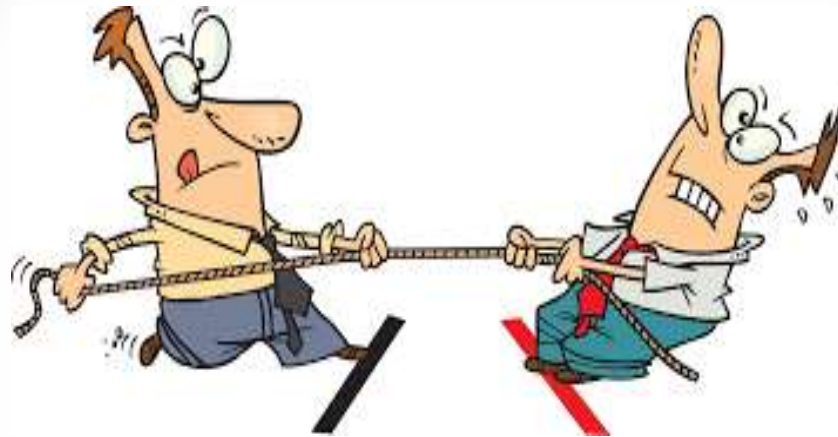


The Economy in 2019: What It Means For Your Portfolio

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U.S. Department of the Treasury
Washington, D.C.
and currently
Boynton D. Murch Chair in Finance
Baldwin Wallace University**

A Tug of War The Economy or the Market?



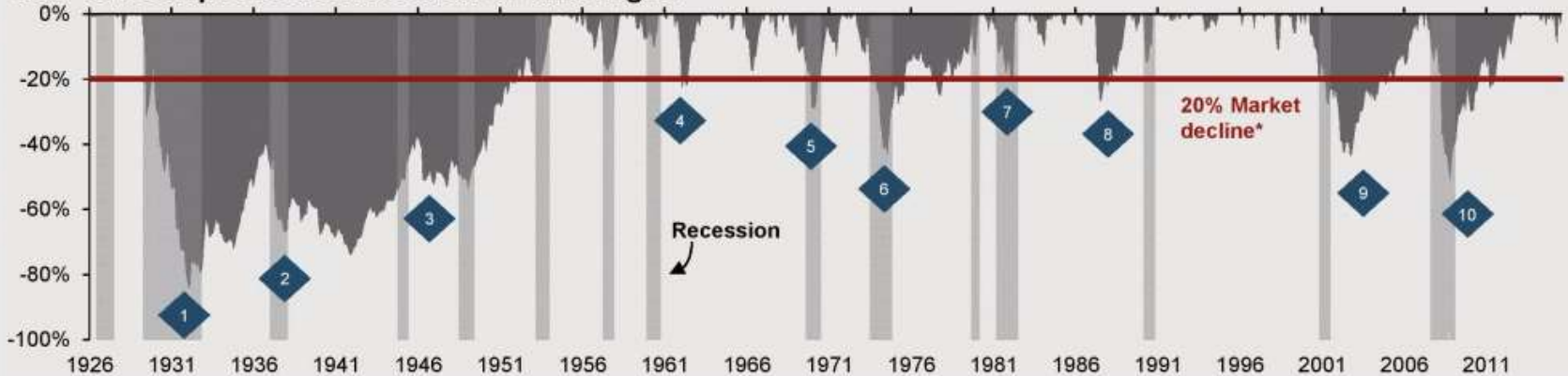
Stock Market Declines

Bear markets and subsequent bull runs

GTM - U.S. | 14

Equities

S&P 500 composite declines from all-time highs



Characteristics of bull and bear markets

Market Corrections	Bear Markets			Macro environment				Bull Markets		
	Market Peak	Bear Return*	Duration (months)*	Recession	Commodity Spike	Aggressive Fed	Extreme Valuations	Bull Begin Date	Bull Return	Duration (months)
1 Crash of 1929 - excessive leverage, irrational exuberance	Sep 1929	-86%	33	◆			◆	Jul 1926	152%	38
2 1937 Fed Tightening - premature policy tightening	Mar 1937	-60%	63	◆		◆		Mar 1935	129%	24
3 Post WWII Crash - post-war demobilization, recession fears	May 1946	-30%	37	◆			◆	Apr 1942	158%	50
4 Flash Crash of 1962 - flash crash, Cuban Missile Crisis	Dec 1961	-28%	7				◆	Oct 1960	39%	14
5 Tech Crash of 1970 - Economic overheating, civil unrest	Nov 1968	-36%	18	◆	◆	◆		Oct 1962	103%	74
6 Stagflation - OPEC oil embargo	Jan 1973	-48%	21	◆	◆			May 1970	74%	32
7 Volcker Tightening - Whip Inflation Now	Nov 1980	-27%	21	◆	◆	◆		Mar 1978	62%	33
8 1987 Crash - Program trading, overheating markets	Aug 1987	-34%	3				◆	Aug 1982	229%	61
9 Tech Bubble - Extreme valuations, .com boom/bust	Mar 2000	-49%	31	◆			◆	Oct 1990	417%	115
10 Global Financial Crisis - Leverage/housing, Lehman collapse	Oct 2007	-57%	17	◆	◆	◆		Oct 2002	101%	61
Current Cycle								Mar 2009	202%	83
Averages	-	-45%	25					-	151%	53

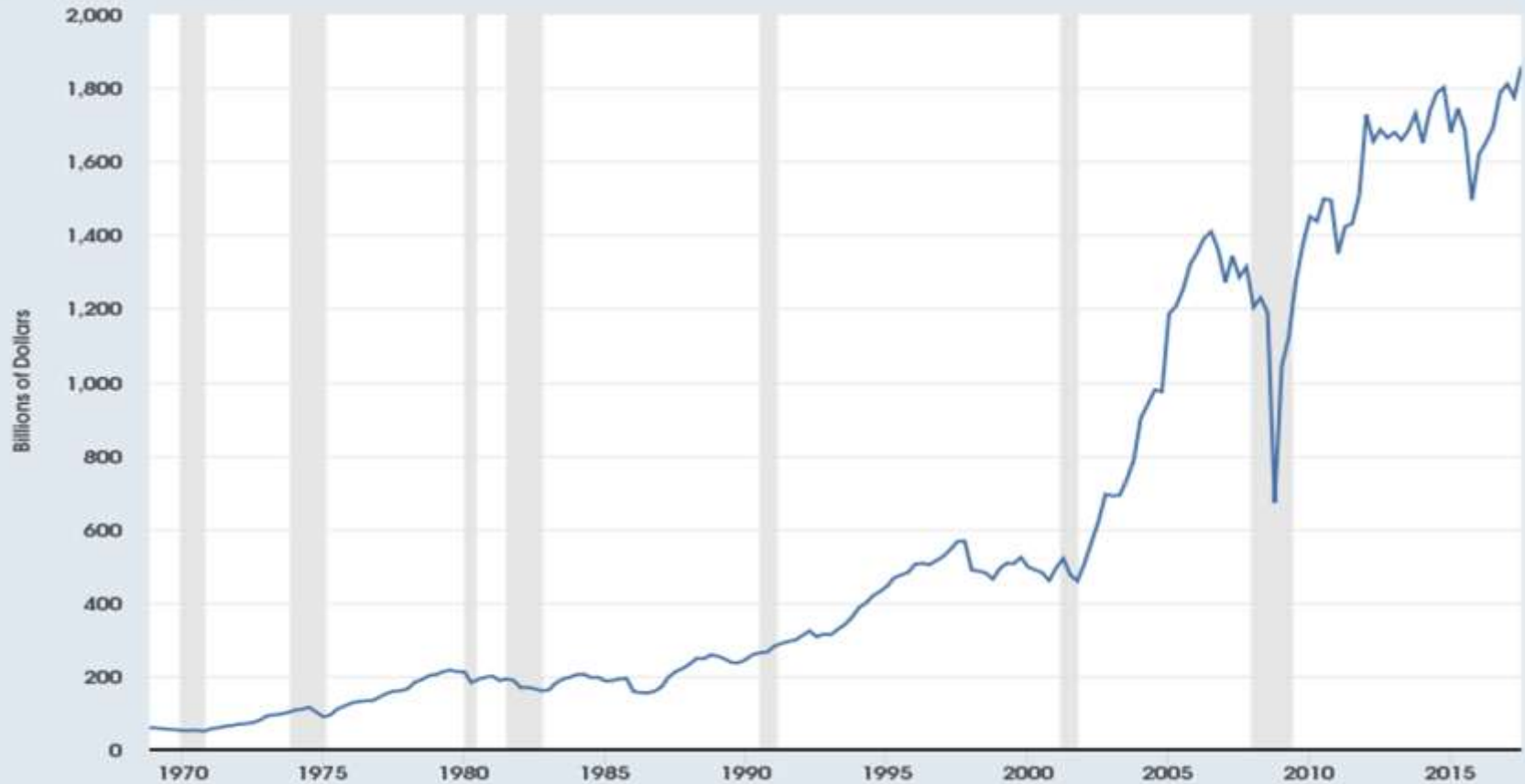
Source: FactSet, NBER, Robert Shiller, Standard & Poor's, J.P. Morgan Asset Management.

*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.

Corporate Profits

FRED — Corporate Profits After Tax (without IVA and CCAAdj)

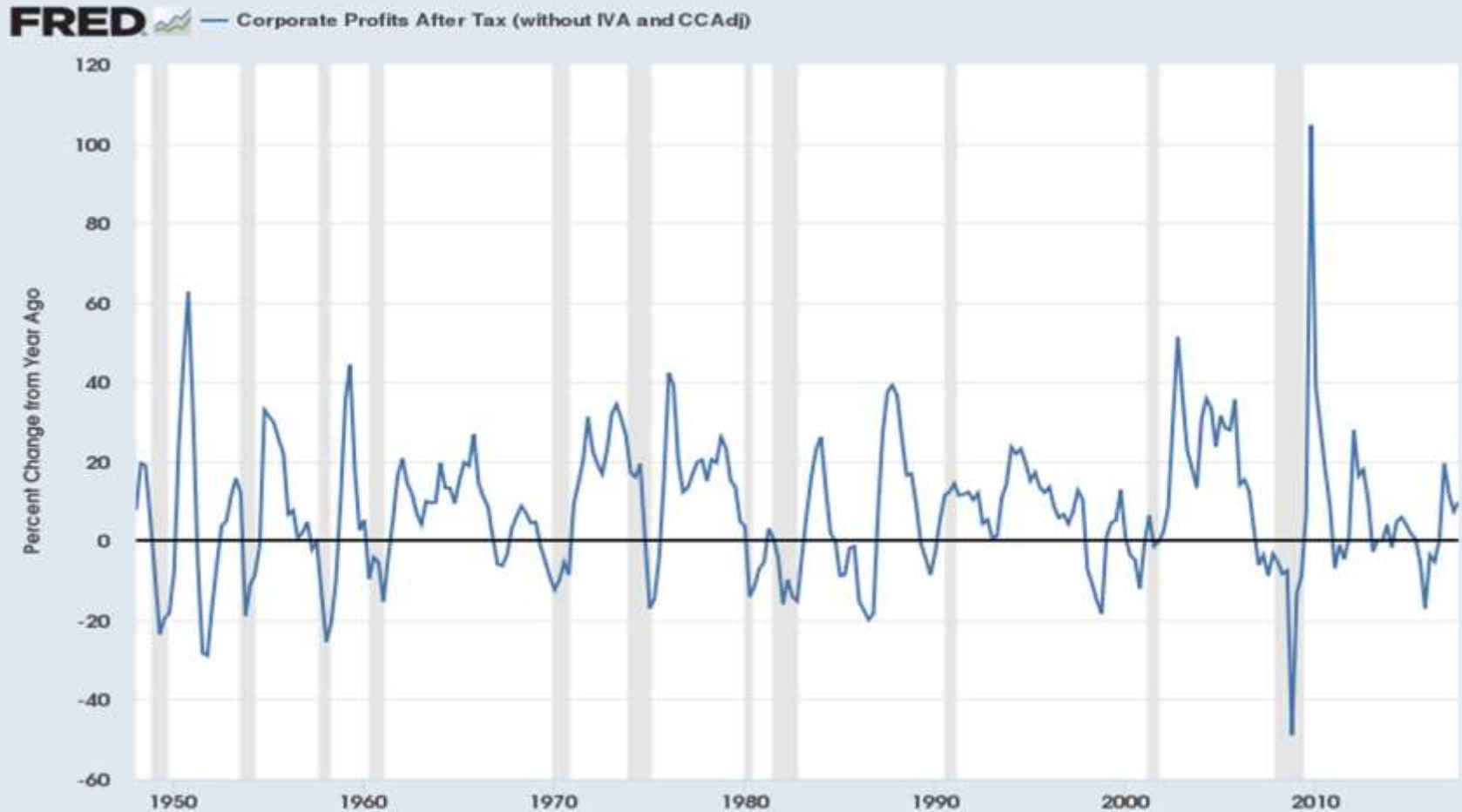


Shaded areas indicate U.S. recessions

Source: U.S. Bureau of Economic Analysis

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Corporate Profits – Another View



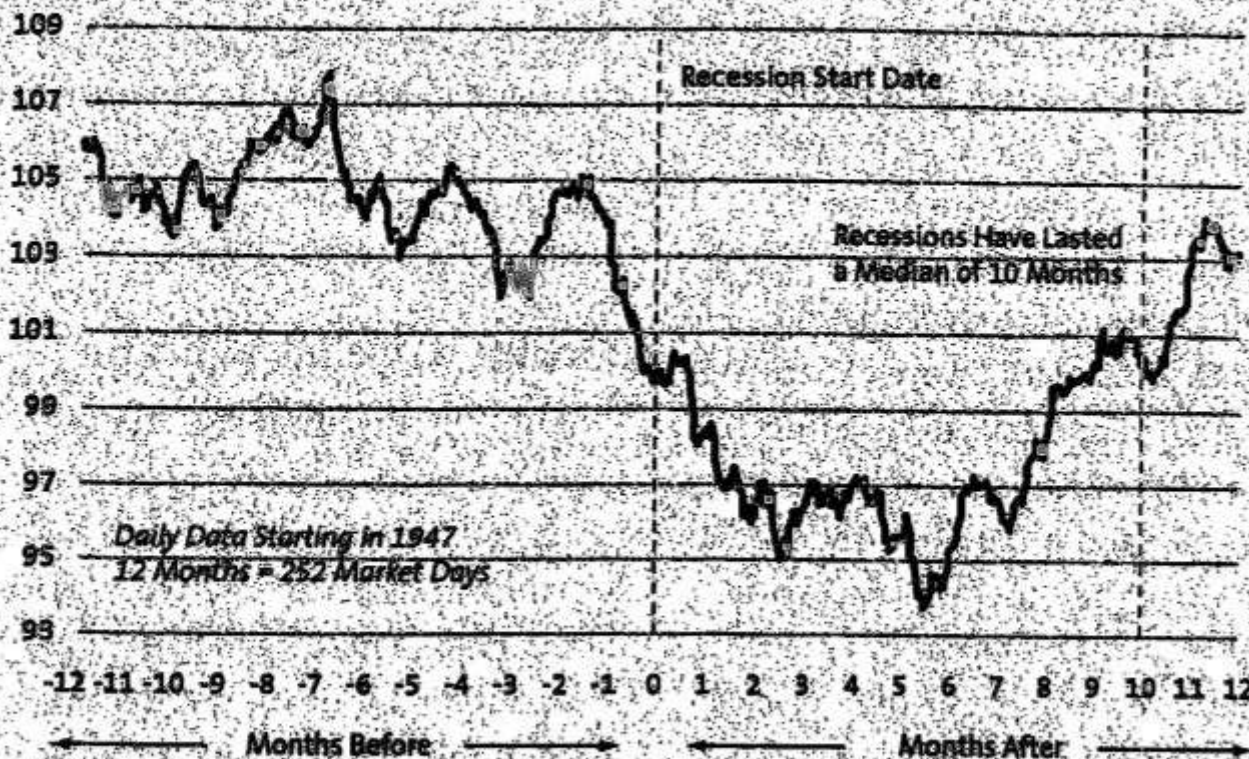
Shaded areas indicate U.S. recessions

Source: U.S. Bureau of Economic Analysis

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A Typical Recession

S&P 500 Performance Around Postwar Recessions
Principal Return



Source: Ned Davis Research, Inc.

What is the Stock Market Telling Us?



Bespoke @bespokeinvest · 17h

If you're thinking about getting out of equities now, here's a look at the S&P's performance after 10%+ down quarters since WW2: bespokepremium.com

S&P 500 10%+ Down Quarters Post WWII

Quarter	% Chg	Next 2 Qtrs		Next Year
		Next Qtr %	%	%
9/30/1946	-18.83	2.27	1.40	1.00
9/30/1957	-10.45	-5.73	-0.75	18.01
6/29/1962	-21.28	2.78	15.25	26.70
6/30/1970	-18.87	15.80	26.72	37.10
12/31/1973	-10.03	-3.66	-11.84	-29.72
9/30/1974	-26.12	7.90	31.19	32.00
9/30/1975	-11.89	7.54	22.53	25.48
9/30/1981	-11.45	5.48	-3.63	3.65
12/31/1987	-23.23	4.78	10.69	12.40
9/28/1990	-14.52	7.90	22.60	26.73
9/30/1998	-10.30	20.87	26.49	26.13
3/30/2001	-12.11	5.52	-10.29	-1.12
9/28/2001	-14.99	10.29	10.23	-21.68
6/28/2002	-13.73	-17.63	-11.11	-1.55
9/30/2002	-17.63	7.92	4.04	22.16
12/31/2008	-22.56	-11.67	1.78	23.45
3/31/2009	-11.67	15.22	32.49	46.57
6/30/2010	-11.86	10.72	22.02	28.13
9/30/2011	-14.33	11.15	24.49	27.33
12/31/2018	-15.55	?	?	?
	Average	5.13	11.28	15.94
	Median	7.54	10.69	23.45

15

140

235



Perspectives on Stocks

- **3 perspectives on stocks and the market**
 - 1. Firm**
 - 2. Industry**
 - 3. Macroeconomic**

- **Influence 2 major factors driving stocks:**
 - 1. Earnings**
 - 2. Interest rates**

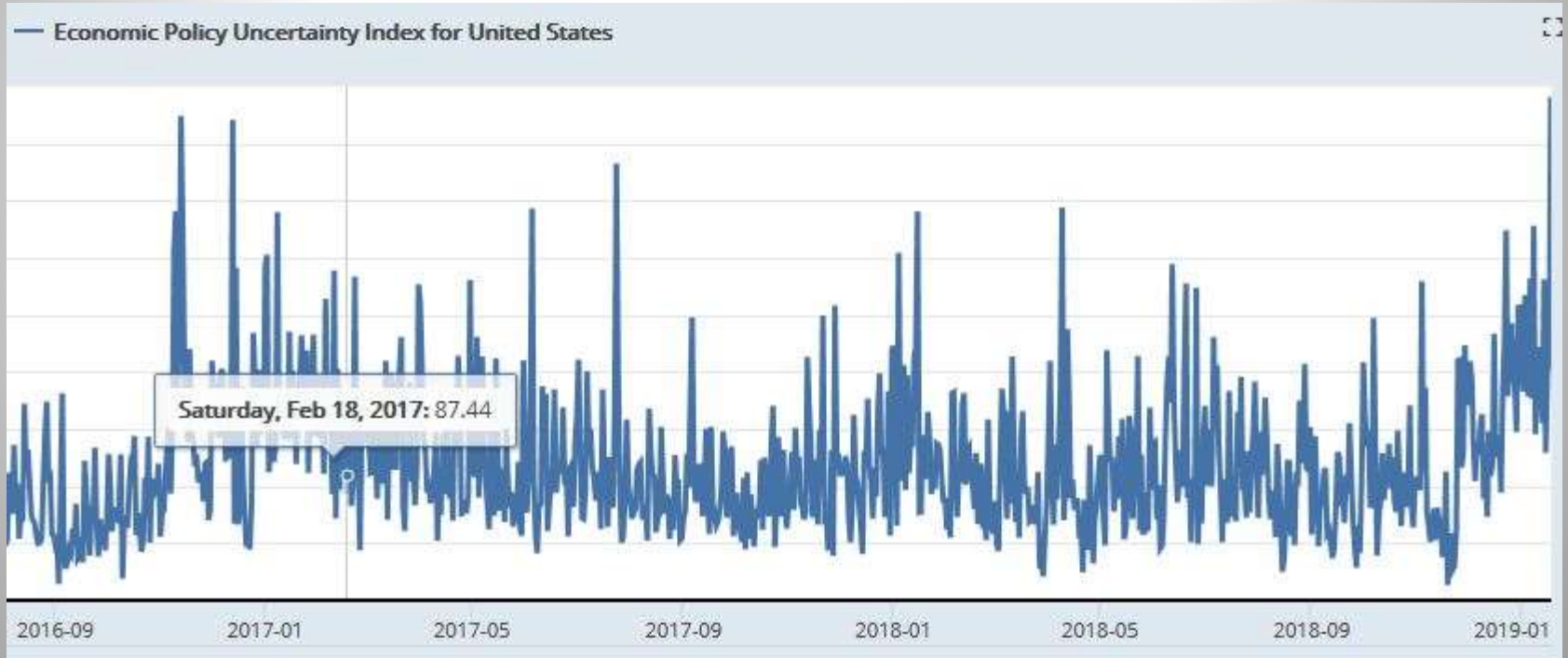
Economic Policy Tools

- **Fiscal policy (government spending, taxes)**
- **Monetary policy (interest rates)**
- **Other (regulation, tariffs, moral suasion)**

Stock Market Concerns

- **4 primary concerns**
 - 1. Is a recession forthcoming?**
 - 2. Interest rates – how far, how fast?**
 - 3. Negative impact of trade barriers**
 - 4. Politics**
- **All this creates investor uncertainty**

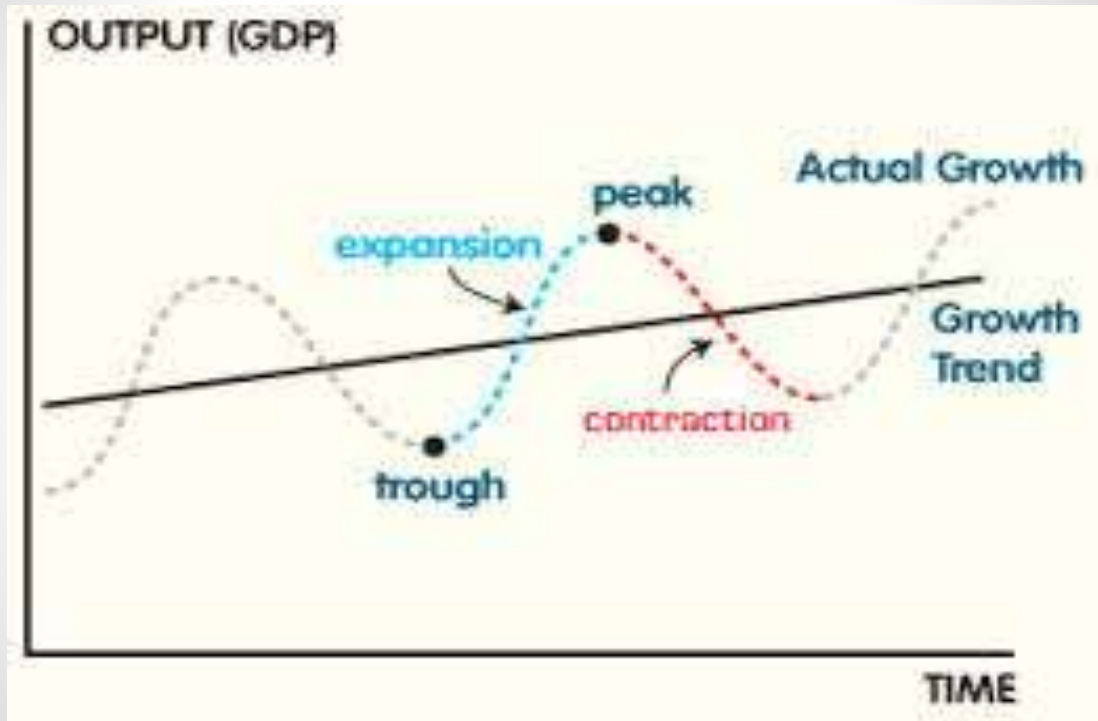
A Look at Uncertainty



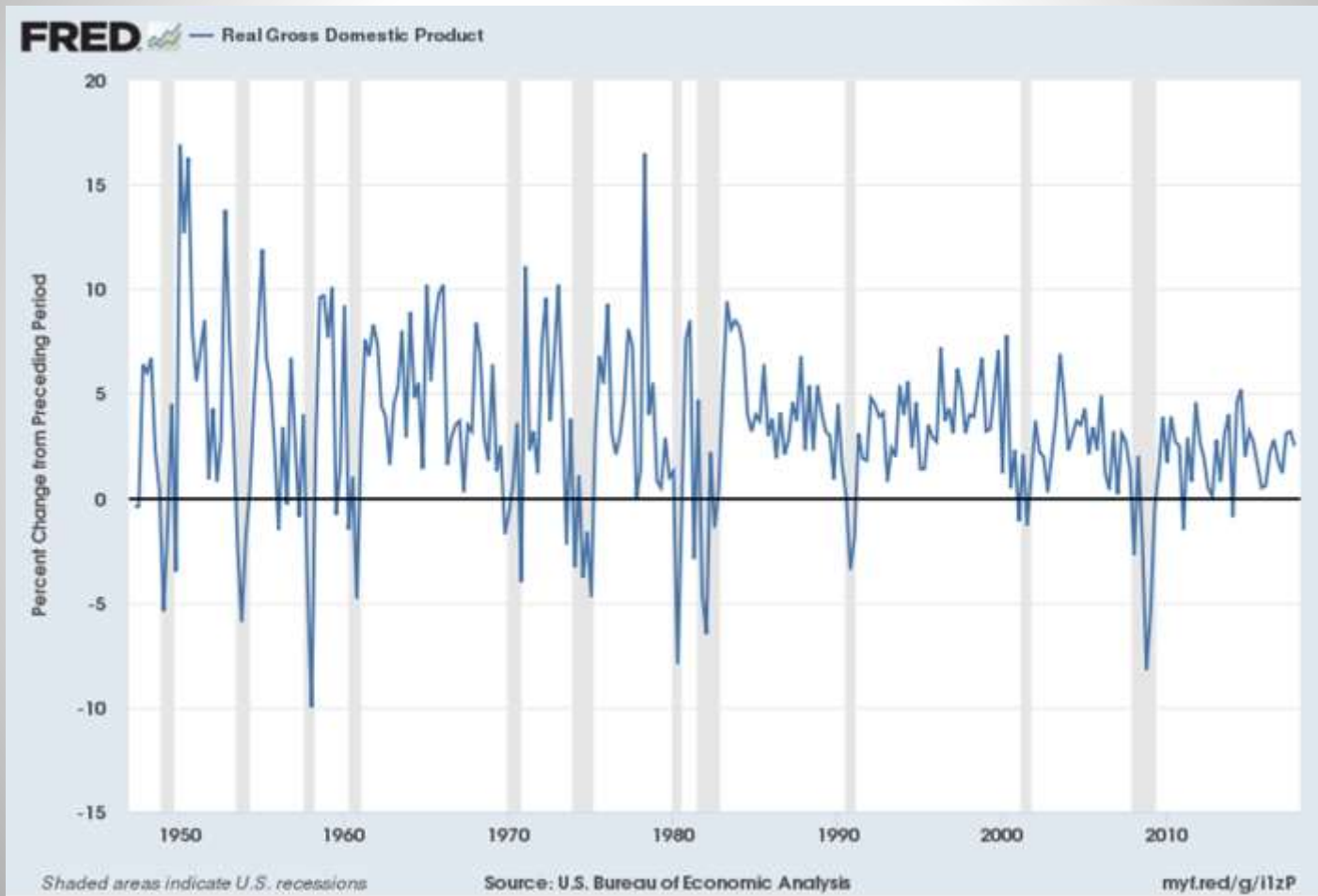
Economic Policy Goals

- **GDP growth**
 - $\text{GDP} = \text{C} + \text{I} + \text{G} + \text{NX}$
- **Unemployment**
- **Inflation**
- **International considerations**
- **Financial market stability**

The Business Cycle



GDP growth



Recession Forthcoming?

- **4th quarter 2018 economy grew 2.8% (e)**
- **Consumer confidence lowest since pre-election**
- **Manufacturing index lowest since pre-election**
- **Current estimate is 25% chance of recession in 2019**

How Do Interest Rates Influence the Stock Market?

- Higher interest rates raise the cost of funding for borrowers, homebuyers, corporations.
- Higher interest rates make bonds more attractive relative to stocks
- The Fed Model (Yardeni)
(Earnings/Price) on S&P 500
 - 10-year Treasury Rate
 - > 0 invest in stocks
 - < 0 invest in bonds

Interest Rates

- **Federal Reserve has raised the federal funds rate 9 times since December 2015**
- **Earlier in 2018 it appeared the Federal Reserve would raise interest rates 3-4 times in 2019**
- **Rising interest rates slow economic activity**
- **Yield curve nearly inverted**

Federal Funds Rate



Tariffs and Trade Policy

- **Exports account for about 13 percent of U.S. output**
- **Foreign sales account for significant portion of many U.S. companies sales – example: Ford Motor Co. 40% of sales**
- **Example of China – rapid growth in exports to China for much of the last decade.**
- **Recent slowing in that growth rate**

Good Macroeconomic News?

- **Index of Leading Economic Indicators still suggests economic growth in 2019**
- **Small Business Optimism Index continues at very high levels**
- **ISM manufacturing sector continues to grow but at slower rate**
- **Unemployment remains low as firms constrained by lack of workers**
- **Corporate profits continue to grow, but at a slower rate**

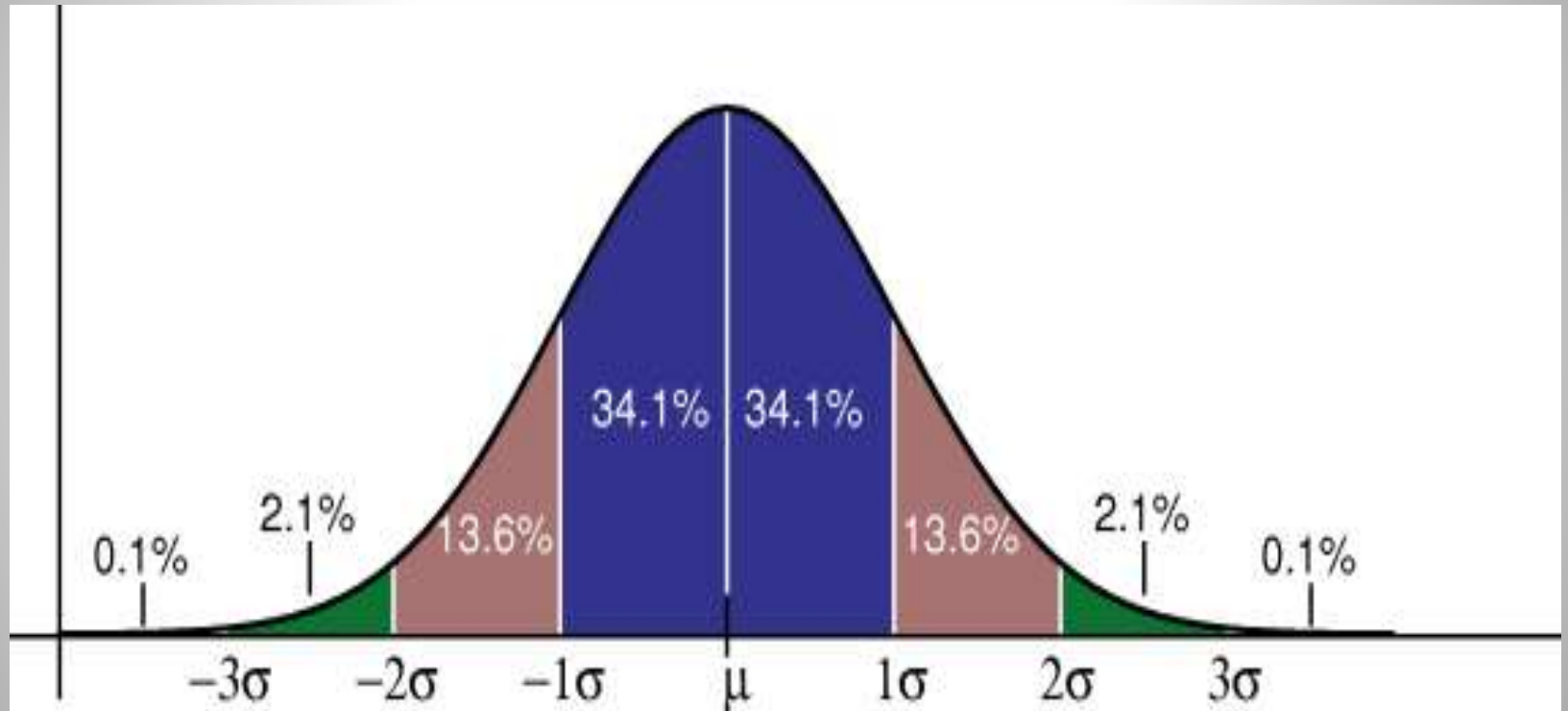
Investing in 2018

- **2018 began with the S&P 500 at 2673**
- **Hit a record high on 9/21 at 2940**
- **Fell to 2351 (-20%) on Christmas Eve**
- **Today at 2670; back to where 2018 began**

So What About Investing in 2019?

- **Expect high volatility, particularly through the first part of the year. Volatility tends to cluster**
- **Leptokurtosis (fat tails) – extremely large and rare movements in the market are more likely to occur than implied by traditional financial models.**
- **Bear markets can be great times to invest in stocks**

Fat Tails in Stock Markets



C-J Simulations

S&P 500 % change from January 1, 2019 thru December 2019	
N = 2000 simulations	
Range	% of simulations
-10% or worse	9.6%
-5 to -9.9%	7.0%
-3 to -4.9%	3.6%
-1 to -2.9%	4.0%
0 to -0.9%	2.5%
0 to 0.9%	1.8%
1 to 2.9%	4.2%
3 to 4.9%	6.1%
5 to 9.9%	13.2%
10% or better	48.3%
median percentage change in S&P 500 thru the end of December 2019 = +9.2%	

*% of simulations may not equal 100% due to rounding.

Recovering From Bear Markets

Recovery From Bear Markets

Equity markets historically have delivered large returns in the years immediately after a bear market, with the potential to deliver double-digit average annual gains for several years. These are the average annual returns of the S&P 500 Index after declines of 20% or more (12/31/61–12/31/16).



Average Return After Bear Market

1 Year Later	38.4%
3 Years Later	19.8%
5 Years Later	17.7%
10 Years Later	13.5%

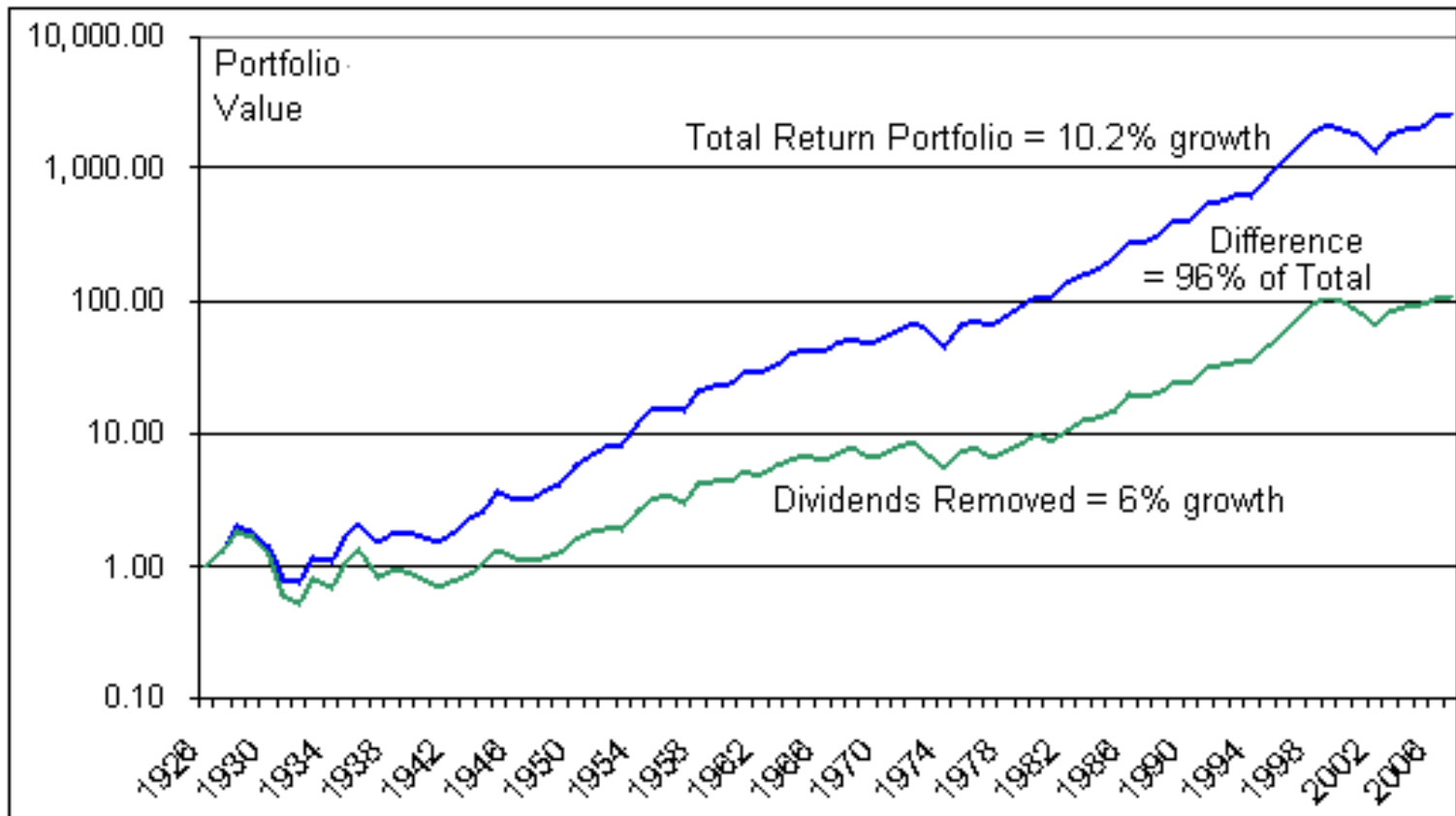
Some Investment Strategies

- **Value stocks – historically higher return and lower risk. Example: AbbVie with a P/E of 11**
- **Dividend Aristocrats – paid and increased dividend every year for at least last 25 years. Example: Johnson and Johnson 56 years**
- **For dividend growth investors the 10-10 rule. Example: Lockheed Martin 18.5% dividend growth last 10 yrs; from \$1.83 to \$8.20**

Some Investment Strategies (continued)

- **High dividend yield combined with low volatility. Example: AT&T with a 6.6% dividend yield**
- **Reduce sequence of returns risk via rising equity glide path**

Dividends vs Capital Gains



Dividend Yield and Growth

Investing for Dividend Yield and Growth: A Winning Combination

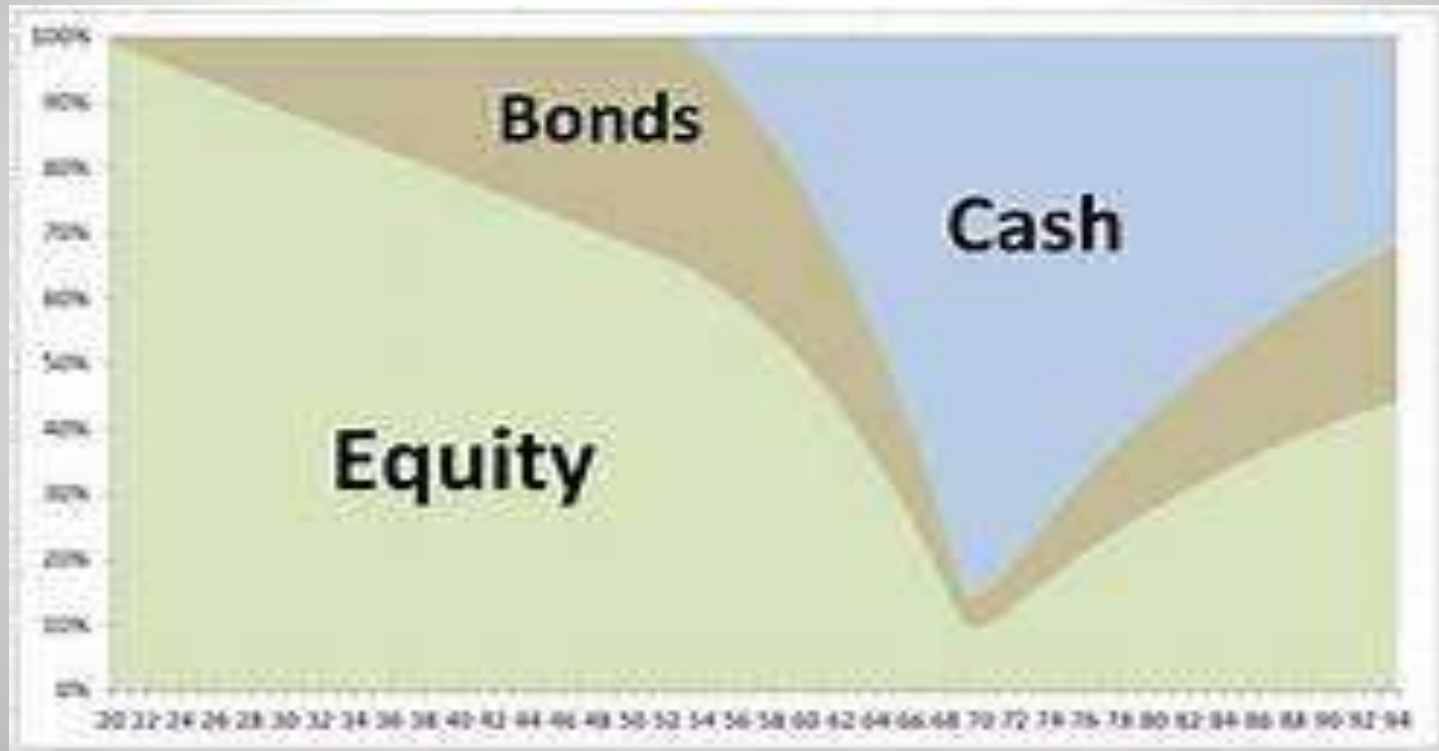
Stocks in the Russell 1000 Index with relatively high dividend yields and high dividend growth rates outperformed those with lower yields and lower dividend growth rates from 12/31/1985 through 12/31/2010.

		Dividend Yield Quintiles				
		Lowest	2nd	3rd	4th	Highest
Difference in 12-Month Median Return Relative to Russell 1000 Index (In percentage points)						
Dividend Growth (3-Year Average) Quintiles	Lowest	-3.79	-0.74	-0.36	0.06	2.05
	2nd	-2.94	-0.55	0.18	0.51	-0.04
	3rd	-2.25	-0.19	0.59	0.64	0.09
	4th	-1.50	-0.30	1.28	1.69	-0.62
	Highest	-2.56	0.34	0.77	2.75	3.01

Performance reflects the total percentage points by which the median 12-month return of the stocks in each group either exceeded or lagged the median 12-month return for all dividend-paying stocks in the index (excluding real estate investment trusts). So the median return for stocks with the highest yield and highest growth rate (lower right-hand corner) exceeded that of the index by 3.01 percentage points.

Source: Analysis by T. Rowe Price based on Compustat data.

Rising Equity Glide Path



Presented by the School of Business and the MBA Association:

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Economic Insights: Global, National and Regional

You're Invited! Economic Insights: Global, National, Regional

Wednesday, January 30, 2019

6:00 p.m. Registration and Networking

7:00 p.m. Featured Presentation and Q&A

Join BW alumni, faculty, staff and community members for this popular annual assessment of global, U.S., and NEO economic outlooks, challenges, and opportunities for 2019 and beyond. The panel features these experts:

Michael Weidokal '94

Executive Director of [ISA](#) (International Strategic Analysis)

Dr. Kevin T. Jacques

Boynton D. Murch Chair of Finance, [BW School of Business](#)

Bill Koehler

Executive Director of [Team NEO](#)