

DELTA
INVESTMENT
MANAGEMENT

AAII

Delta's 2020 Outlook

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Disclosures

The presentation is being provided for informational purposes only and should not be used or construed as a recommendation of any security, sector or investment strategy.

The opinions in this presentation are as of the date of the presentation.

Stock and bond markets are volatile and can decline significantly in response to adverse issuer, political, regulatory, market, or economic developments as well as interest rate risk, inflation, credit and default rates. In addition, foreign securities are subject to interest rate, currency exchange rate, economic and political risks, all of which are magnified in emerging markets.

The S&P 500 Index is a market capitalization weighted index of 500 widely held stocks often used as a proxy for the stock market.

Consider the investment objectives, risks, charges, expenses, and instruments used to implement a strategy before investing.

Past performance is no guarantee of future results or returns.

Investing involves risk, including risk of loss.

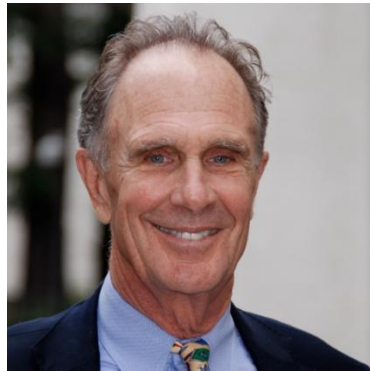
Delta Investment Management is a California registered investment advisor. The firm is based in San Francisco, CA. For more information, please visit www.deltaim.com or call (415) 249-6337.

Delta Investment Management

Delta is an SEC Registered Investment Advisor (RIA) headquartered in San Francisco. Delta's wealth management services have an emphasis of avoiding major bear markets. Delta manages separately managed accounts at TD Ameritrade and Charles Schwab for qualified retirement accounts (IRAs) and non-qualified accounts for individuals, trusts and corporations.



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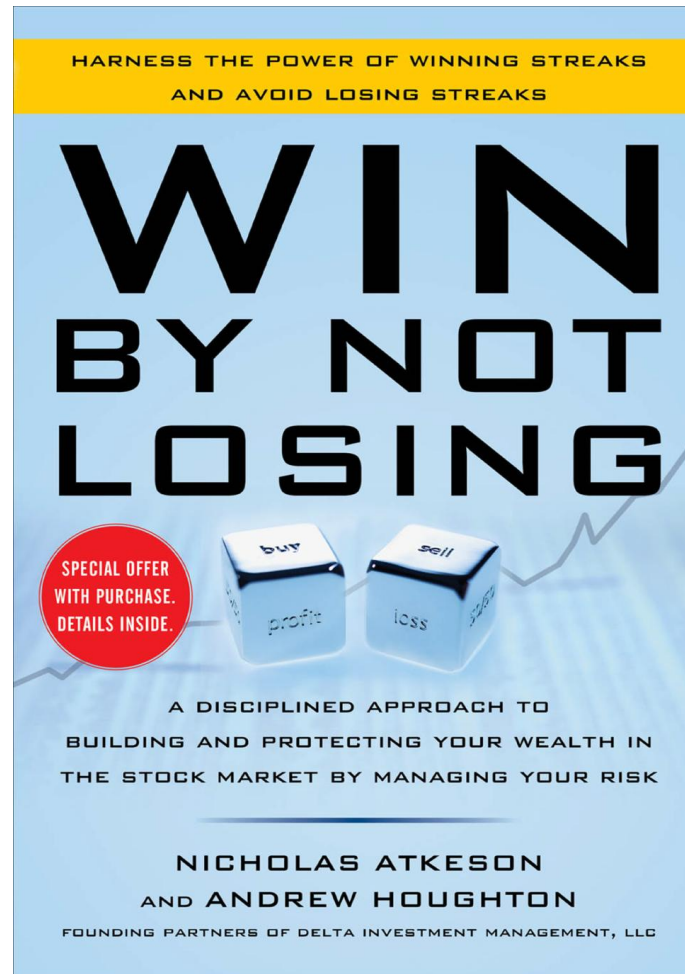
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Delta Investment Philosophy

- ❖ *We believe there are periods in market cycles to be fully invested and there are other periods not to be fully invested*
- ❖ *As such, we believe it is necessary to be proactive in managing money*
- ❖ *As active managers, we follow market-tested, proven investment disciplines*
- ❖ *During bullish cycles, we seek to invest in the strongest performing assets*
- ❖ *During bearish cycles, we seek to preserve capital by reducing exposure to risk assets*
- ❖ *We believe diversification in both asset type and asset allocation methodology strengthens portfolio performance through the full investment cycle*

Win by Not Losing

Book Available
On Amazon



DELTA
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Weekly Newsletter



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Delta Insights

a weekly commentary on investing

Delta Investment Management is a registered investment advisory firm headquartered in San Francisco.

Delta welcomes discussions with individuals seeking investment advice and advisors seeking a new partner.

Delta manages stock and bond portfolios at Schwab and TD Ameritrade.

Please contact Delta at info@deltaim.com or 415-249-6337 if you would like to learn more how we can be your partner.

The Hidden Risks of “Safe” Assets

April 6, 2018

Dear Nick,

Money managers often advise clients who would like more safety in their portfolios to increase the weighting of bonds versus stocks. Historically, bonds have experienced lower volatility than stocks. Volatility (standard deviation) is one way risk is measured in finance.

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Stock Market Dashboard

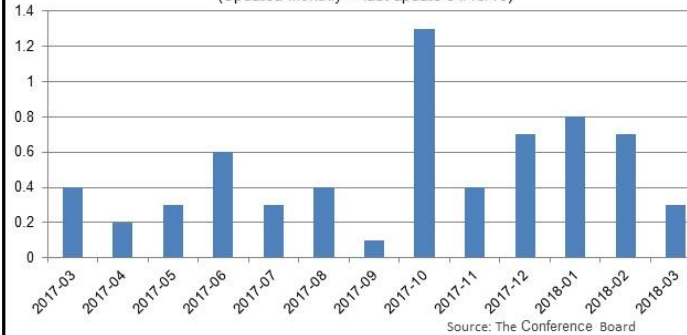
Bear Market LEI
2006 - 2009



Leading Economic Index % Change Monthly

March 2017 – March 2018

(Updated Monthly – last update 04/19/18)



Source: The Conference Board

MARKET SENTIMENT IS

BEARISH

THIS WEEK'S NUMBER IS

45.9

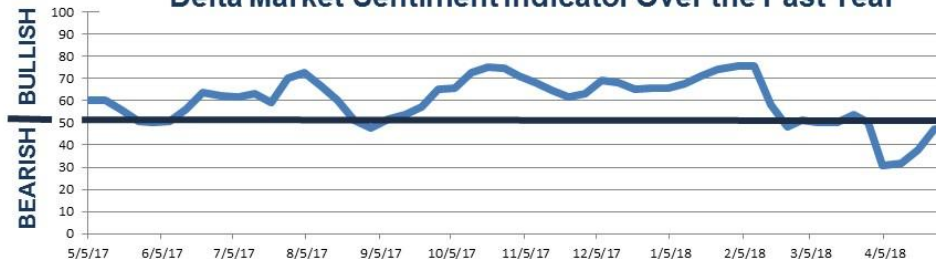
Our technical indicator decreased
this week from 46.7 to 45.9

INDICATOR STATISTICS

Consecutive Bearish Weeks:	6
Cycle Inception Date:	3/29/2018
Range:	30.7 – 47.0
Mean:	40.0
Bullish Weeks YTD:	12
Bearish Weeks YTD:	6
*S&P 500	-1.4%
*DJIA	-2.1%
*NASDAQ	-0.8%

* Percentage change during current cycle

Delta Market Sentiment Indicator Over the Past Year



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Delta MSI in Barron's

February 3, 2014

BARRON'S
The Best Business and Financial News

BARRON'S

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Market Laboratory • Indicators

MONEY RATES

	Latest	Prev.	7-Dge Week
Discount Rate (NY)	%	%	%
Prime Rate (Bank)	3%	3%	3%
Real Funds Rate	%	%	%
Aug effective offer	0.63	0.65	0.64
Aug monthly auction-C	0.63	0.65	0.64
T-Bills Rate			
12 weeks, Current Field	0.498	0.505	0.476
12 weeks, Auction Bid	0.498	0.505	0.476
28 weeks, Current Field	0.588	0.595	0.572
28 weeks, Auction Bid	0.588	0.595	0.572

FEDERAL RESERVE DATA BANK

Member Bank	Latest Week	Prev. Week	Year Ago
Reserve Chgs. (BIL. \$)			
One week ended Jan 29:			
U.S. Gov't securities:	3,838,923	+ 13,561	+ 1,262,248
Bought outright:			
Federal agency notes:	54,911	—	-20,208
Bought outright:			
Reserve bank credit:			
Primary credit:	17	+ 11	+ 12

DELTA MARKET SENTIMENT INDICATOR

The Delta MSI measures the position of ~3,600 stocks relative to an intermediate-term moving average crossover (MAC) point. When greater than 50% of the stocks followed are above this MAC point, the market is bullish and equities are attractive. When the indicator is below 50%, risk is elevated and stock exposures should be reduced. Manager uses discretion on asset allocation when MSI is 50% +/- 3%.

Current Sentiment	Last Week	2 Weeks Ago	3 Weeks Ago
BULLISH	52.1%	67.4%	65.2%
Current Market Exposure: 100% Equities, 0% Bonds, 0% Cash			
Source: Delta Investment Management www.deltaim.com, (415) 249-6337			

Other Money Rates	Latest	Prev.	7-Dge Week
12-Month T-Bill	0.36	0.38	0.39
3-Month T-Bill	0.36	0.38	0.39
6-Month T-Bill	0.36	0.38	0.39
12-Month Cert	0.36	0.38	0.39
3-Month Cert	0.36	0.38	0.39
6-Month Cert	0.36	0.38	0.39
12-Month Note	0.36	0.38	0.39
3-Month Note	0.36	0.38	0.39
6-Month Note	0.36	0.38	0.39
12-Month Bond	0.36	0.38	0.39
3-Month Bond	0.36	0.38	0.39
6-Month Bond	0.36	0.38	0.39
12-Month CDO	0.36	0.38	0.39
3-Month CDO	0.36	0.38	0.39
6-Month CDO	0.36	0.38	0.39
12-Month CDO	0.36	0.38	0.39

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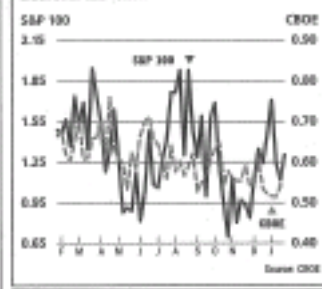
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ADJUSTABLE MORTGAGE BASE RATES

	Jan 22	Jan 29	1r Ago	3r Ago
1 Year Treas/Bills	0.11	0.11	0.15	-26.57
1 Year Treas/Notes	0.48	0.48	0.50	53.85
1 Year Treas/Bonds	0.88	0.78	0.79	109.13
1 Year Treas/Notes	1.65	1.65	0.79	108.86
1 Year Treas/Bonds	2.82	2.80	1.90	-48.42
1 Year Treas/Notes	3.47	3.53	2.66	36.45
1 Year Treas/Bonds	0.784	0.783	1.871	-26.80
1 Year Treas/Notes	4.25	4.21	3.29	29.18

CRUDE PUT/CALL RATIO vs S&P 100

Readings in the CRUDE equity put-call ratio of 0.8108 and in the S&P 100 of 125.00 are considered bullish, for instance. Bearish signals flash when the equity put-call level reaches the vicinity of 30.00 and the index rate hits 10.00.



INVESTOR SENTIMENT READINGS

High bullish readings in the Consensus stock index or in the Market Vantage stock index usually coincide with market highs, low lows, market bottoms.

	Last Week	2 Weeks Ago	3 Weeks Ago
Consensus Index			
Consensus Bullish Sentiment	60%	71%	72%
Source: Consensus Inc., P.O. Box 50525, Independence, Mo. 64650-0525			
Market Vantage			
Market Vantage Bullish Sentiment	60%	71%	72%
Source: Market Vantage, P.O. Box 50525, Independence, Mo. 64650-0525			

	Last Week	2 Weeks Ago	3 Weeks Ago
Market Vantage			
Market Vantage Bullish Sentiment	60%	71%	72%
Source: Market Vantage, P.O. Box 50525, Independence, Mo. 64650-0525			

	Last Week	2 Weeks Ago	3 Weeks Ago
Market Vantage			
Market Vantage Bullish Sentiment	60%	71%	72%
Source: Market Vantage, P.O. Box 50525, Independence, Mo. 64650-0525			

	Last Week	2 Weeks Ago	3 Weeks Ago
Market Vantage			
Market Vantage Bullish Sentiment	60%	71%	72%
Source: Market Vantage, P.O. Box 50525, Independence, Mo. 64650-0525			

	Last Week	2 Weeks Ago	3 Weeks Ago
Market Vantage			
Market Vantage Bullish Sentiment	60%	71%	72%
Source: Market Vantage, P.O. Box 50525, Independence, Mo. 64650-0525			

FOREIGN EXCHANGE

The foreign-exchange mid-range rates below apply to trading among banks in amounts of \$1 million and more, as quoted at 4 p.m. Eastern time by Reuters and other sources. Special transactions provide lower rates of foreign currency per dollar.

Country	Foreign Currency vs U.S. \$	Foreign Currency vs U.S. \$	U.S. \$ vs Foreign Currency	U.S. \$ vs Foreign Currency
	Jan 31, 2014	Jan 31, 2014	Jan 31, 2014	Jan 31, 2014
Argentina (Peso)	13.57	13.62	10.00	1.0000
Australia (Dollar)	0.918	0.914	1.000	1.015
1 month forward	0.918	0.914	1.000	1.015
3 months forward	0.918	0.914	1.000	1.015
6 months forward	0.918	0.914	1.000	1.015
Bahamas (Dollar)	0.0024	0.0024	1.000	1.000
Brazil (Real)	0.615	0.615	1.000	1.000
Canada (Dollar)	0.999	0.999	1.000	1.000
China (Yuan)	0.0000	0.0000	1.000	1.000
China (Renminbi)	0.0000	0.0000	1.000	1.000
Colombia (Peso)	0.0000	0.0000	1.000	1.000
Czech Rep. (Koruna)	0.0000	0.0000	1.000	1.000
Denmark (Krone)	0.0000	0.0000	1.000	1.000
Egypt (Pound)	0.0000	0.0000	1.000	1.000
Hong Kong (Dollar)	0.0000	0.0000	1.000	1.000
Hungary (Forint)	0.0000	0.0000	1.000	1.000
India (Rupee)	0.0000	0.0000	1.000	1.000
Indonesia (Rupiah)	0.0000	0.0000	1.000	1.000
Israel (Sheqel)	0.0000	0.0000	1.000	1.000
Japan (Yen)	0.0000	0.0000	1.000	1.000
1 month forward	0.0000	0.0000	1.000	1.000
3 months forward	0.0000	0.0000	1.000	1.000
6 months forward	0.0000	0.0000	1.000	1.000
Jordan (Dinar)	0.0000	0.0000	1.000	1.000
Korea (Won)	0.0000	0.0000	1.000	1.000
Latvia (Lats)	0.0000	0.0000	1.000	1.000
Malaysia (Ringgit)	0.0000	0.0000	1.000	1.000
Mexico (Peso)	0.0000	0.0000	1.000	1.000
New Zealand (Dollar)	0.0000	0.0000	1.000	1.000
Norway (Krone)	0.0000	0.0000	1.000	1.000
Poland (Zloty)	0.0000	0.0000	1.000	1.000
Portugal (Escudo)	0.0000	0.0000	1.000	1.000
Romania (Leu)	0.0000	0.0000	1.000	1.000
Saudi Arabia (Riyal)	0.0000	0.0000	1.000	1.000
Singapore (Dollar)	0.0000	0.0000	1.000	1.000
South Africa (Rand)	0.0000	0.0000	1.000	1.000
South Korea (Won)	0.0000	0.0000	1.000	1.000
Sweden (Krona)	0.0000	0.0000	1.000	1.000
Switzerland (Franc)	0.0000	0.0000	1.000	1.000
1 month forward	0.0000	0.0000	1.000	1.000
3 months forward	0.0000	0.0000	1.000	1.000
6 months forward	0.0000	0.0000	1.000	1.000
Taiwan (Dollar)	0.0000	0.0000	1.000	1.000
Thailand (Baht)	0.0000	0.0000	1.000	1.000
Turkey (Lira)	0.0000	0.0000	1.000	1.000
U.S. (Dollar)	0.0000	0.0000	1.000	1.000
1 month forward	0.0000	0.0000	1.000	1.000
3 months forward	0.0000	0.0000	1.000	1.000
6 months forward	0.0000	0.0000	1.000	1.000
United Arab Emirates (Dirham)	0.0000	0.0000	1.000	1.000
Uruguay (Peso)	0.0000	0.0000	1.000	1.000
Venezuela (Bolívar)	0.0000	0.0000	1.000	1.000

Performance: Style & Size

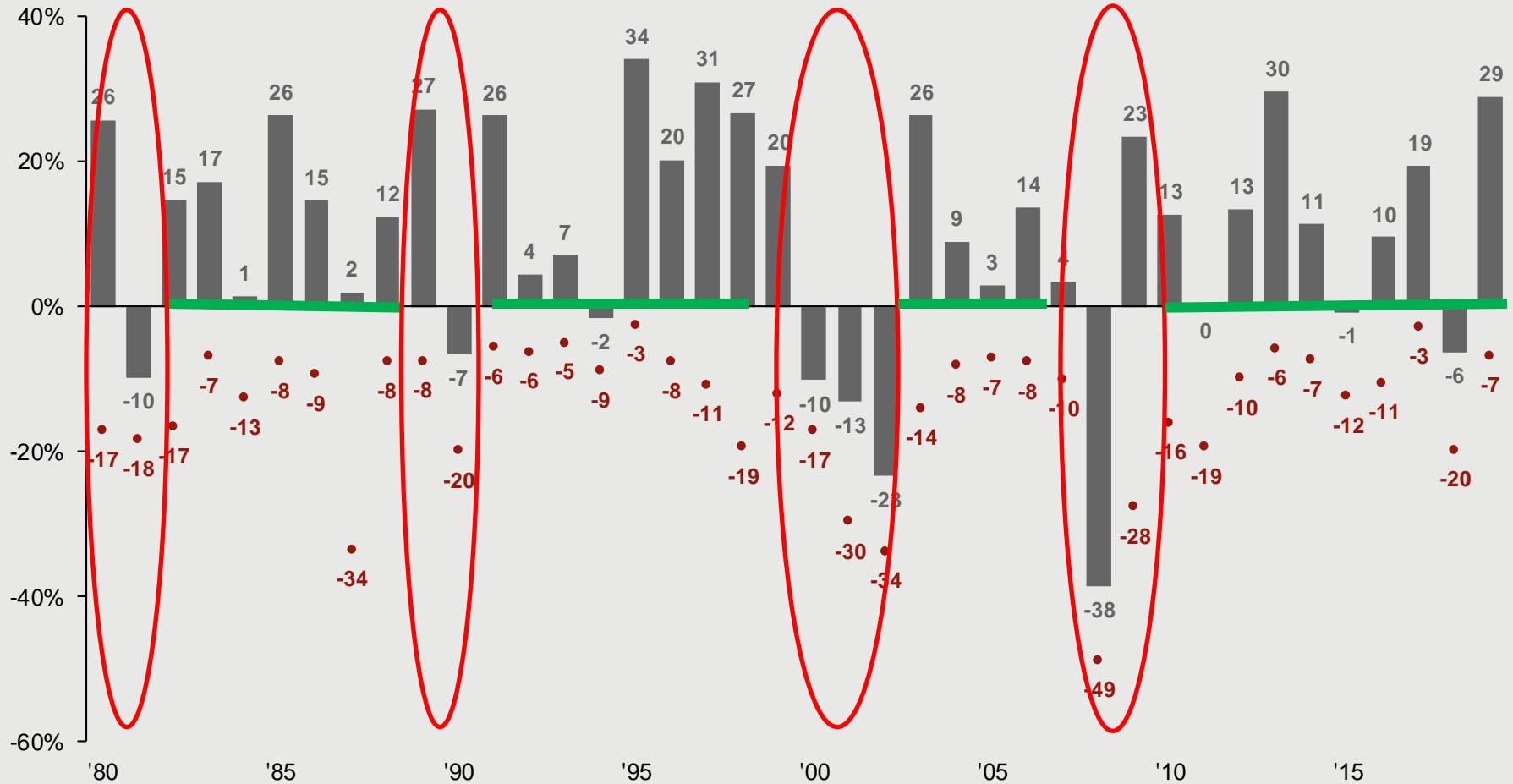
4Q 2019			2019				
	Value	Blend	Growth		Value	Blend	Growth
Large	7.4%	9.1%	10.6%	Large	26.5%	31.5%	36.4%
Mid	6.4%	7.1%	8.2%	Mid	27.1%	30.5%	35.5%
Small	8.5%	9.9%	11.4%	Small	22.4%	25.5%	28.5%

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S&P 500 Returns and Drawdowns

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

Despite average intra-year drops of 13.8%, annual returns positive in 30 of 40 years



Source: JP Morgan Asset Management

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Quantifying Drawdowns & Recoveries

Drawdown %	Occurences	AVG Days to Recovery	AVG Days of Decline
5-10	40	34	24
10-20	14	72	96
20-30	4	182	260
30-40	2	432	220
40+	3	1215	476

1/3/1950 – 7/8/2019, Days are trading days only

Importance of Recessions

- The 3 pullbacks of > than 40% all occurred during recessions; 1973-74, 2000-02, 2007-09.
- The 2 pullbacks of 30-40% occurred outside of recessions. The most recent was “Black Monday” in October 1987. The S&P 500 declined by 33.5% from high to low but ended the year in positive territory and rallied another 12% the following year. The second instance was Nov. 1968 to Dec. 1970. 1968 and 1970 were positive calendar years. 1969 the S&P 500 declined by –11.4%
- The average time to recovery on the remaining pullbacks is 3 months.

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Valuation

S&P 500 Index: Forward P/E ratio

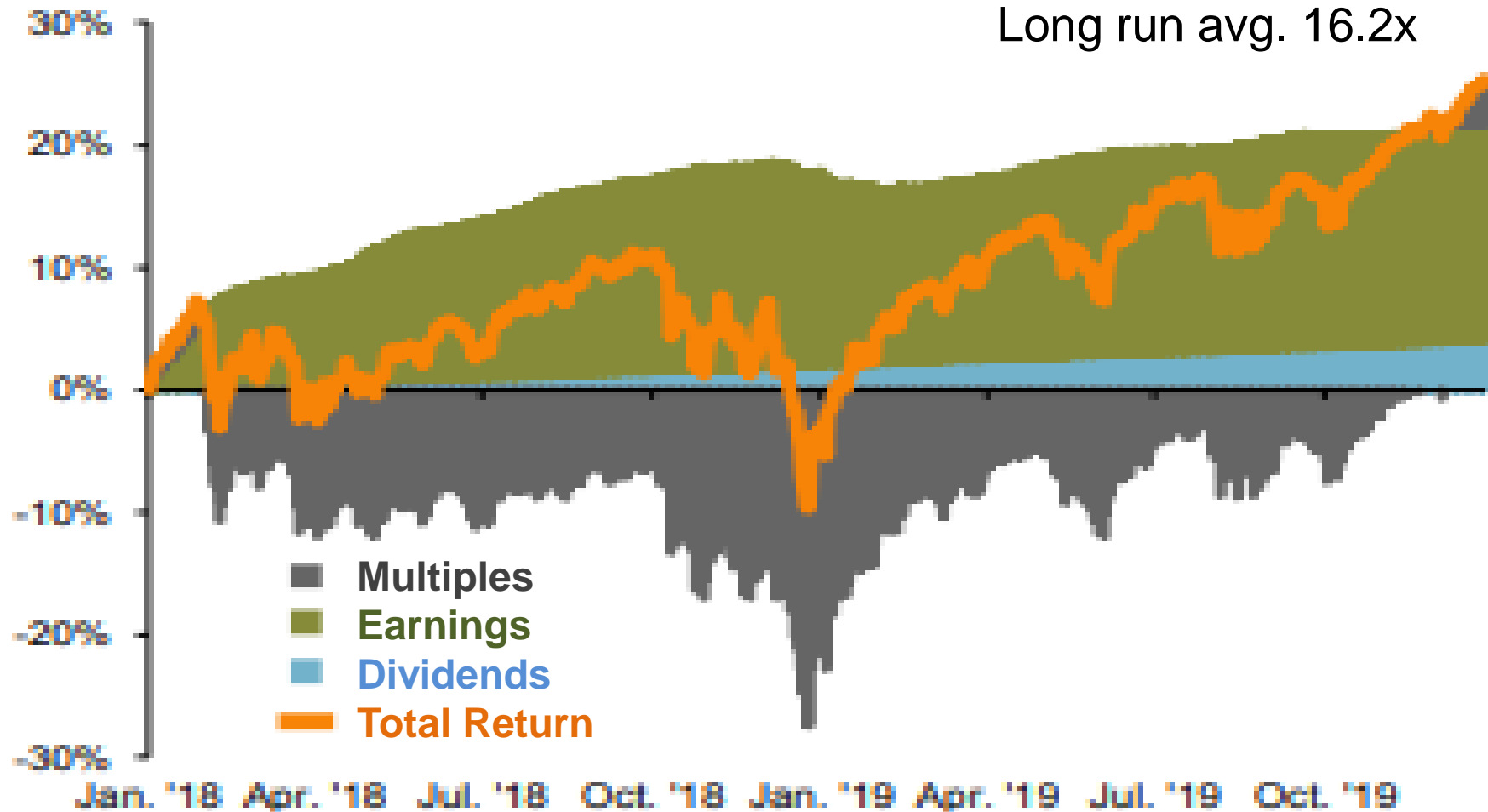


Source: JP Morgan Asset Management, FactSet, Robert Shiller, Standard & Poor's, Thomson Reuters

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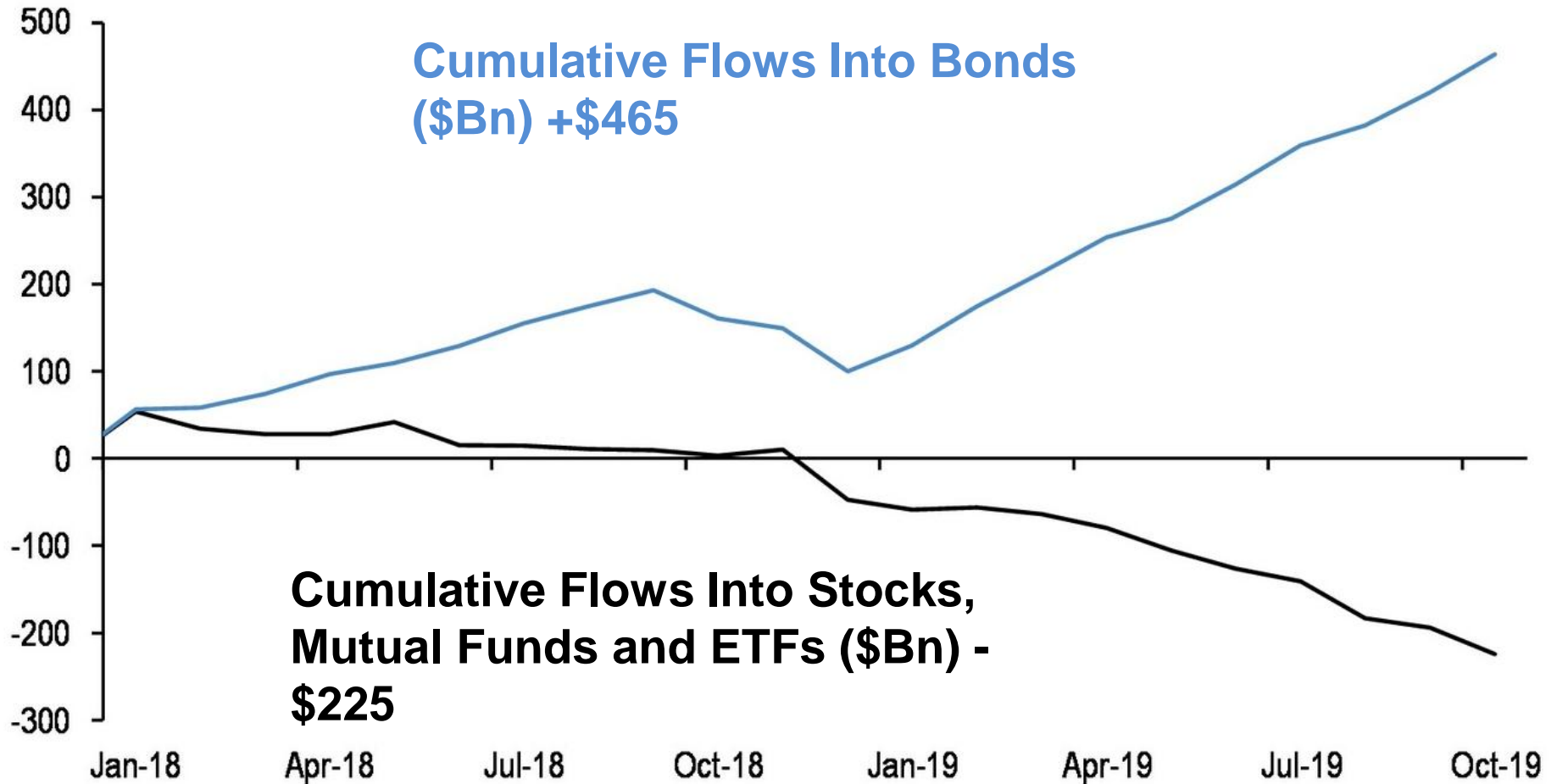
2018 – 2019 In Review

Forward P/E 18x
Long run avg. 16.2x



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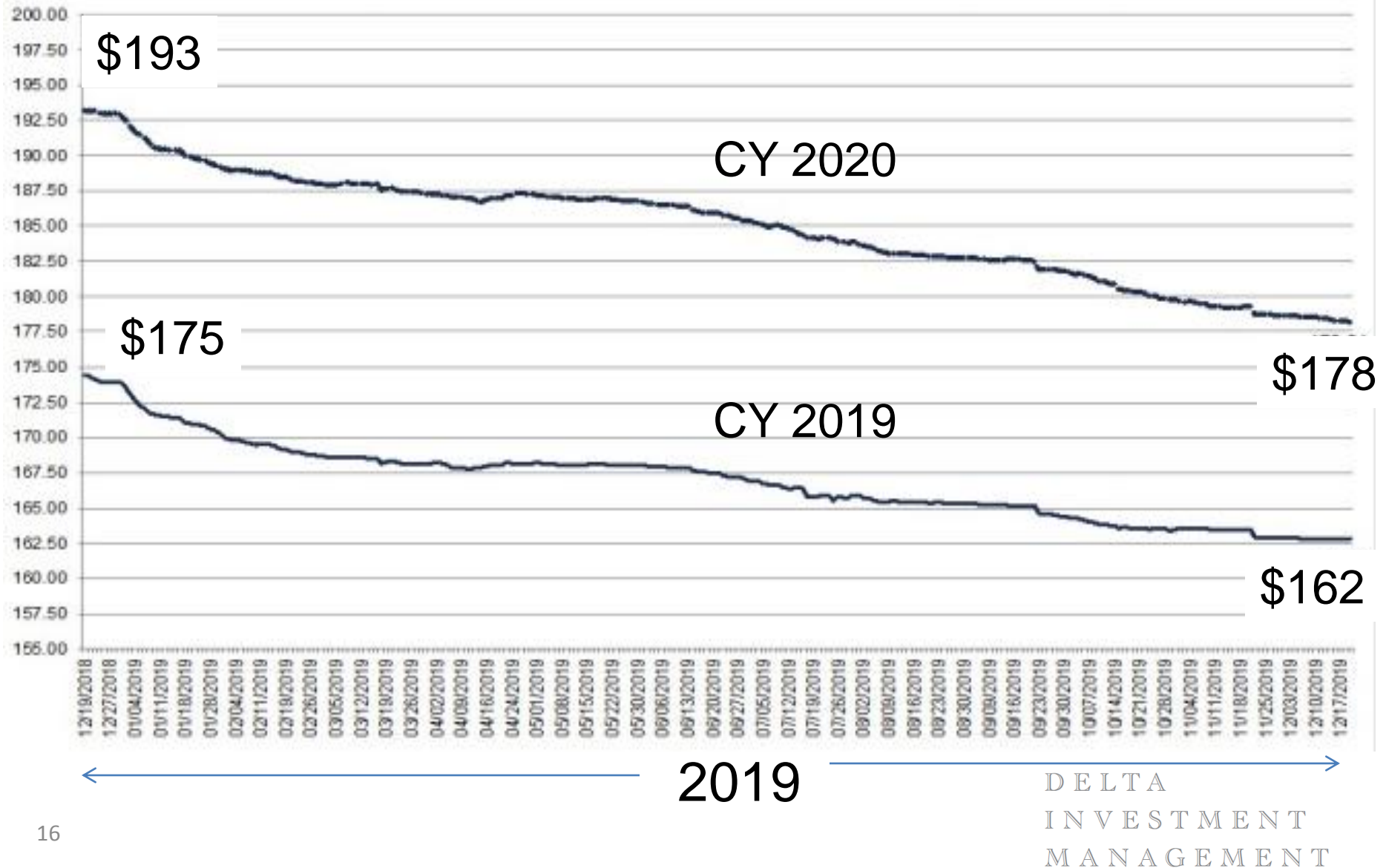
Cumulative Fund Flows



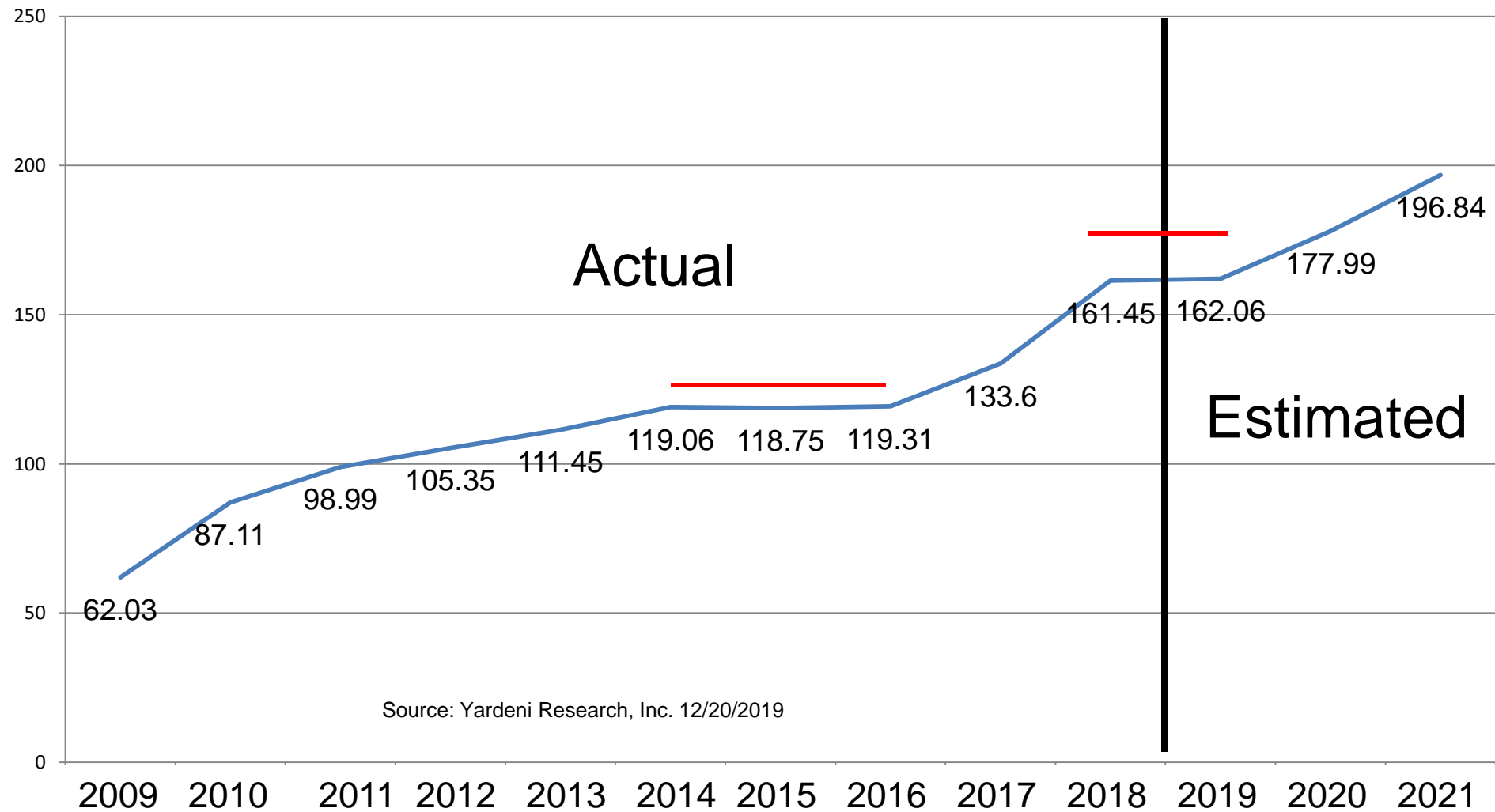
Stock Market Valuation Model

$$\text{Stock Prices} = \frac{\text{Future Earnings (est.)}}{\text{Risk-Free Rate} + \text{Risk Premium (anxiety, uncertainty)}}$$

Earnings Revisions



S&P 500 Earnings



Source: Yardeni Research, Inc. 12/20/2019

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Risk-Free Rate

1-Month U.S. Treasury Rate

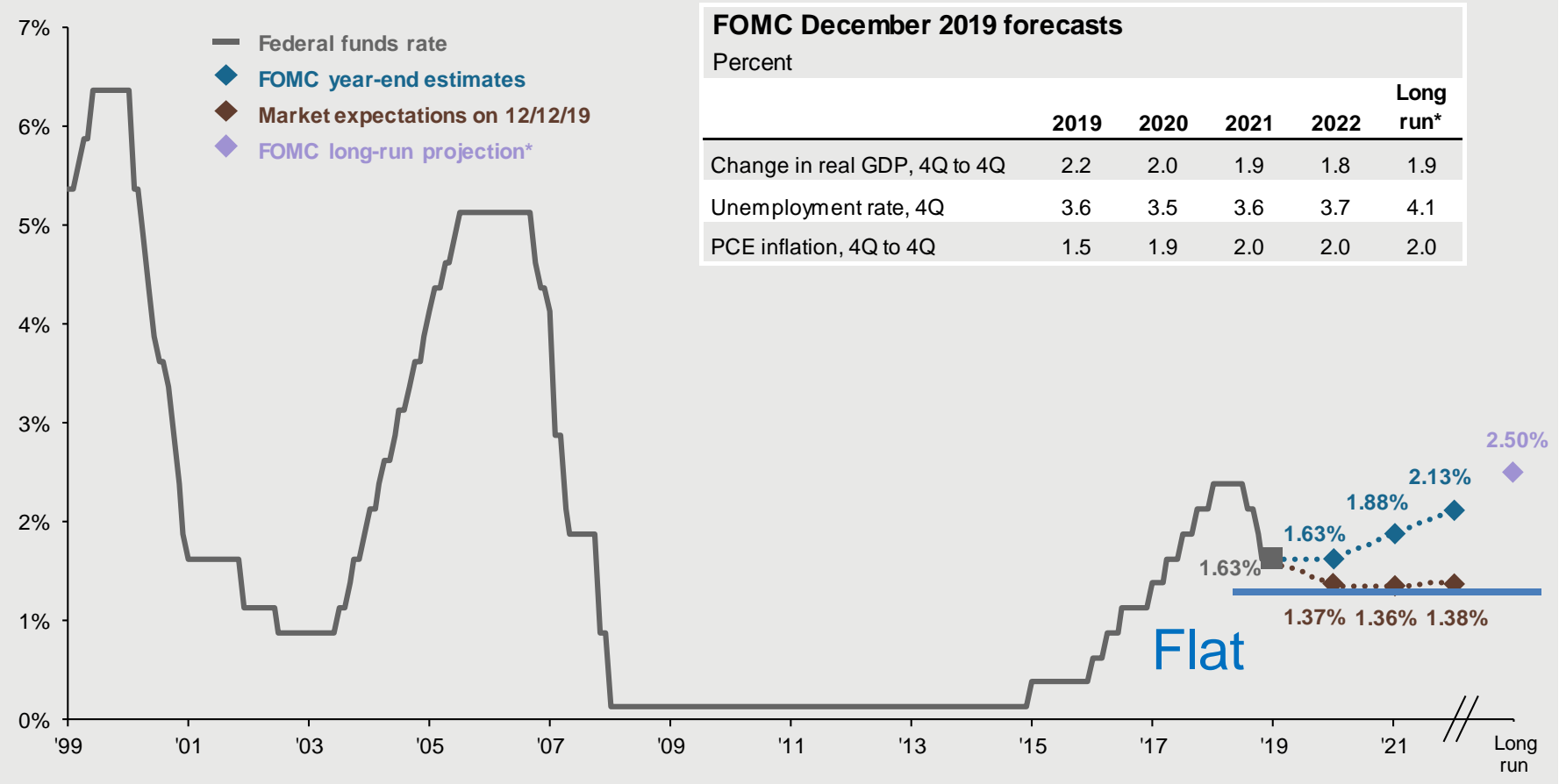
~ 1.5%

We use the one-month U.S. treasury rate as the risk-free rate. This rate is currently 1.50%. At the end of October, the Fed cut the Fed Funds rate for the third time this year reversing the 2018 rate increases. They signaled that they are likely to be patient and not move rates again unless the data is highly compelling. Taking the Fed at face value, we predict no change in the risk-free rate by this time next year.

Federal Funds Rate Expectations

Federal funds rate expectations

FOMC and market expectations for the federal funds rate



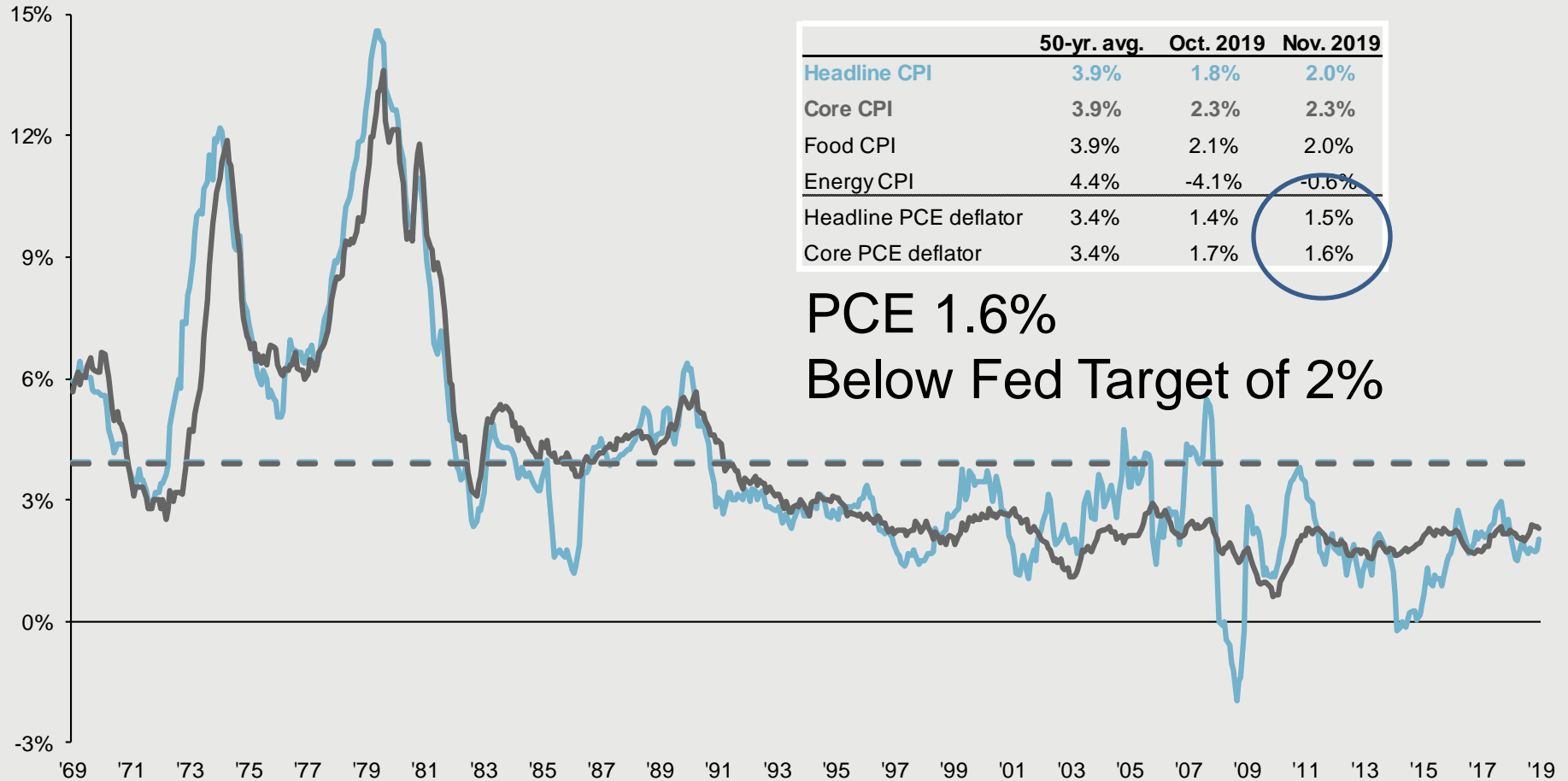
Source: JP Morgan Asset Management, Bloomberg, FactSet, Federal Reserve

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Inflation

CPI and core CPI

% change vs. prior year, seasonally adjusted



Source: U.S. Bureau of Economic Analysis

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High Yield Spread



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Risk Premium

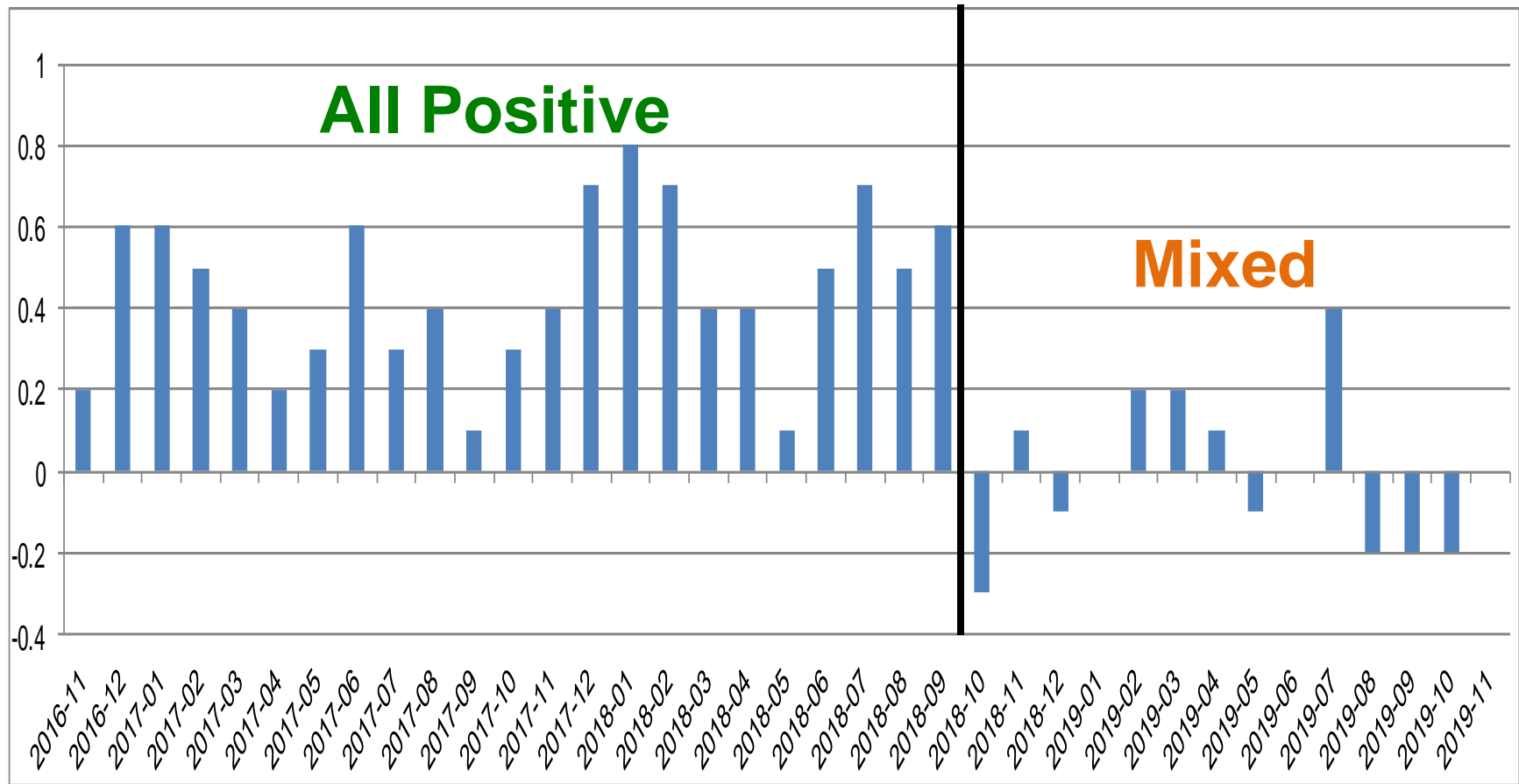
	<u>Stock Price</u>	<u>Earnings</u>	<u>Risk Free Rat</u>	<u>Risk Premium</u>
2020	3,578.91	196.84	1.50%	4.0%
2019	3,220.00	162.06	1.58%	3.5%
2018	2,767.00	162.65	1.30%	4.6%
2017	2,673.61	131.45	0.54%	4.4%
2016	2,238.43	118.24	0.24%	5.0%
2015	2,043.94	106.32	0.12%	5.1%
2014	2,058.90	113.01	0.09%	5.4%
2013	1,848.36	107.30	0.16%	5.6%
2012	1,426.19	96.82	0.07%	6.7%
2011	1,257.60	96.44	0.18%	7.5%
2010	1,257.64	83.77	0.12%	6.5%
2009	1,115.10	56.86	0.16%	4.9%
2008	903.25	49.51	4.24%	1.2%
2007	1,468.36	82.54	5.24%	0.4%
2006	1,418.30	87.72	4.16%	2.0%
2005	1,248.29	76.45	2.16%	4.0%
2004	1,211.92	67.68	0.98%	4.6%
2003	1,111.91	54.69	1.24%	3.7%
2002	879.82	46.04	1.82%	3.4%
2001	1,148.09	38.85	6.40%	-3.0%
2000	1,320.28	56.13	5.30%	-1.0%

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S&P 500 1-yr. Forecast

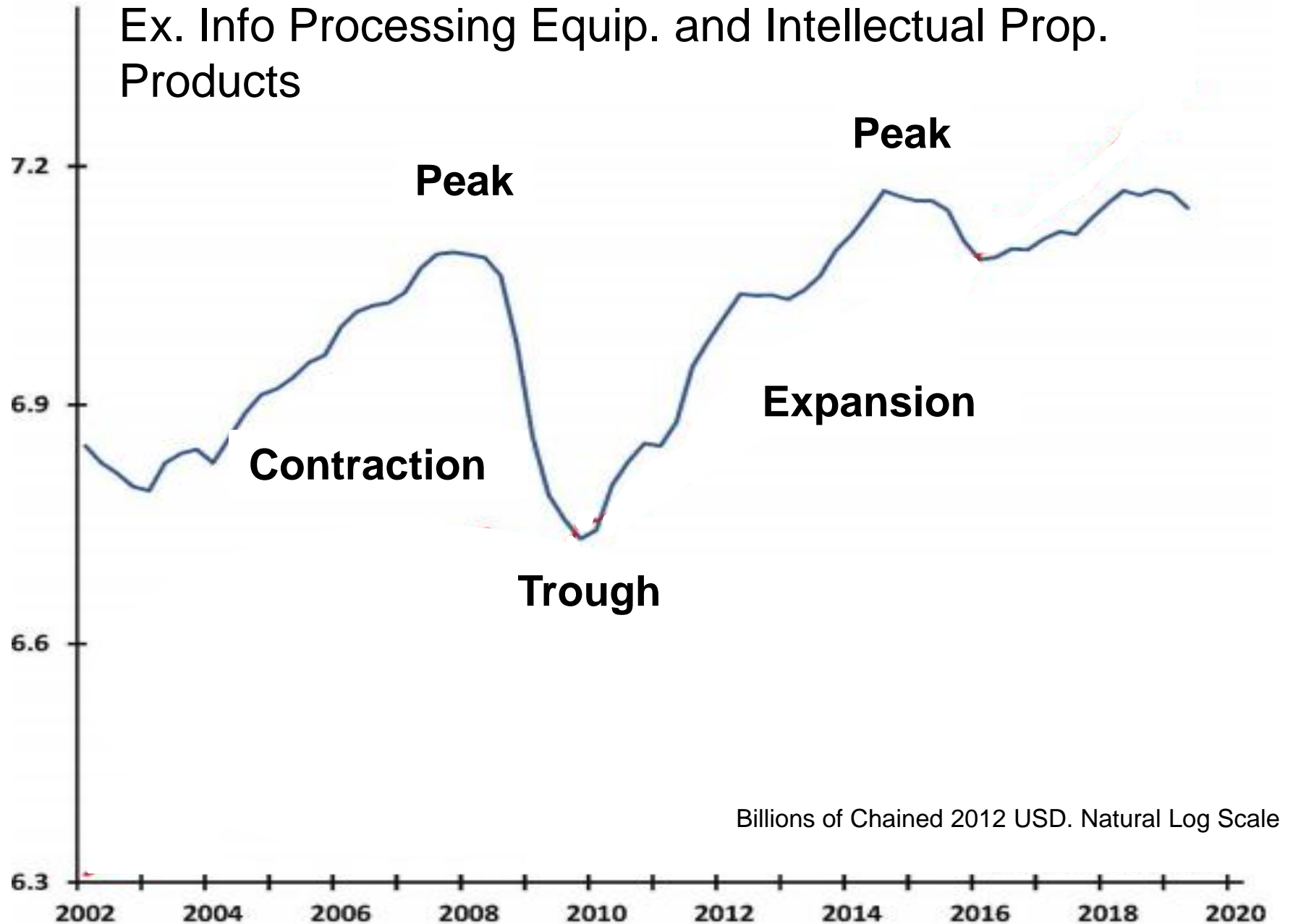
$$\begin{array}{rcl} \text{S\&P 500} & & \text{Future Earnings (est.)} \\ \text{1-yr Forecast} & = & \text{\$196.84} \\ \text{3,579} & & \hline & \text{Risk-Free Rate} & + & \text{Risk Premium} \\ & \text{1-M Treasury} & & \text{4\%} \\ & \text{1.5\%} & & \end{array}$$

Risk of Recession - LEI



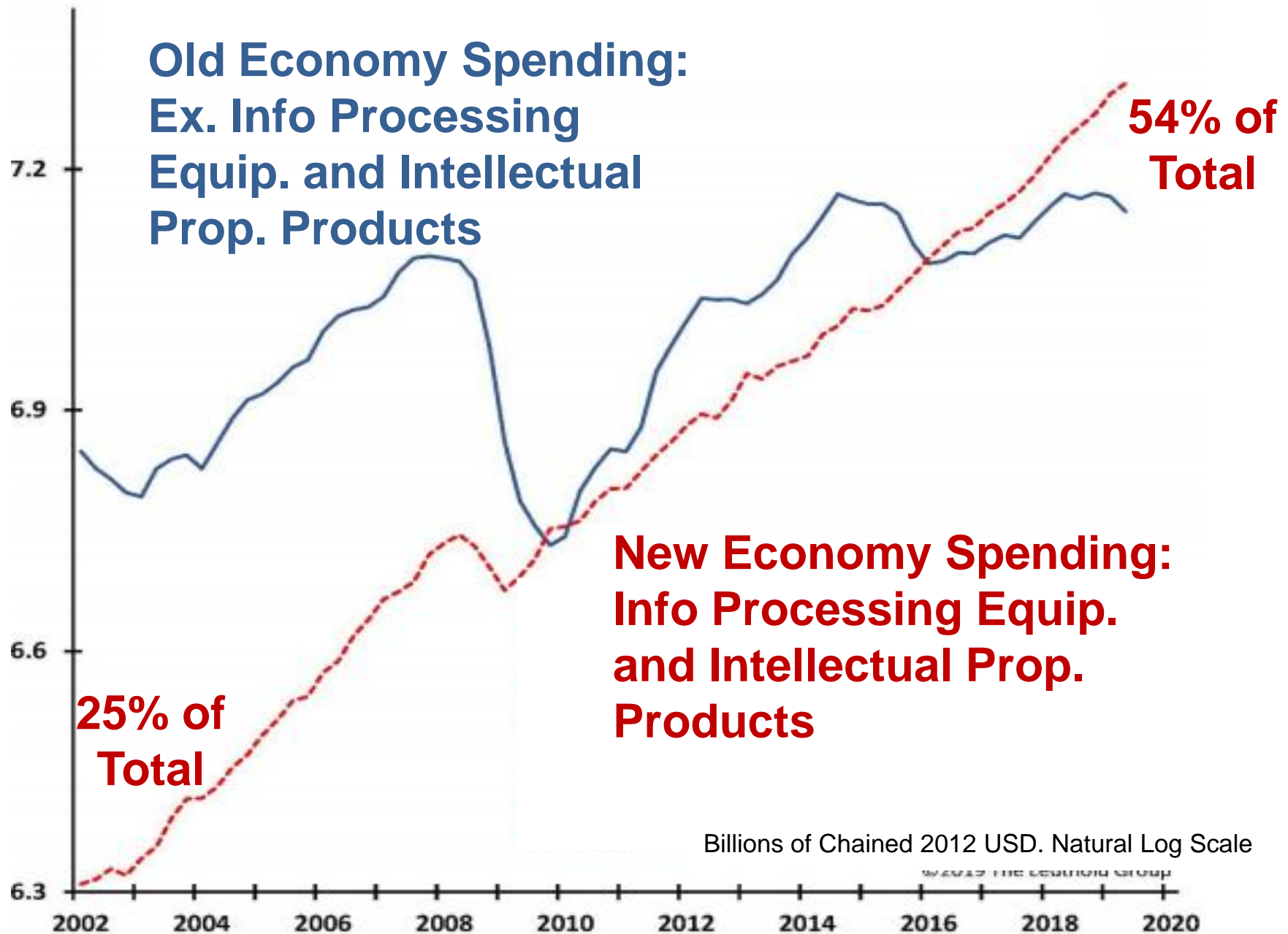
U.S. Real Nonresidential Investment Spending

Ex. Info Processing Equip. and Intellectual Prop. Products

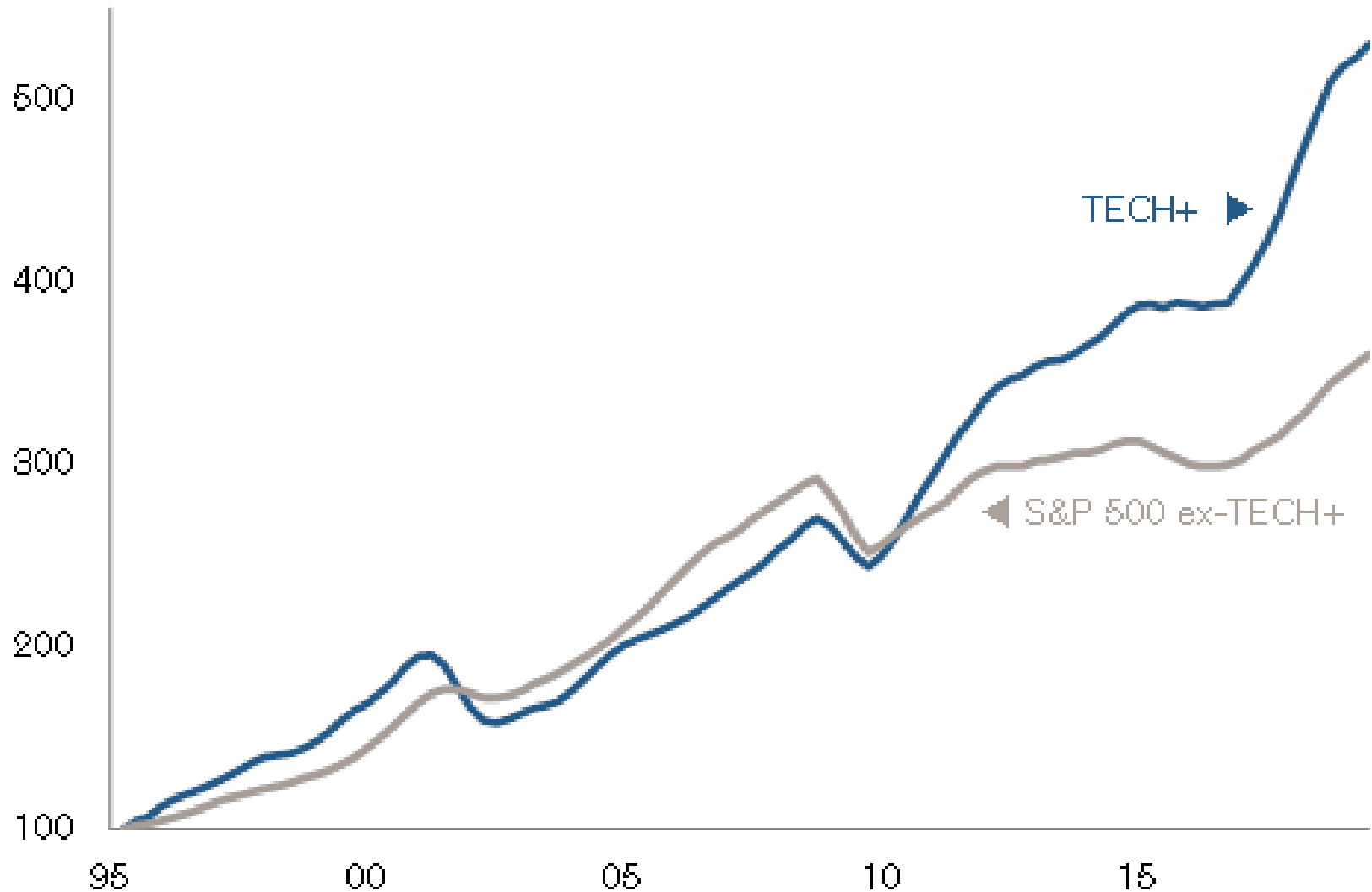


Billions of Chained 2012 USD. Natural Log Scale

U.S. Real Nonresidential Investment Spending

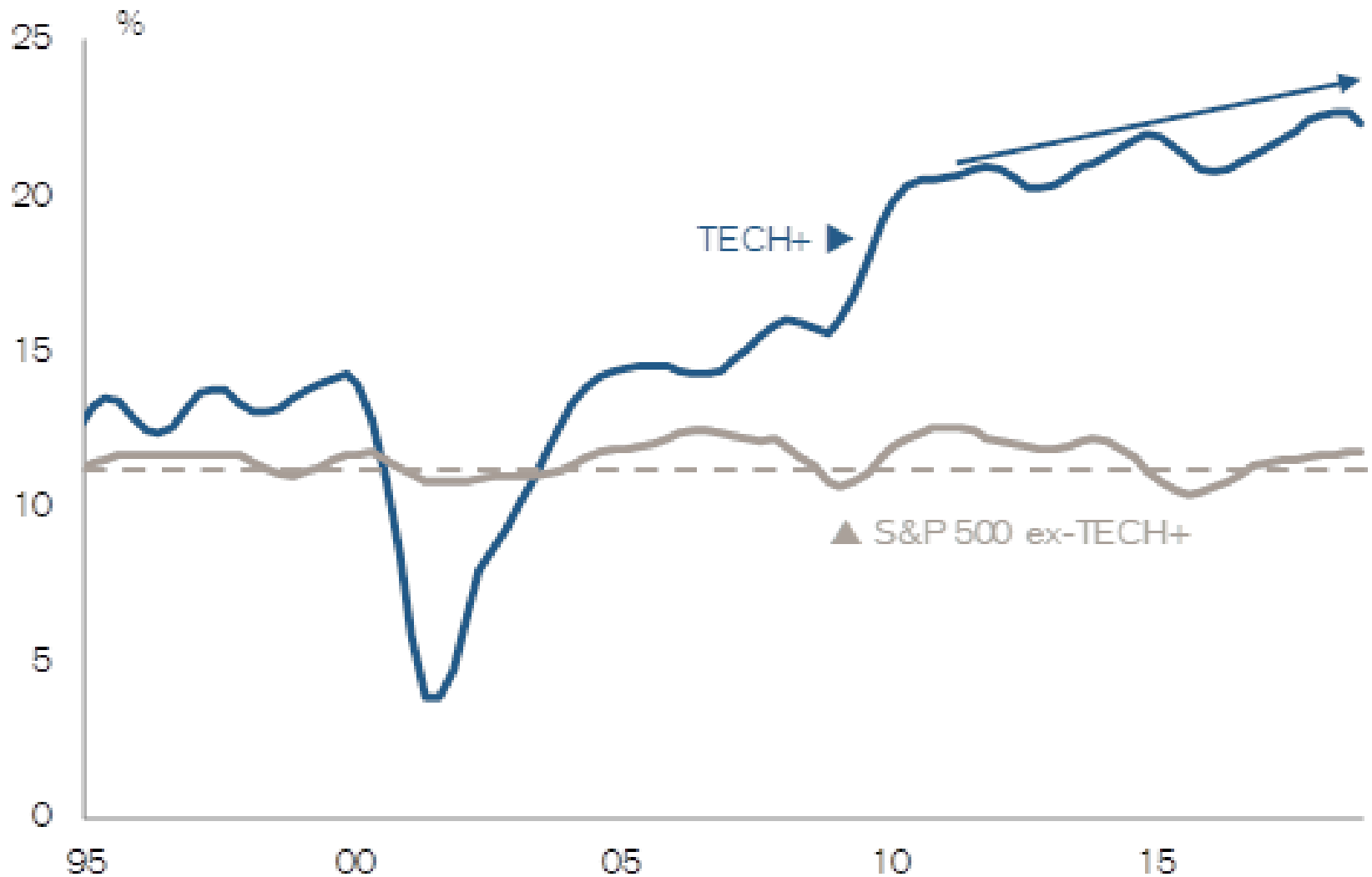


Revenue Growth



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EBIT MARGINS

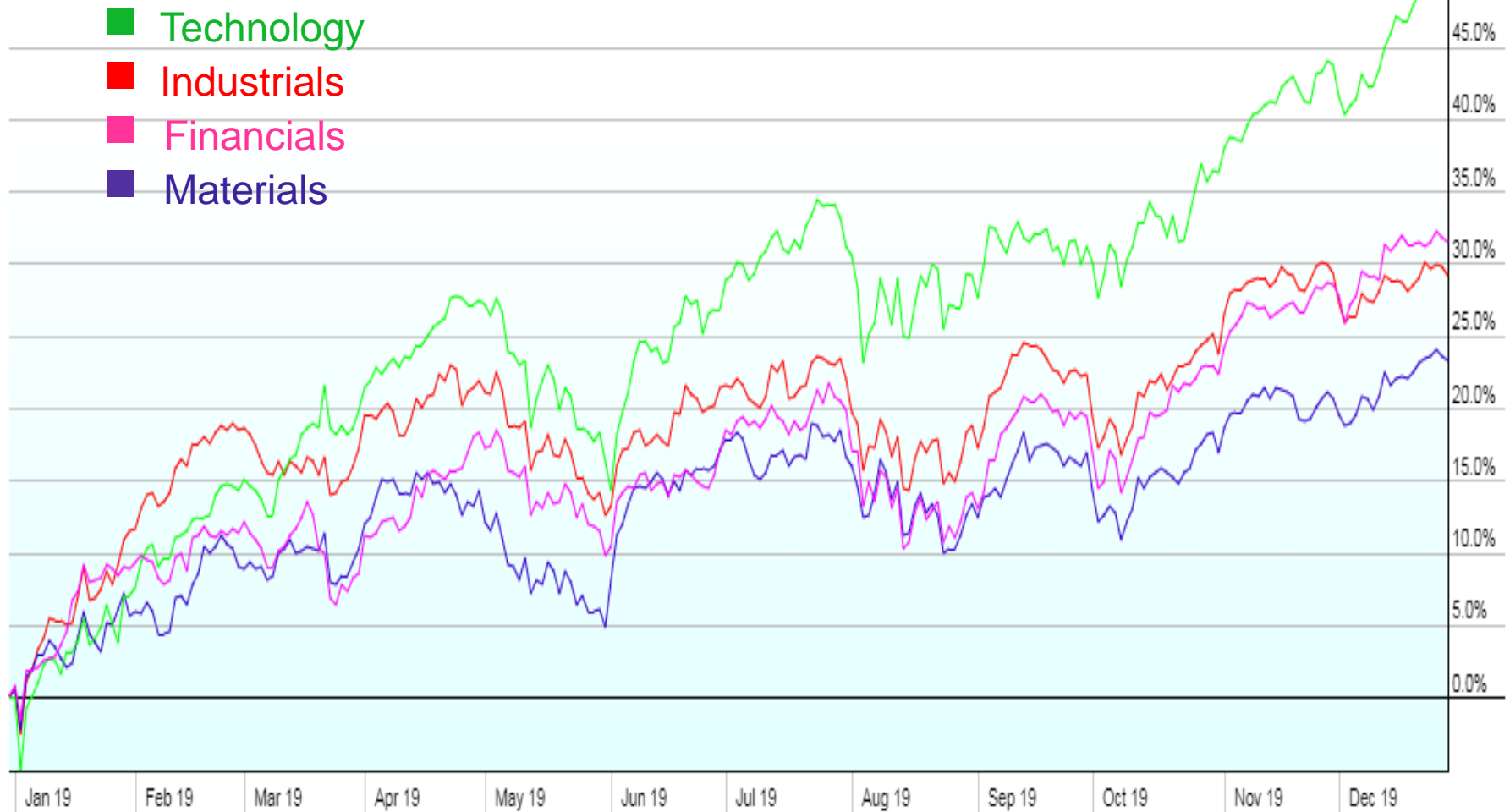


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Cyclical Sector Strength

31 December 2018 - 30 December 2019

Copyright, StockCharts.com



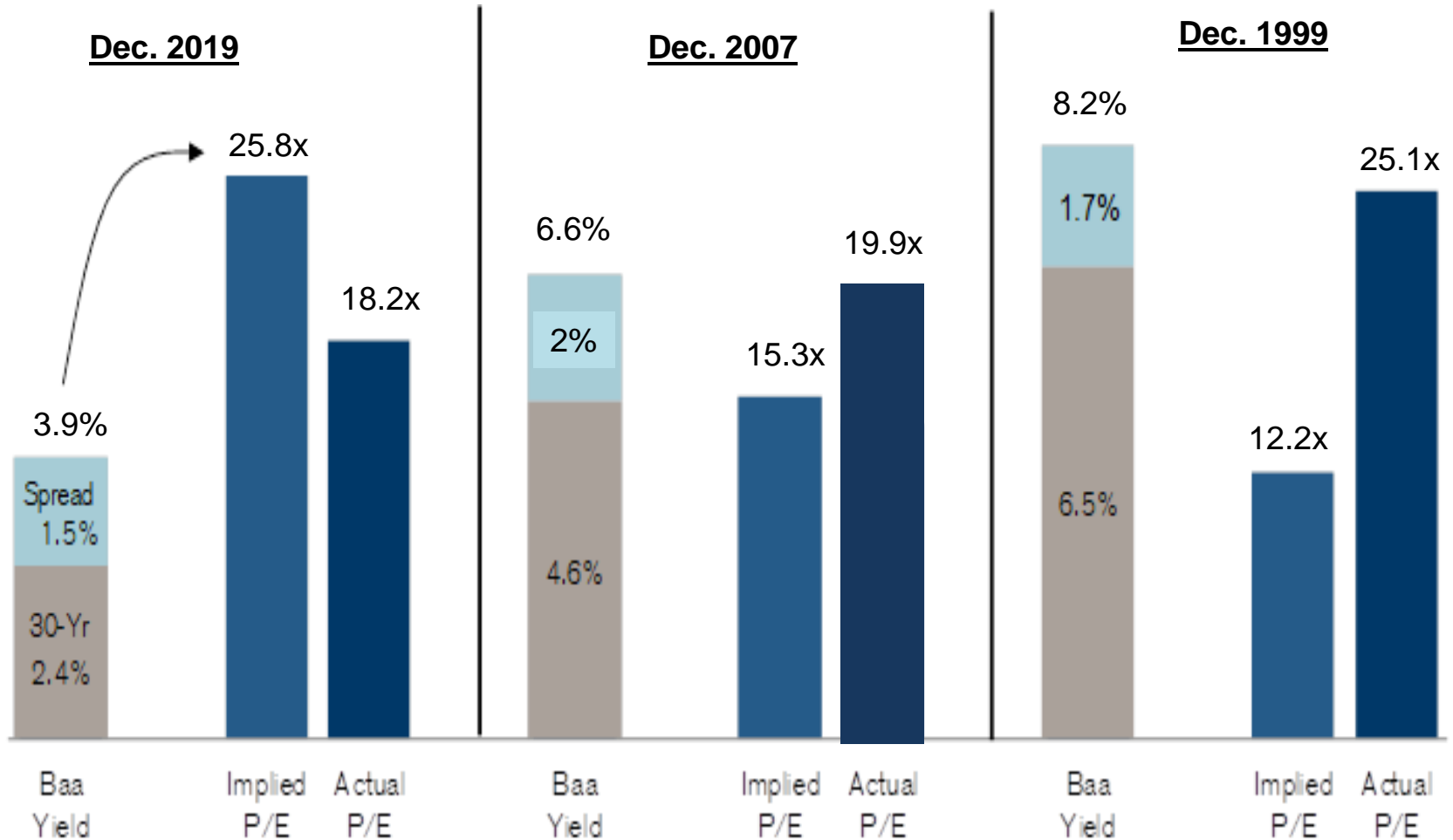
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Europe Reaches New Highs



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Bond Yields vs. S&P 500 P/E



Bond Yields vs. S&P 500 P/E

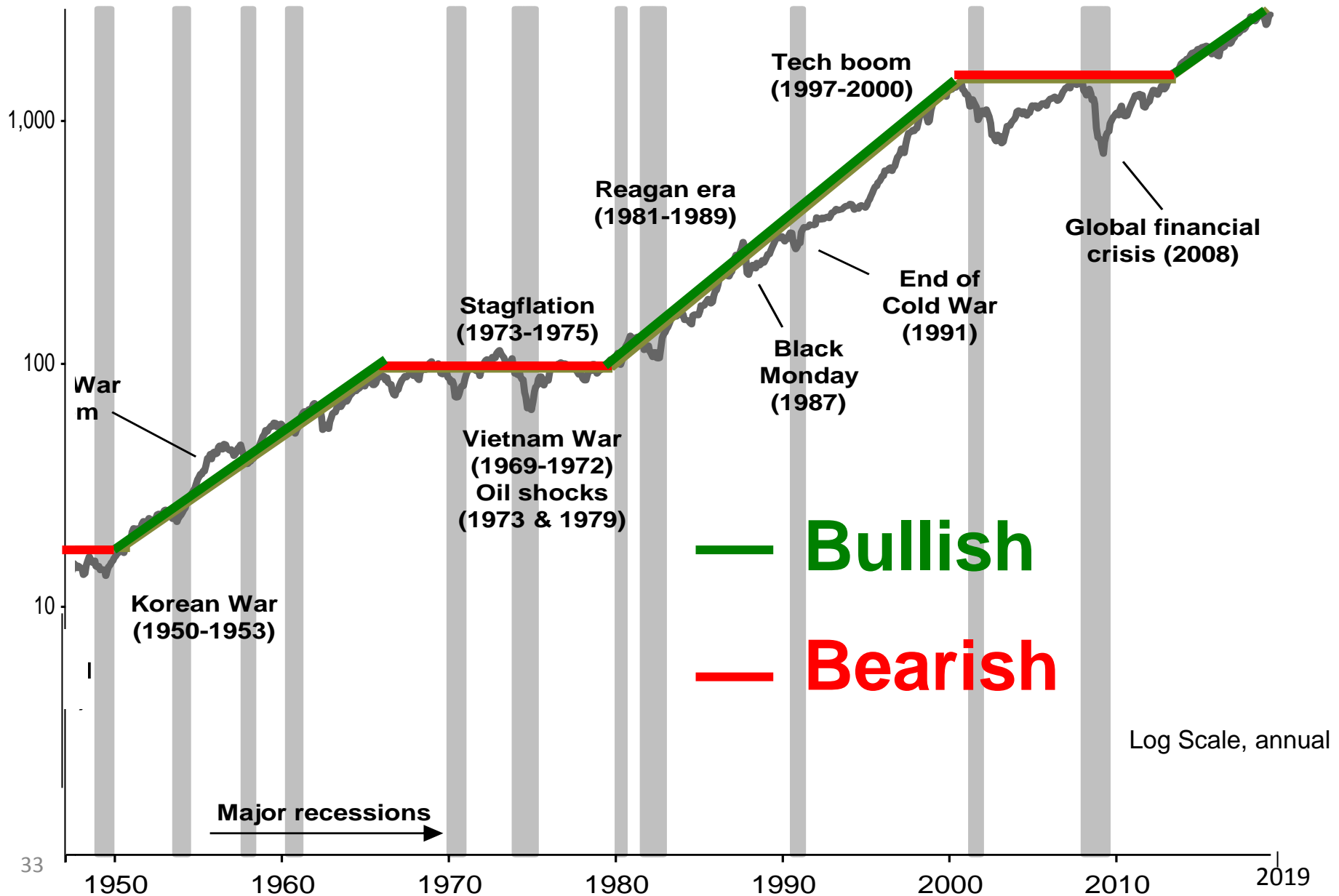
P/E versus E/P

Bond Yield (E/P) 3.9%

$\$163/P = 3.9\%$

$P = 4,205$

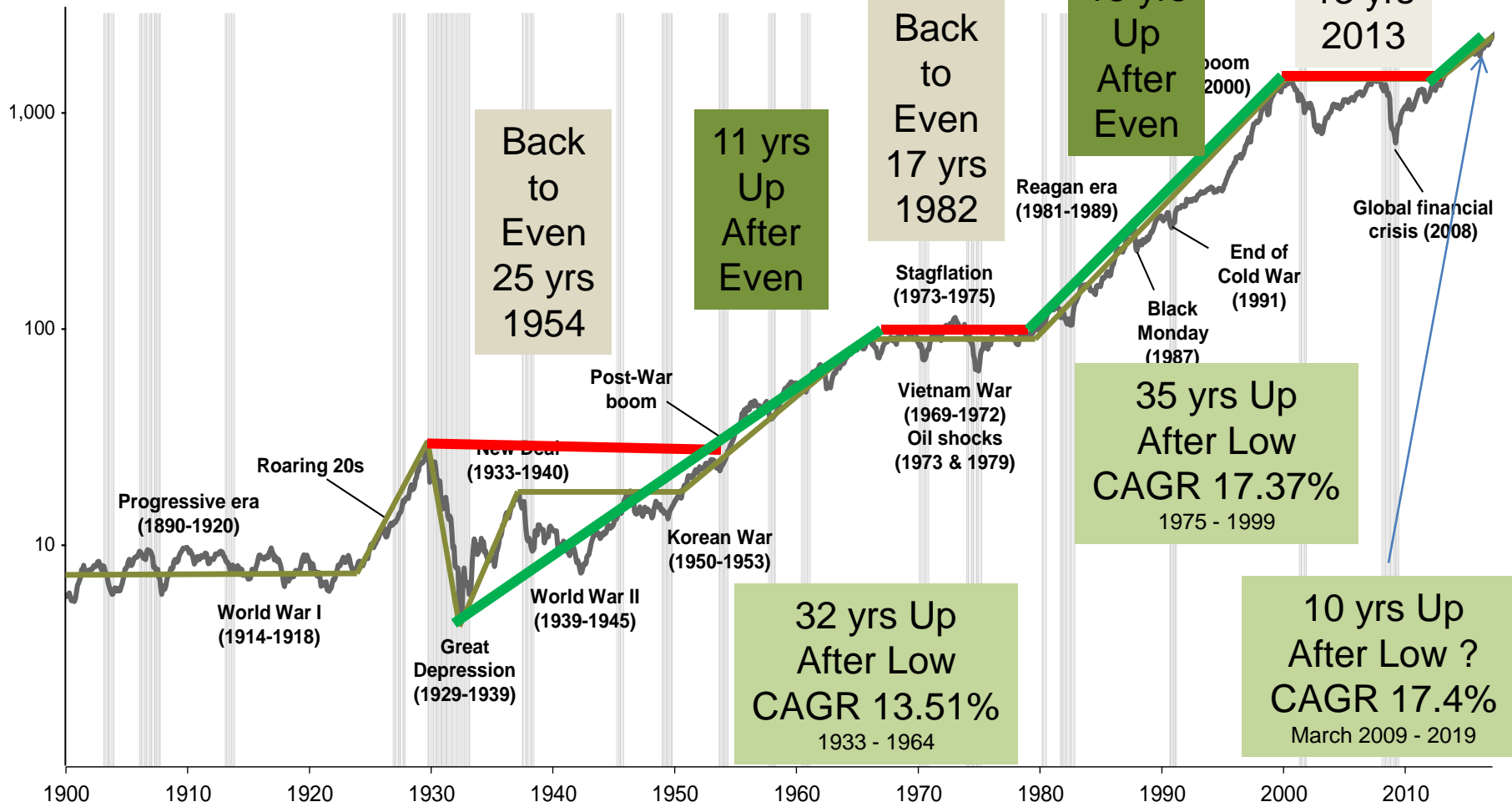
Stock Market Stair-Steps Higher



Up Years After Breakeven

S&P Composite Index

Log scale, annual

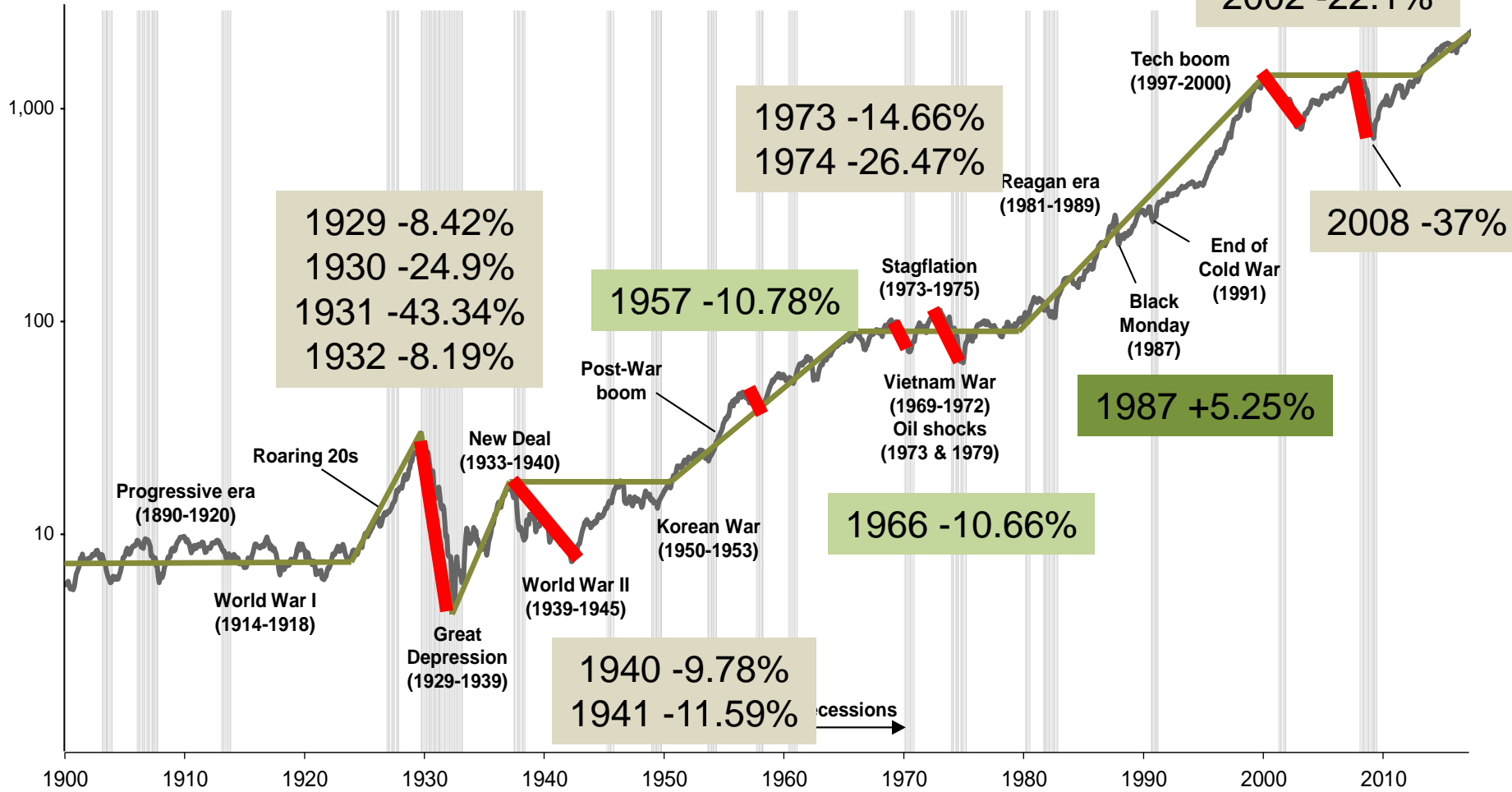


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Losses Concentrated

S&P Composite Index

Log scale, annual



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