U.S. stocks of various sizes and styles, giving it a middle-of-the-road profile. Most shy away from high-priced growth stocks but aren't so price-conscious that they land in value territory. The U.S. mid-cap range for market capitalization typically falls between $1 billion and $8 billion and represents 20% of the total capitalization of the U.S. equity market. The blend style is assigned to portfolios where neither growth nor value characteristics predominate.

Mid-Cap growth portfolios invest in stocks of all sizes, thus leading to a mid-cap profile, but others focus on midsize companies. Mid-cap growth portfolios target U.S. firms that are projected to grow faster than other mid-cap stocks, therefore commanding relatively higher prices. The U.S. mid-cap range for market capitalization typically falls between $1 billion and $8 billion and represents 20% of the total capitalization of the U.S. equity market. Growth is defined based on fast growth (high growth rates for earnings, sales, book value, and cash flow) and high valuations (high price ratios and low dividend yields).

Mid-Cap value portfolios focus on medium-size companies while others land here because they own a mix of small-, mid-, and large-cap stocks. All look for U.S. stocks that are less expensive or growing more slowly than the market. The U.S. mid-cap range for market capitalization typically falls between $1 billion and $8 billion and represents 20% of the total capitalization of the U.S. equity market. Value is defined based on low valuations (low price ratios and high dividend yields) and slow growth (low growth rates for earnings, sales, book value, and cash flow).

Small blend portfolios favor U.S. firms at the smaller end of the market-capitalization range. Some aim to own an array of value and growth stocks while others employ a discipline that leads to holdings with valuations and growth rates close to the small-cap averages. Stocks in the bottom 10% of the capitalization of the U.S. equity market are defined as small cap. The blend style is assigned to portfolios where neither growth nor value characteristics predominate.

Small growth portfolios focus on faster-growing companies whose shares are at the lower end of the market-capitalization range. These portfolios tend to favor companies in up-and-coming industries or young firms in their early growth stages. Because these businesses are fast-growing and often richly valued, their stocks tend to be volatile. Stocks in the bottom 10% of the capitalization of the U.S. equity market are defined as small cap. Growth is defined based on fast growth (high growth rates for earnings, sales, book value, and cash flow) and high valuations (high price ratios and low dividend yields).

Small value portfolios invest in small U.S. companies with valuations and growth rates below other small-cap peers. Stocks in the bottom 10% of the capitalization of the U.S. equity market are defined as small cap. Value is defined based on low valuations (low price ratios and high dividend yields) and slow growth (low growth rates for earnings, sales, book value, and cash flow).

Appendix and disclosures (cont'd)

METHODOLOGY FOR UNIVERSE CONSTRUCTION:

- Average of Morningstar's Tax Cost Ratio for universes as defined. Passive is defined as being an index fund as reported by Morningstar or part of an ETF Category.
- Averages calculated on a given category. For example, average reflects the arithmetic average of the Morningstar Tax Cost Ratio for the universe/category as listed.
- Large Cap/Small Cap determination based upon Morningstar Category.
- If fund is indicated by Morningstar as passive or an ETF, the fund is considered to be passively managed. Otherwise, the fund is considered to be actively managed. Tax Drag: Morningstar calculated Tax Cost Ratio.
- The Morningstar categories are as reported by Morningstar and have not been modified.
- Morningstar Categories included: U.S. ETF Large Blend, U.S. ETF Large Growth, U.S. ETF Large Value, U.S. ETF Mid-Cap Blend, U.S. ETF Mid-Cap Growth, U.S. ETF Mid-Cap Value, U.S. ETF Small Blend, U.S. ETF Small Growth, U.S. ETF Small Value, U.S. OE Large Blend, U.S. OE Large Growth, U.S. OE Large Value, U.S. OE Mid-Cap Blend, U.S. OE Mid-Cap Growth, U.S. OE Mid-Cap Value, U.S. OE Small Blend, U.S. OE Small Growth, U.S. OE Small Value.

Methodology for Tax Drag:

- Include all open ended investment products – mutual funds/ETFs that are both active and passive. Tax Drag reflects the arithmetic average of Morningstar Tax Cost Ratio. Data includes all share classes and reflects Morningstar category of US Equity and Taxable Bond for equities and fixed income respectively.

Russell Investments

Joshua Hemmert, Executive Director

Joshua Hemmert
Executive Director
Investment Specialist in the Multi-Asset Solutions Team
JP Morgan Asset Management

Joshua Hemmert, executive director, is an investment specialist in J.P. Morgan Asset Management's Multi-Asset Solutions team, based in New York. An employee since 2004, Joshua is the lead U.S. Investment Specialist for flexible income-oriented strategies and also spends time on many of the group's other outcome-oriented portfolios. Prior to his current role, he led the Subadvisory channel and focused on custom multi-asset mandates. Joshua has also worked with a range of other institutional clients in the past, including defined benefit pension plans, endowments and foundations. He started his career with J.P. Morgan working on the implementation of tactical asset allocation across balanced portfolios. In addition to his current role, Joshua serves as JPMorgan Chase's investment committee representative at The Clearing House. He obtained a B.A. in Finance and Economics from the Honors Tutorial College at Ohio University. Joshua is Series 3, 7, and 63 licensed.

J.P. Morgan Asset Management

Sound Principles for Investing & Market Outlook

***Joshua Hemmert** – JPMorgan Multi-Asset Solutions*

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When cash pays you nothing, invest in something

ANNUAL INCOME GENERATED BY $100,000 INVESTMENT IN A 6-MONTH CD

Source: FactSet, J.P. Morgan Asset Management; Bankrate.com. Annual income is for illustrative purposes and is calculated based on the 6-month CD yield on average during each year and $100,000 invested. Past performance is not indicative of comparable future results. *Guide to the Markets – U.S.* Data are as of August 31, 2018.

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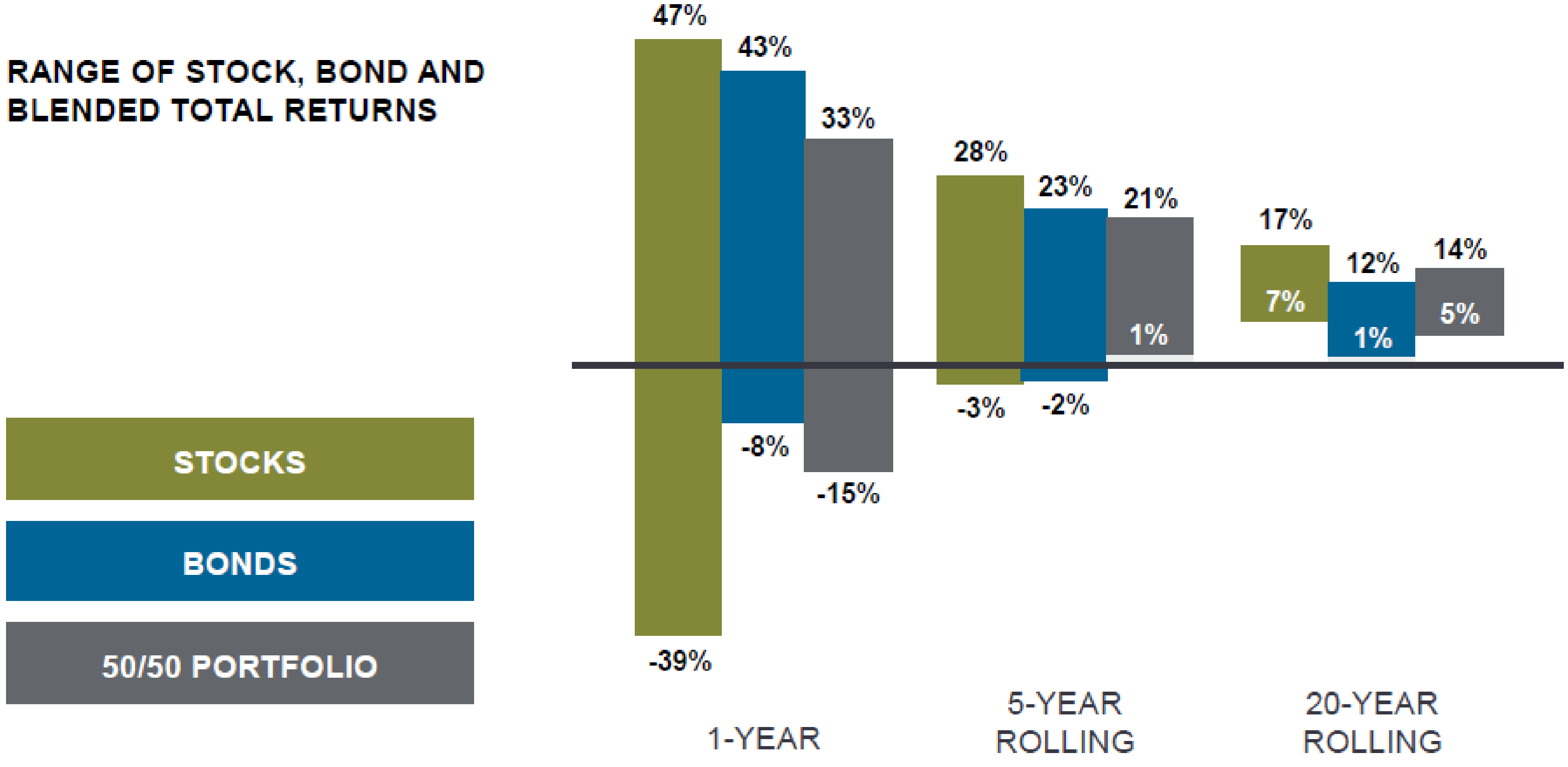
Asset Management

If you want to reduce risk, increase time and diversification



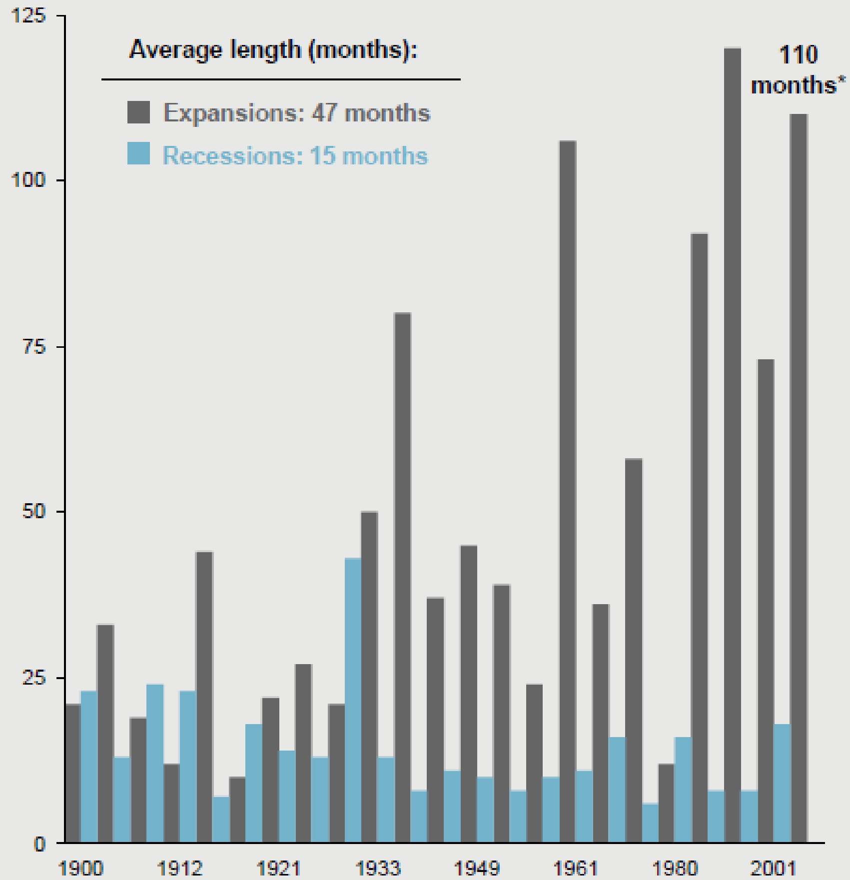
Source: Barclays, FactSet, Federal Reserve, Robert Shiller, Strategas/Ibbotson, J.P. Morgan Asset Management. Returns shown are based on calendar year returns from 1950 to 2017. Stocks represent the S&P 500 Shiller Composite and Bonds represent Strategas/Ibbotson for periods from 1950 to 2010 and Barclays Aggregate thereafter. *Guide to the Markets – U.S.* Data are as of August 31, 2018.

J.P.Morgan Asset Management

The length and strength of expansions

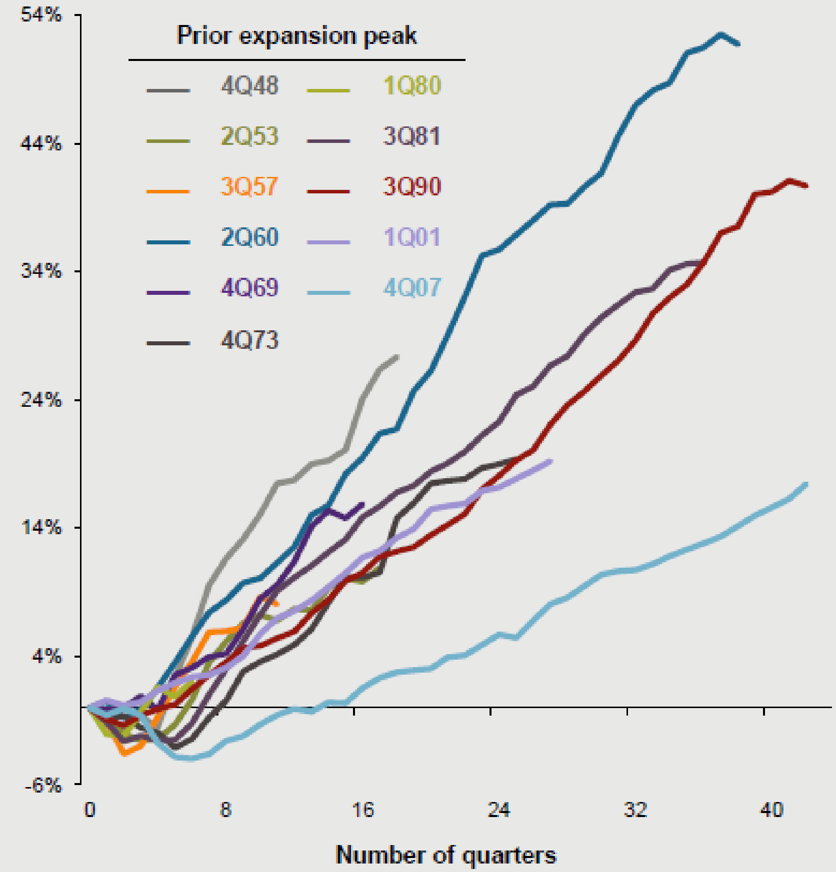
Economy

Length of economic expansions and recessions



Strength of economic expansions

Cumulative real GDP growth since prior peak, percent



Source: BEA, NBER, J.P. Morgan Asset Management. *Chart assumes current expansion started in July 2009 and continued through August 2018, lasting 110 months so far. Data for length of economic expansions and recessions obtained from the National Bureau of Economic Research (NBER). These data can be found at www.nber.org/cycles/ and reflect information through August 2018.
Guide to the Markets – U.S. Data are as of August 31, 2018.

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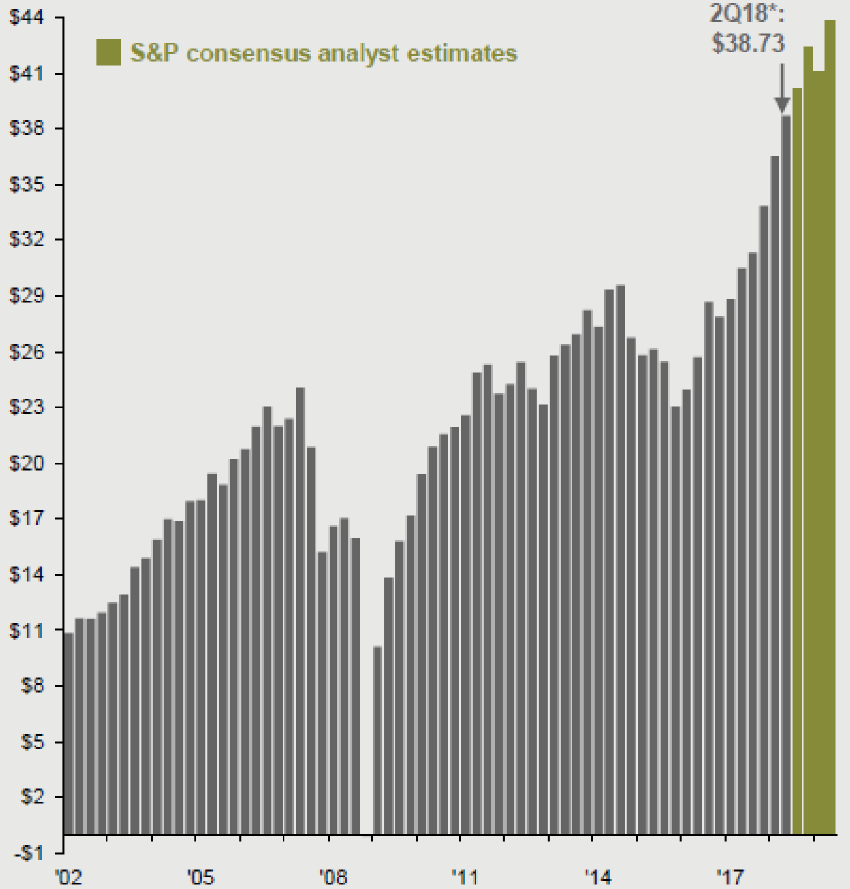
Corporate profits

Equities

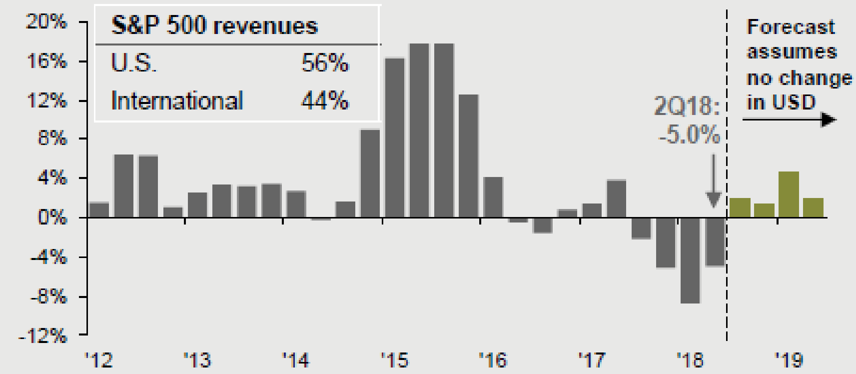
S&P 500 earnings per share

Index quarterly operating earnings



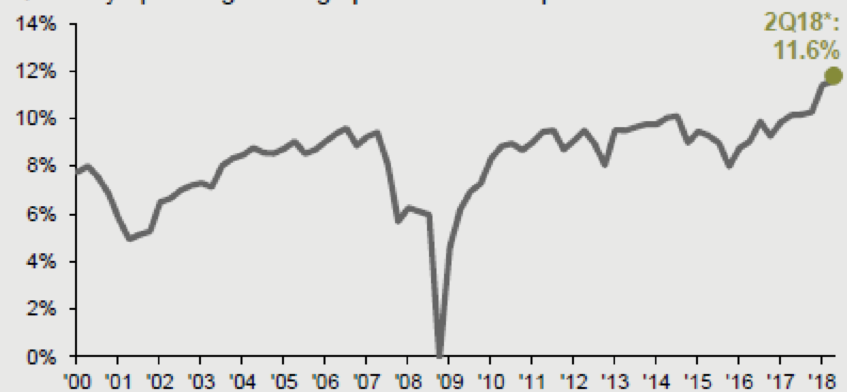
U.S. dollar

Year-over-year % change**, quarterly, USD major currencies index



S&P 500 profit margins

Quarterly operating earnings per share/sales per share



Source: Compustat, FactSet, Standard & Poor's, J.P. Morgan Asset Management; (Top right) Federal Reserve, S&P 500 individual company 10k filings, S&P Index Alert.

EPS levels are based on operating earnings per share. Earnings estimates are Standard & Poor's consensus analyst expectations. Past performance is not indicative of future returns. Currencies in the Trade Weighted U.S. Dollar Major Currencies Index are: Australian dollar, British pound, Canadian dollar, euro, Japanese yen, Swedish krona and Swiss franc. *2Q18 earnings are calculated using actual earnings for 97.8% of S&P 500 market cap and earnings estimates for the remaining companies. **Year-over-year change is calculated using the quarterly average for each period. USD forecast assumes no change in the U.S. dollar from its August 31, 2018 level. S&P 500 revenue breakdown comes from Standard & Poor's S&P 500 2017: Global Sales report as of June 2018.

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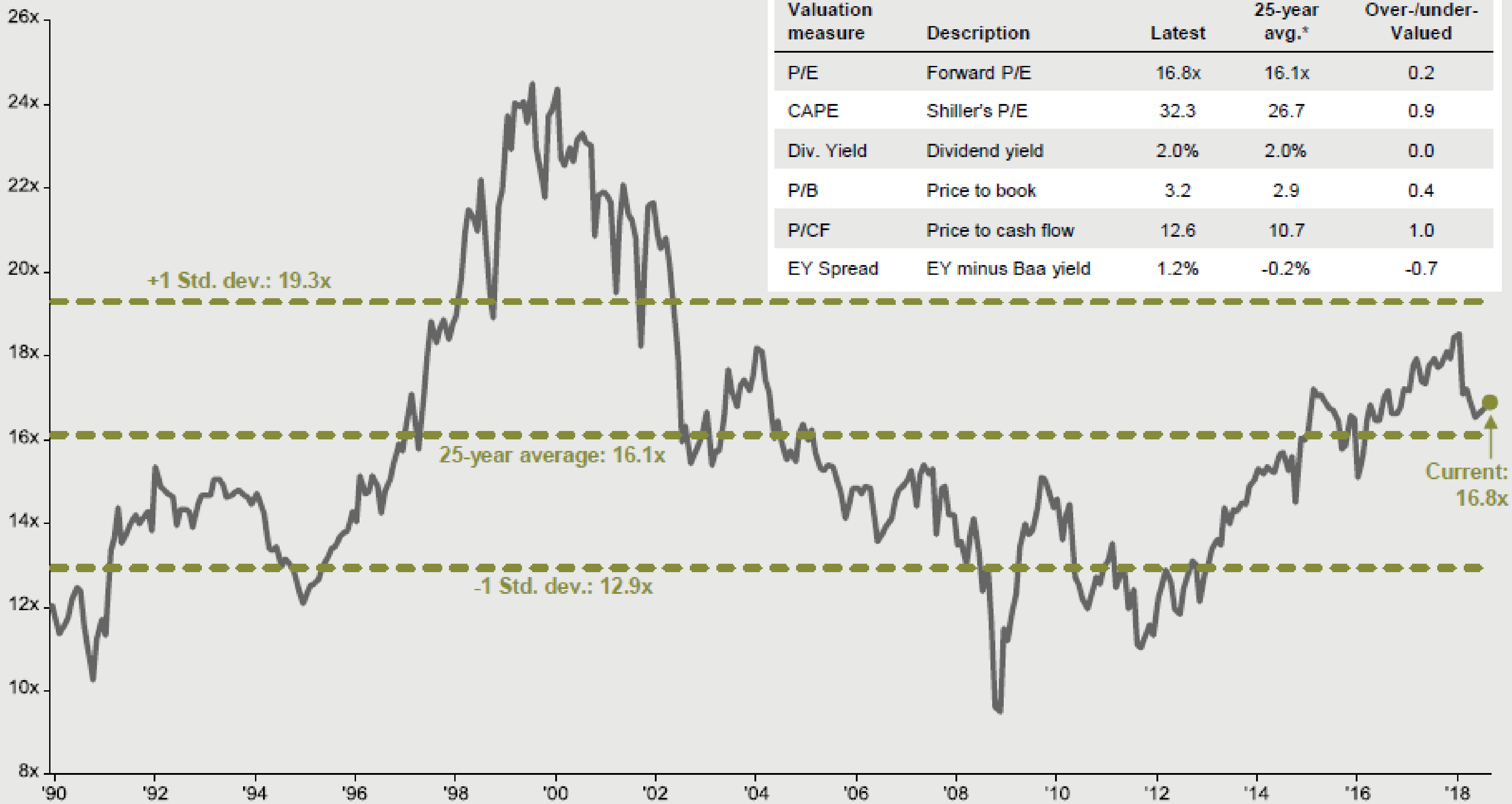
Equities

S&P 500 Index: Forward P/E ratio



Valuation measure	Description	Latest	25-year avg.*	Std. dev. Over-/under-Valued
P/E	Forward P/E	16.8x	16.1x	0.2
CAPE	Shiller's P/E	32.3	26.7	0.9
Div. Yield	Dividend yield	2.0%	2.0%	0.0
P/B	Price to book	3.2	2.9	0.4
P/CF	Price to cash flow	12.6	10.7	1.0
EY Spread	EY minus Baa yield	1.2%	-0.2%	-0.7

Source: FactSet, FRB, Robert Shiller, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management.
Price to earnings is price divided by consensus analyst estimates of earnings per share for the next 12 months as provided by IBES since December 1989, and FactSet for August 31, 2018. Average P/E and standard deviations are calculated using 25 years of FactSet history. Shiller's P/E uses trailing 10-years of inflation-adjusted earnings as reported by companies. Dividend yield is calculated as the next 12-month consensus dividend divided by most recent price. Price to book ratio is the price divided by book value per share. Price to cash flow is price divided by NTM cash flow. EY minus Baa yield is the forward earnings yield (consensus analyst estimates of EPS over the next 12 months divided by price) minus the Moody's Baa seasoned corporate bond yield. Std. dev. over-/under-valued is calculated using the average and standard deviation over 25 years for each measure.
*P/CF is a 20-year average due to cash flow data availability.
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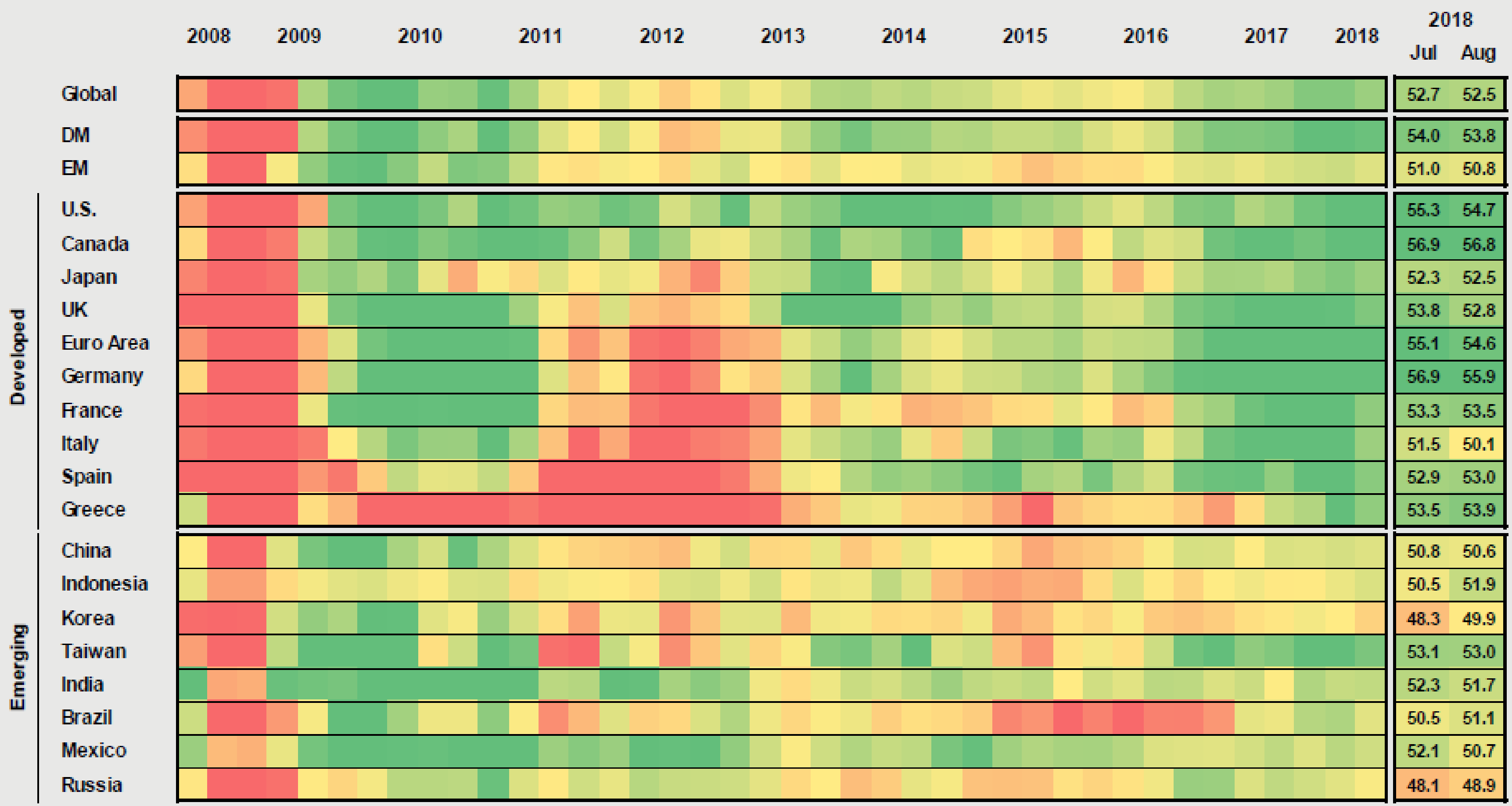
International

Global Purchasing Managers' Index for manufacturing, quarterly



Source: Markit, J.P. Morgan Asset Management.
Heatmap colors are based on PMI relative to the 50 level, which indicates acceleration or deceleration of the sector, for the time period shown. Heat map is based on quarterly averages, with the exception of the two most recent figures, which are single month readings. Data for Canada, Indonesia and Mexico are back-tested and filled in from December 2007 to November 2010 for Canada and May 2011 for Indonesia and Mexico due to lack of existing PMI figures for these countries. DM and EM represent developed markets and emerging markets, respectively.
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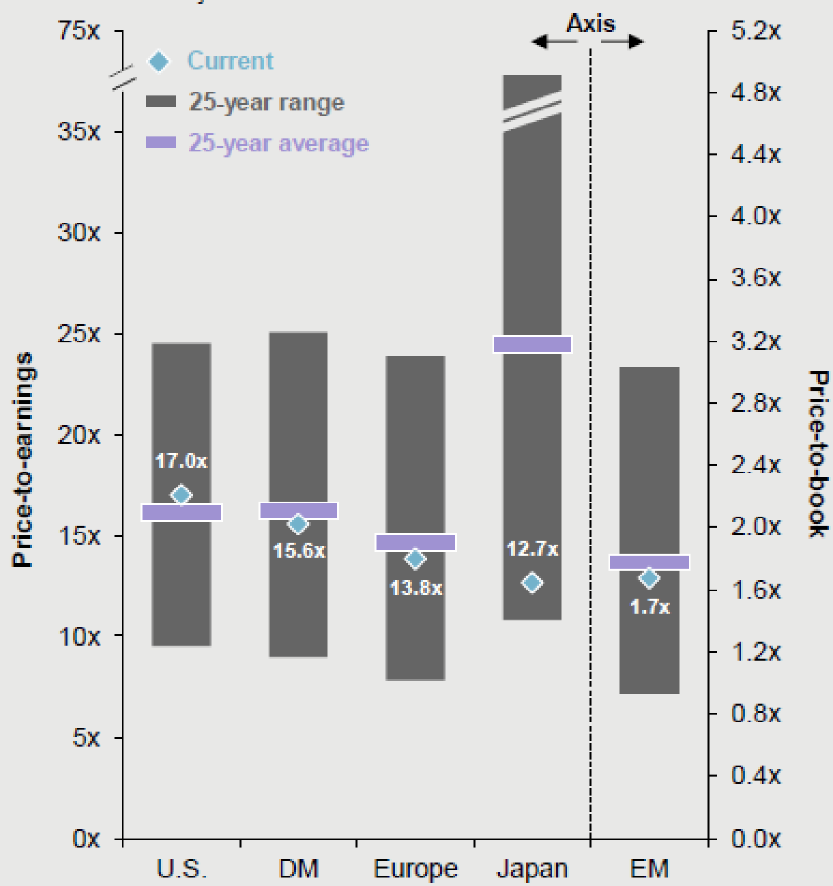
International

Global earnings

EPS, U.S. dollar, next 12 months, Jan. 2006 = 100

Global valuations

Current and 25-year historical valuations*



Source: FactSet, MSCI, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management.
*Valuations refer to NTMA P/E for Europe, U.S., Japan and developed markets and P/B for emerging markets. Valuation and earnings charts use MSCI indices for all regions/countries, except for the U.S., which is the S&P 500. All indices use IBES aggregate earnings estimates, which may differ from earnings estimates used elsewhere in the book. MSCI Europe includes the eurozone as well as countries not in the currency bloc, such as Norway, Sweden, Switzerland and the UK (which collectively make up 46% of the overall index). Past performance is not a reliable indicator of current and future results.
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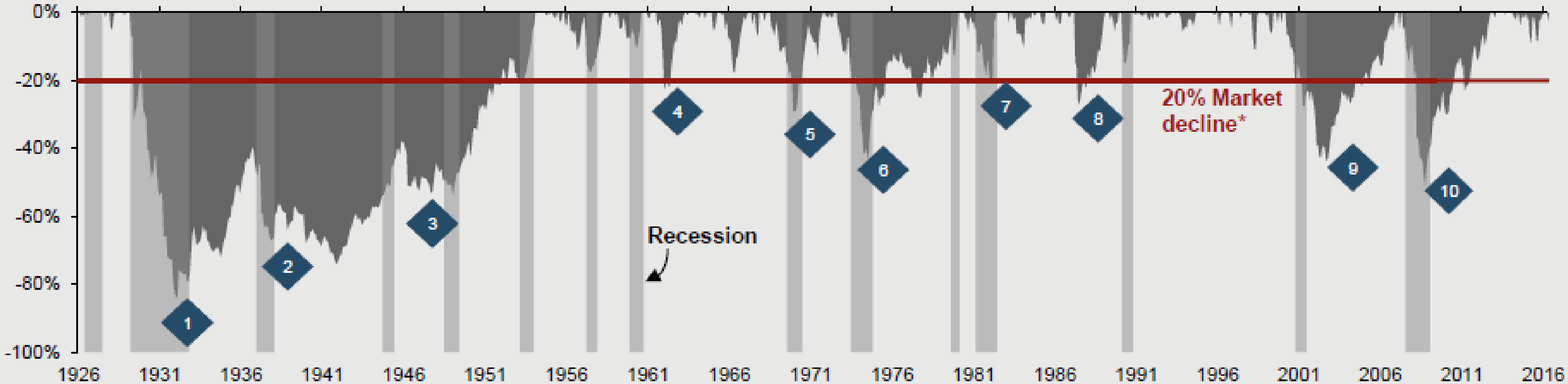
Bear markets and subsequent bull runs

S&P 500 composite declines from all-time highs



Characteristics of bull and bear markets

Market Corrections	Bear markets: Market peak	Bear markets: Bear return*	Bear markets: Duration (months)*	Macro environment: Recession	Macro environment: Commodity spike	Macro environment: Aggressive Fed	Macro environment: Extreme valuations	Bull markets: Bull begin date	Bull markets: Bull return	Bull markets: Duration (months)
1 Crash of 1929 - Excessive leverage, irrational exuberance	Sep 1929	-86%	32	◆			◆	Jul 1926	152%	37
2 1937 Fed Tightening - Premature policy tightening	Mar 1937	-60%	61	◆		◆		Mar 1935	129%	23
3 Post WWII Crash - Post-war demobilization, recession fears	May 1946	-30%	36	◆			◆	Apr 1942	158%	49
4 Flash Crash of 1962 - Flash crash, Cuban Missile Crisis	Dec 1961	-28%	6				◆	Oct 1960	39%	13
5 Tech Crash of 1970 - Economic overheating, civil unrest	Nov 1968	-36%	17	◆	◆	◆		Oct 1962	103%	73
6 Stagflation - OPEC oil embargo	Jan 1973	-48%	20	◆	◆			May 1970	74%	31
7 Volcker Tightening - Whip Inflation Now	Nov 1980	-27%	20	◆	◆	◆		Mar 1978	62%	32
8 1987 Crash - Program trading, overheating markets	Aug 1987	-34%	3				◆	Aug 1982	229%	60
9 Tech Bubble - Extreme valuations, .com boom/bust	Mar 2000	-49%	30	◆			◆	Oct 1990	417%	113
10 Global Financial Crisis - Leverage/housing, Lehman collapse	Oct 2007	-57%	17	◆	◆	◆		Oct 2002	101%	60
Current Cycle								Mar 2009	329%	113
Averages	-	-45%	24					-	163%	55

Source: FactSet, NBER, Robert Shiller, Standard & Poor's, J.P. Morgan Asset Management.
*A bear market is defined as a 20% or more decline from the previous market high. The bear return is the peak to trough return over the cycle. Periods of "Recession" are defined using NBER business cycle dates. "Commodity spikes" are defined as significant rapid upward moves in oil prices. Periods of "Extreme valuations" are those where S&P 500 last 12 months' P/E levels were approximately two standard deviations above long-run averages, or time periods where equity market valuations appeared expensive given the broader macroeconomic environment. "Aggressive Fed Tightening" is defined as Federal Reserve monetary tightening that was unexpected and/or significant in magnitude. Bear and Bull returns are price returns.
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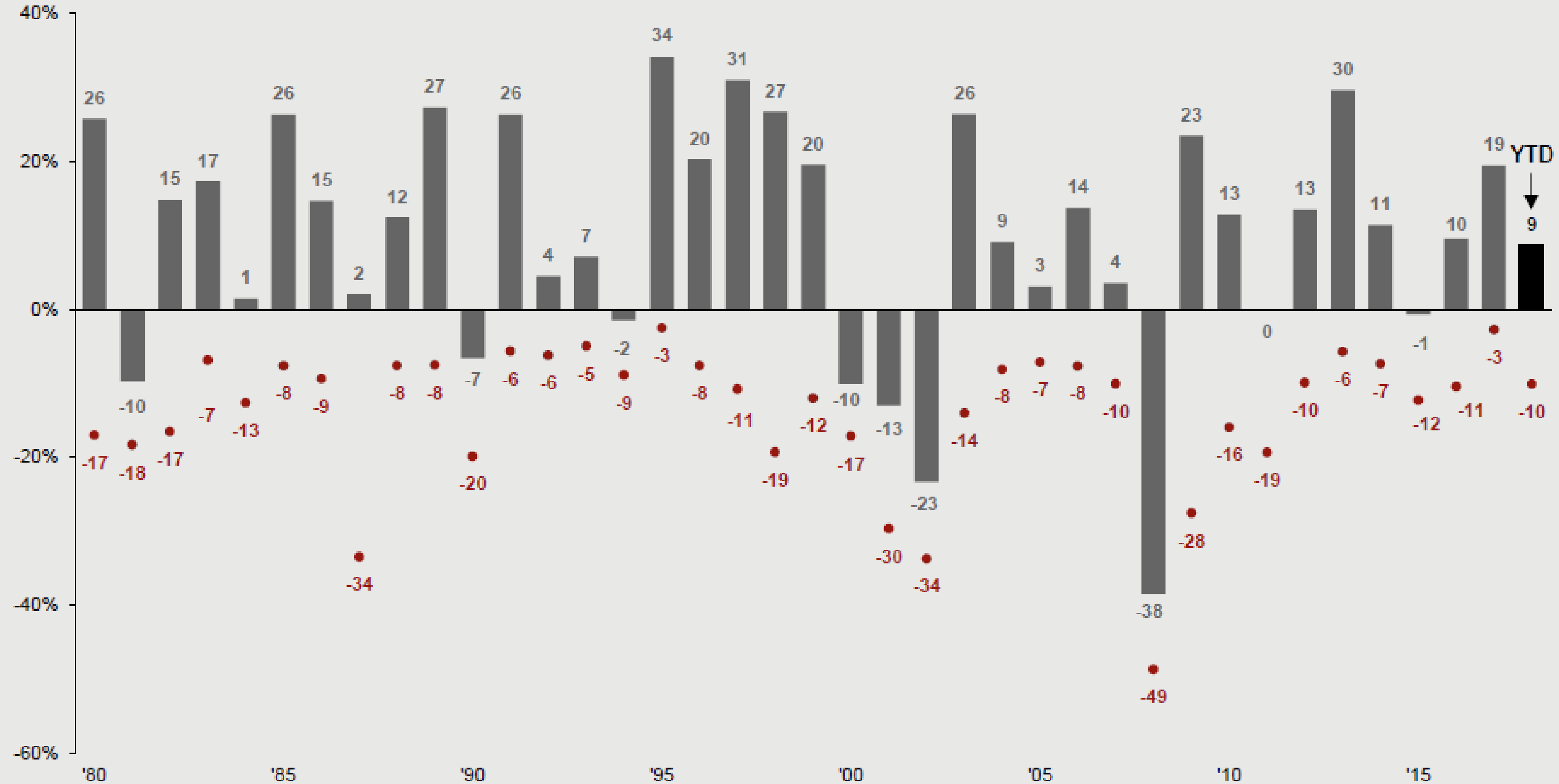
Equities

Annual returns and intra-year declines

S&P 500 intra-year declines vs. calendar year returns

Despite average intra-year drops of 13.8%, annual returns positive in 29 of 38 years



Source: FactSet, Standard & Poor's, J.P. Morgan Asset Management.
Returns are based on price index only and do not include dividends. Intra-year drops refers to the largest market drops from a peak to a trough during the year. For illustrative purposes only. Returns shown are calendar year returns from 1980 to 2017, over which time period the average annual return was 8.8%.
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All indexes are unmanaged and an individual cannot invest directly in an index. Index returns do not include fees or expenses.

Equities:

The **Dow Jones Industrial Average** is a price-weighted average of 30 actively traded blue-chip U.S. stocks.

The **MSCI ACWI (All Country World Index)** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets.

The **MSCI EAFE Index (Europe, Australasia, Far East)** is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the US & Canada.

The **MSCI Emerging Markets Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets.

The **MSCI Europe Index** is a free float-adjusted market capitalization index that is designed to measure developed market equity performance in Europe.

The **MSCI Pacific Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the Pacific region.

The **Russell 1000 Index®** measures the performance of the 1,000 largest companies in the Russell 3000.

The **Russell 1000 Growth Index®** measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

The **Russell 1000 Value Index®** measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.

The **Russell 2000 Index®** measures the performance of the 2,000 smallest companies in the Russell 3000 Index.

The **Russell 2000 Growth Index®** measures the performance of those Russell 2000 companies with higher price-to-book ratios and higher forecasted growth values.

The **Russell 2000 Value Index®** measures the performance of those Russell 2000 companies with lower price-to-book ratios and lower forecasted growth values.

The **Russell 3000 Index®** measures the performance of the 3,000 largest U.S. companies based on total market capitalization.

The **Russell Midcap Index®** measures the performance of the 800 smallest companies in the Russell 1000 Index.

The **Russell Midcap Growth Index ®** measures the performance of those Russell Midcap companies with higher price-to-book ratios and higher forecasted growth values. The stocks are also members of the Russell 1000 Growth index.

The **Russell Midcap Value Index ®** measures the performance of those Russell Midcap companies with lower price-to-book ratios and lower forecasted growth values. The stocks are also members of the Russell 1000 Value index.

The **S&P 500 Index** is widely regarded as the best single gauge of the U.S. equities market. The index includes a representative sample of 500 leading companies in leading industries of the U.S. economy. The **S&P 500 Index** focuses on the large-cap segment of the market; however, since it includes a significant portion of the total value of the market, it also represents the market.

Fixed income:

The **Bloomberg Barclays 1-3 Month U.S. Treasury Bill Index** includes all publicly issued zero-coupon US Treasury Bills that have a remaining maturity of less than 3 months and more than 1 month, are rated investment grade, and have $250 million or more of outstanding face value. In addition, the securities must be denominated in U.S. dollars and must be fixed rate and non convertible.

The **Bloomberg Barclays Global High Yield Index** is a multi-currency flagship measure of the global high yield debt market. The index represents the union of the US High Yield, the Pan-European High Yield, and Emerging Markets (EM) Hard Currency High Yield Indices. The high yield and emerging markets sub-components are mutually exclusive. Until January 1, 2011, the index also included CMBS high yield securities.

The **Bloomberg Barclays Municipal Index**: consists of a broad selection of investment- grade general obligation and revenue bonds of maturities ranging from one year to 30 years. It is an unmanaged index representative of the tax-exempt bond market.

The **Bloomberg Barclays US Dollar Floating Rate Note (FRN) Index** provides a measure of the U.S. dollar denominated floating rate note market.

The **Bloomberg Barclays US Corporate Investment Grade Index** is an unmanaged index consisting of publicly issued US Corporate and specified foreign debentures and secured notes that are rated investment grade (Baa3/BBB or higher) by at least two ratings agencies, have at least one year to final maturity and have at least $250 million par amount outstanding. To qualify, bonds must be SEC-registered.

The **Bloomberg Barclays US High Yield Index** covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (sovereign rating of Baa1/BBB+/BBB+ and below using the middle of Moody's, S&P, and Fitch) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included.

The **Bloomberg Barclays US Mortgage Backed Securities Index** is an unmanaged index that measures the performance of investment grade fixed-rate mortgage backed pass-through securities of GNMA, FNMA and FHLMC.

The **Bloomberg Barclays US TIPS Index** consists of Inflation-Protection securities issued by the U.S. Treasury.

The **J.P. Morgan Emerging Market Bond Global Index (EMBI)** includes U.S. dollar denominated Brady bonds, Eurobonds, traded loans and local market debt instruments issued by sovereign and quasi-sovereign entities.

The **J.P. Morgan Domestic High Yield Index** is designed to mirror the investable universe of the U.S. dollar domestic high yield corporate debt market.

The **J.P. Morgan Corporate Emerging Markets Bond Index Broad Diversified (CEMBI Broad Diversified)** is an expansion of the **J.P. Morgan Corporate Emerging Markets Bond Index (CEMBI)**. The CEMBI is a market capitalization weighted index consisting of U.S. dollar denominated emerging market corporate bonds.

The **J.P. Morgan Emerging Markets Bond Index Global Diversified (EMBI Global Diversified)** tracks total returns for U.S. dollar-denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities: Brady bonds, loans, Eurobonds. The index limits the exposure of some of the larger countries.

The **J.P. Morgan GBI EM Global Diversified** tracks the performance of local currency debt issued by emerging market governments, whose debt is accessible by most of the international investor base.

The **U.S. Treasury Index** is a component of the U.S. Government index.

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Other asset classes:

The **Alerian MLP Index** is a composite of the 50 most prominent energy Master Limited Partnerships (MLPs) that provides investors with an unbiased, comprehensive benchmark for the asset class.

The **Bloomberg Commodity Index** and related sub-indices are composed of futures contracts on physical commodities and represents twenty two separate commodities traded on U.S. exchanges, with the exception of aluminum, nickel, and zinc

The **Cambridge Associates U.S. Global Buyout and Growth Index®** is based on data compiled from 1,768 global (U.S. & ex – U.S.) buyout and growth equity funds, including fully liquidated partnerships, formed between 1986 and 2013.

The **CS/Tremont Hedge Fund Index** is compiled by Credit Suisse Tremont Index, LLC. It is an asset-weighted hedge fund index and includes only funds, as opposed to separate accounts. The Index uses the Credit Suisse/Tremont database, which tracks over 4500 funds, and consists only of funds with a minimum of US$50 million under management, a 12-month track record, and audited financial statements. It is calculated and rebalanced on a monthly basis, and shown net of all performance fees and expenses. It is the exclusive property of Credit Suisse Tremont Index, LLC.

The **HFRI Monthly Indices (HFRI)** are equally weighted performance indexes, utilized by numerous hedge fund managers as a benchmark for their own hedge funds. The HFRI are broken down into 4 main strategies, each with multiple sub strategies. All single-manager HFRI Index constituents are included in the HFRI Fund Weighted Composite, which accounts for over 2200 funds listed on the internal HFR Database.

The **NAREIT EQUITY REIT Index** is designed to provide the most comprehensive assessment of overall industry performance, and includes all tax-qualified real estate investment trusts (REITs) that are listed on the NYSE, the American Stock Exchange or the NASDAQ National Market List.

The **NFI-ODCE**, short for NCREIF Fund Index - Open End Diversified Core Equity, is an index of investment returns reporting on both a historical and current basis the results of 33 open-end commingled funds pursuing a core investment strategy, some of which have performance histories dating back to the 1970s. The NFI-ODCE Index is capitalization-weighted and is reported gross of fees. Measurement is time-weighted.

Definitions:

Investing in **alternative assets** involves higher risks than traditional investments and is suitable only for sophisticated investors. Alternative investments involve greater risks than traditional investments and should not be deemed a complete investment program. They are not tax efficient and an investor should consult with his/her tax advisor prior to investing. Alternative investments have higher fees than traditional investments and they may also be highly leveraged and engage in speculative investment techniques, which can magnify the potential for investment loss or gain. The value of the investment may fall as well as rise and investors may get back less than they invested.

Bonds are subject to interest rate risks. Bond prices generally fall when interest rates rise.

Investments in **commodities** may have greater volatility than investments in traditional securities, particularly if the instruments involve leverage. The value of commodity-linked derivative instruments may be affected by changes in overall market movements, commodity index volatility, changes in interest rates, or factors affecting a particular industry or commodity, such as drought, floods, weather, livestock disease, embargoes, tariffs and international economic, political and regulatory developments. Use of leveraged commodity-linked derivatives creates an opportunity for increased return but, at the same time, creates the possibility for greater loss.

Derivatives may be riskier than other types of investments because they may be more sensitive to changes in economic or market conditions than other types of investments and could result in losses that significantly exceed the original investment. The use of derivatives may not be successful, resulting in investment losses, and the cost of such strategies may reduce investment returns.

Distressed Restructuring Strategies employ an investment process focused on corporate fixed income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceeding or financial market perception of near term proceedings.

Investments in **emerging markets** can be more volatile. The normal risks of investing in foreign countries are heightened when investing in emerging markets. In addition, the small size of securities markets and the low trading volume may lead to a lack of liquidity, which leads to increased volatility. Also, emerging markets may not provide adequate legal protection for private or foreign investment or private property.

The price of **equity** securities may rise, or fall because of changes in the broad market or changes in a company's financial condition, sometimes rapidly or unpredictably. These price movements may result from factors affecting individual companies, sectors or industries, or the securities market as a whole, such as changes in economic or political conditions. Equity securities are subject to "stock market risk" meaning that stock prices in general may decline over short or extended periods of time.

Equity market neutral strategies employ sophisticated quantitative techniques of analyzing price data to ascertain information about future price movement and relationships between securities, select securities for purchase and sale. Equity Market Neutral Strategies typically maintain characteristic net equity market exposure no greater than 10% long or short.

Global macro strategies trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency and commodity markets.

International investing involves a greater degree of risk and increased volatility. Changes in currency exchange rates and differences in accounting and taxation policies outside the U.S. can raise or lower returns. Some overseas markets may not be as politically and economically stable as the United States and other nations.

There is no guarantee that the use of **long and short positions** will succeed in limiting an investor's exposure to domestic stock market movements, capitalization, sector swings or other risk factors. Using long and short selling strategies may have higher portfolio turnover rates. Short selling involves certain risks, including additional costs associated with covering short positions and a possibility of unlimited loss on certain short sale positions.

Merger arbitrage strategies which employ an investment process primarily focused on opportunities in equity and equity related instruments of companies which are currently engaged in a corporate transaction.

Mid-capitalization investing typically carries more risk than investing in well-established "blue-chip" companies. Historically, mid-cap companies' stock has experienced a greater degree of market volatility than the average stock.

Price to forward earnings is a measure of the price-to-earnings ratio (P/E) using forecasted earnings. **Price to book value** compares a stock's market value to its book value. **Price to cash flow** is a measure of the market's expectations of a firm's future financial health. **Price to dividends** is the ratio of the price of a share on a stock exchange to the dividends per share paid in the previous year, used as a measure of a company's potential as an investment.

Real estate investments may be subject to a higher degree of market risk because of concentration in a specific industry, sector or geographical sector. Real estate investments may be subject to risks including, but not limited to, declines in the value of real estate, risks related to general and economic conditions, changes in the value of the underlying property owned by the trust and defaults by borrower.

Relative Value Strategies maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities.

Small-capitalization investing typically carries more risk than investing in well-established "blue-chip" companies since smaller companies generally have a higher risk of failure. Historically, smaller companies' stock has experienced a greater degree of market volatility than the average stock.

J.P.Morgan
Asset Management

The Market Insights program provides comprehensive data and commentary on global markets without reference to products. Designed as a tool to help clients understand the markets and support investment decision-making, the program explores the implications of current economic data and changing market conditions.

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Unless otherwise stated, all data are as of August 31, 2018 or most recently available.

Guide to the Markets – U.S.

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J.P.Morgan Asset Management

Jon Parkhurst, CPA, CFP®

-Closing Announcements
-Please turn in your comment cards at the door
-Questions and Answers

Thank You for Attending

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