DATA 2017 UPDATE 2: THE RESILIENT US MARKETS!

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The Year-beginning Worries, A Bad Start and a Resilient End

- At the start of the year, the two big worries were
  - The Federal Reserve's imminent retreat from quantitative easing.
  - The possibility of a slowdown in China rippling across the globe.
- Those fears contributed to making January 2016 one of the worst-ever starts to the year for US stock markets.
- During the year, the Fed did pull back from its easy money policy a bit, with promises of more to come. And during the China continued to report signs of slowing.
- In surprises, the market was hit with political tidal waves, with the UK voters okaying Brexit and US voters picking Donald Trump as president.

A Month-by-month Picture of Stocks and Interest Rates

	S&P 500	Price Change (S&P 500)	Cumulative Price Change	S&P 600	Price Change (S&P 600)	Cumulative Price Change (S&P 600)	10-Year T.Bond	Price Change (T.Bond)	Cumulative Price Change (T.Bond)
31-Dec-15	2043.94			671.74			2.27%		
31-Jan-16	1940.24	-5.07%	-5.07%	629.95	-6.22%	-6.22%	1.92%	3.16%	3.16%
29-Feb-16	1932.23	-0.41%	-5.47%	636.03	0.97%	-5.32%	1.74%	1.64%	4.85%
31-Mar-16	2059.74	6.60%	0.77%	686.97	8.01%	2.27%	1.77%	-0.27%	4.56%
30-Apr-16	2065.3	0.27%	1.05%	694.56	1.10%	3.40%	1.84%	-0.63%	3.90%
31-May-16	2096.96	1.53%	2.59%	705.14	1.52%	4.97%	1.85%	-0.09%	3.80%
30-Jun-16	2098.86	0.09%	2.69%	708.36	0.46%	5.45%	1.47%	3.51%	7.45%
31-Jul-16	2173.6	3.56%	6.34%	743.98	5.03%	10.75%	1.46%	0.09%	7.55%
31-Aug-16	2170.95	-0.12%	6.21%	753.07	1.22%	12.11%	1.58%	-1.10%	6.36%
30-Sep-16	2168.27	-0.12%	6.08%	756.9	0.51%	12.68%	1.60%	-0.18%	6.17%
31-Oct-16	2126.15	-1.94%	4.02%	722.59	-4.53%	7.57%	1.83%	-2.08%	3.95%
30-Nov-16	2198.81	3.42%	7.58%	812.02	12.38%	20.88%	2.38%	-4.84%	-1.08%
31-Dec-16	2238.83	1.82%	9.54%	837.96	3.19%	24.74%	2.45%	-0.61%	-1.69%
Dividend/ Coupon yield for year			**2.20%**			**1.71%**			**2.27%**
Return for the year			**11.74%**			**26.46%**			**0.58%**

Some Historical Perspective

	Arithmetic Annual Average			Geometric Annual Average		
	Stocks	3-month T.Bills	10-year T.Bonds	Stocks	3-month T.Bills	10-year T.Bonds
1928-2016	11.42%	3.46%	5.18%	9.52%	3.42%	4.91%
1967-2016	11.45%	4.88%	7.08%	10.09%	4.83%	6.66%
2007-2016	8.64%	0.74%	5.03%	6.88%	0.73%	4.58%

Between 1928 & 2016, stocks earned 4.62% more than bonds, on a compounded annual average basis.

	Arithmetic Average		Geometric Average	
	Stocks - T. Bills	Stocks - T. Bonds	Stocks - T. Bills	Stocks - T. Bonds
1928-2016	7.96%	6.24%	6.11%	4.62%
Std Error	2.12%	2.26%		
1967-2016	6.57%	4.37%	5.25%	3.42%
Std Error	2.39%	2.72%		
2007-2016	7.90%	3.62%	6.15%	2.30%
Std Error	6.06%	8.63%		

A Forward Looking ERP

Base year cash flow (last 12 mths)
Dividends (TTM): 45.39
\+ Buybacks (TTM): 62.38
= Cash to investors (TTM): **108.67**

Expected cashflow growth in next 5 years
Top down analyst estimate of earnings growth for S&P 500: **5.54**%

Payout Ratio in stable growth
Growth rate = 2.45% a year forever

	Last 12 months	1	2	3	4	5	Terminal Year
Expected Dividends + Buybacks =	$108.67	$114.69	$121.04	$127.75	$134.82	$142.28	$145.77

Earnings and Cash flows grow @2.45% (set equal to risk free rate) a year forever.

S&P 500 on 1/1/17= 2238.83

$$2238.83 = \frac{114.69}{(1+r)} + \frac{121.04}{(1+r)^2} + \frac{127.75}{(1+r)^3} + \frac{134.82}{(1+r)^4} + \frac{142.28}{(1+r)^5} + \frac{145.77}{(r-.0245)(1+r)^5}$$

r = Implied Expected Return on Stocks = 8.14%

Minus

Risk free rate = T.Bond rate on 1/1/17= 2.45%

Equals

Implied Equity Risk Premium (1/1/17) = 8.14% - 2.45% = 5.69%

A Modified Implied ERP

Base Year Earnings = 102.00
Base Year ROE = 13.84%

102.00 growing @ 5.54% a year

Expected growth in next 5 years
Top down analyst estimate of earnings growth for S&P 500: **5.54**%

Base year cash flow (last 12 mths)
Dividends (TTM): 45.39
+ Buybacks (TTM): 62.38
= Cash to investors (TTM): **108.67**
Payout Ratio = **106.54%**

Payout Ratio adjusts in linear steps to sustainable payout

Payout Ratio in stable growth
Growth rate = 2.45% a year forever
ROE = 13.84%
Sustainable Payout = 1 - .0245/.1384 = **82.30%**

	Last 12 months	1	2	3	4	5	Terminal Year
Expected Earnings	$ 102.00	$ 107.65	$ 113.61	$ 119.90	$ 126.54	$ 133.55	$ 136.82
Expected cash payout %	106.54%	101.69%	96.85%	92.00%	87.15%	82.30%	82.30%
Expected Dividends + Buybacks	$ 108.67	$ 109.47	$ 110.03	$ 110.31	$ 110.28	$ 109.92	$ 112.61

Earnings and Cash flows grow @2.45% (set equal to risk free rate) a year forever.

S&P 500 on 1/1/17= 2238.83

$$2238.83 = \frac{109.47}{(1+r)} + \frac{110.03}{(1+r)^2} + \frac{110.31}{(1+r)^3} + \frac{110.28}{(1+r)^4} + \frac{109.92}{(1+r)^5} + \frac{112.61}{(r-.0245)(1+r)^5}$$

r = Implied Expected Return on Stocks = 6.95%

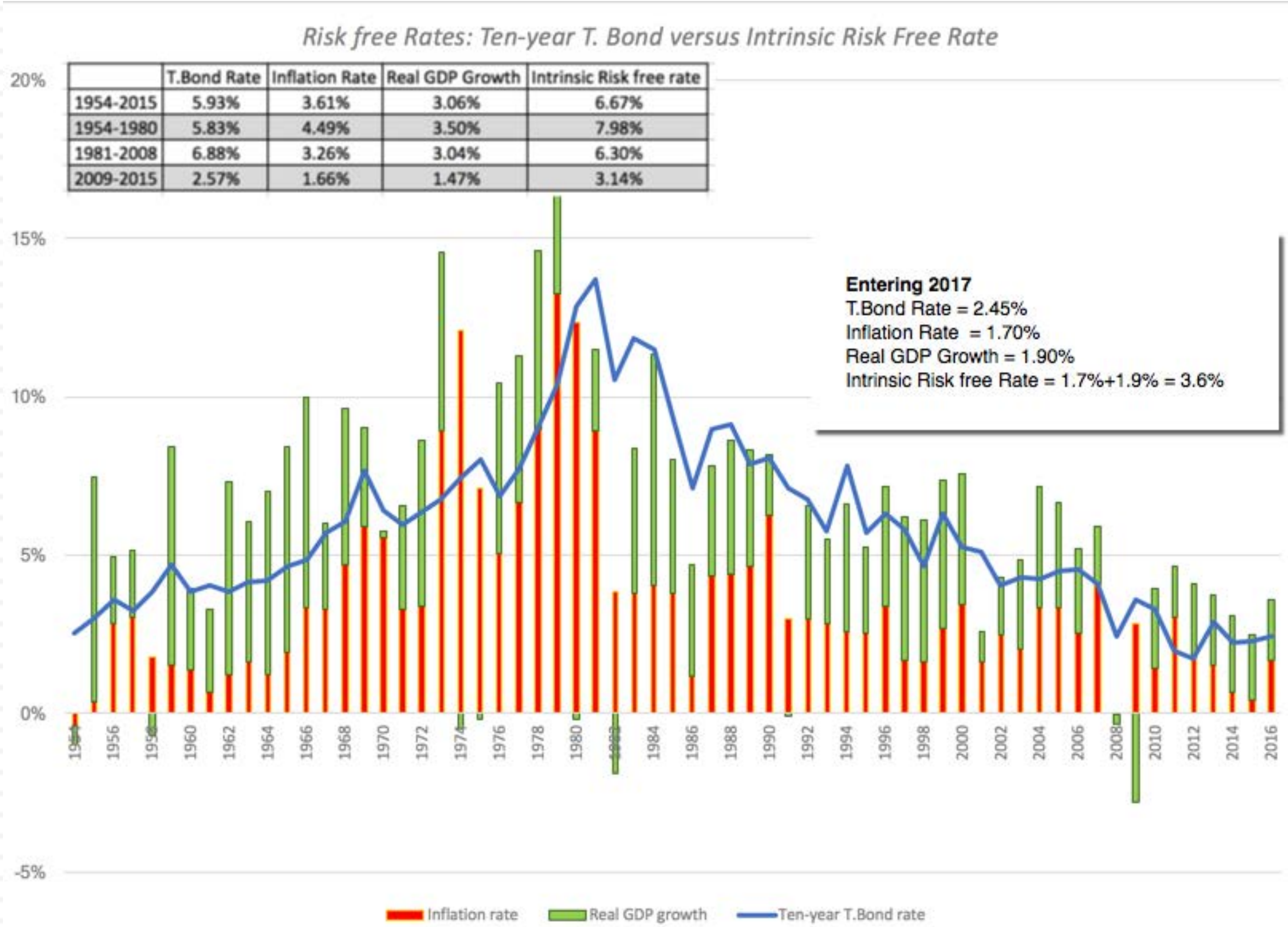
Minus

Risk free rate = T.Bond rate on 1/1/17= 2.45%

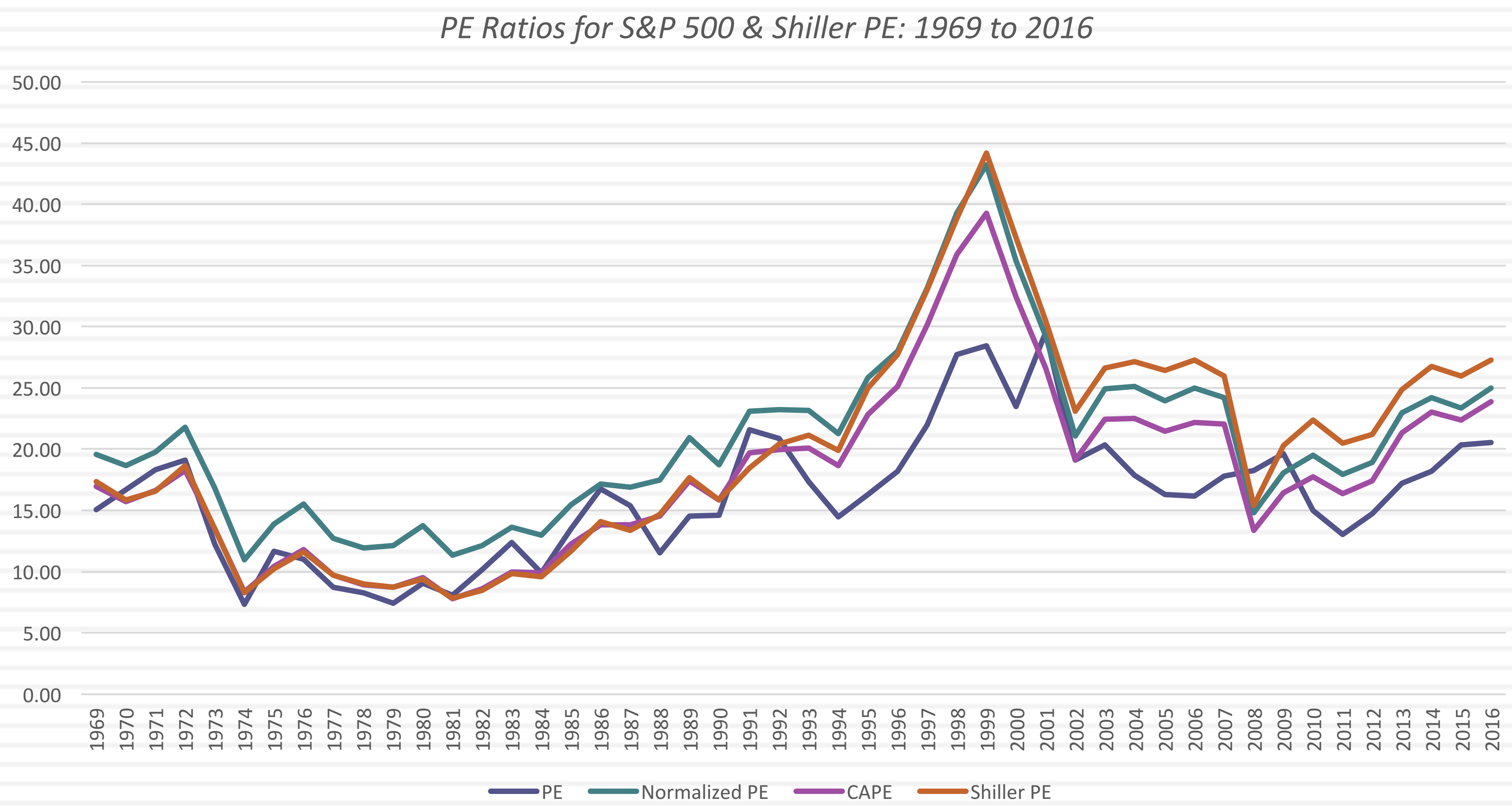
Equals

Implied Equity Risk Premium (1/1/17) = 6.95% - 2.45% = 4.50%

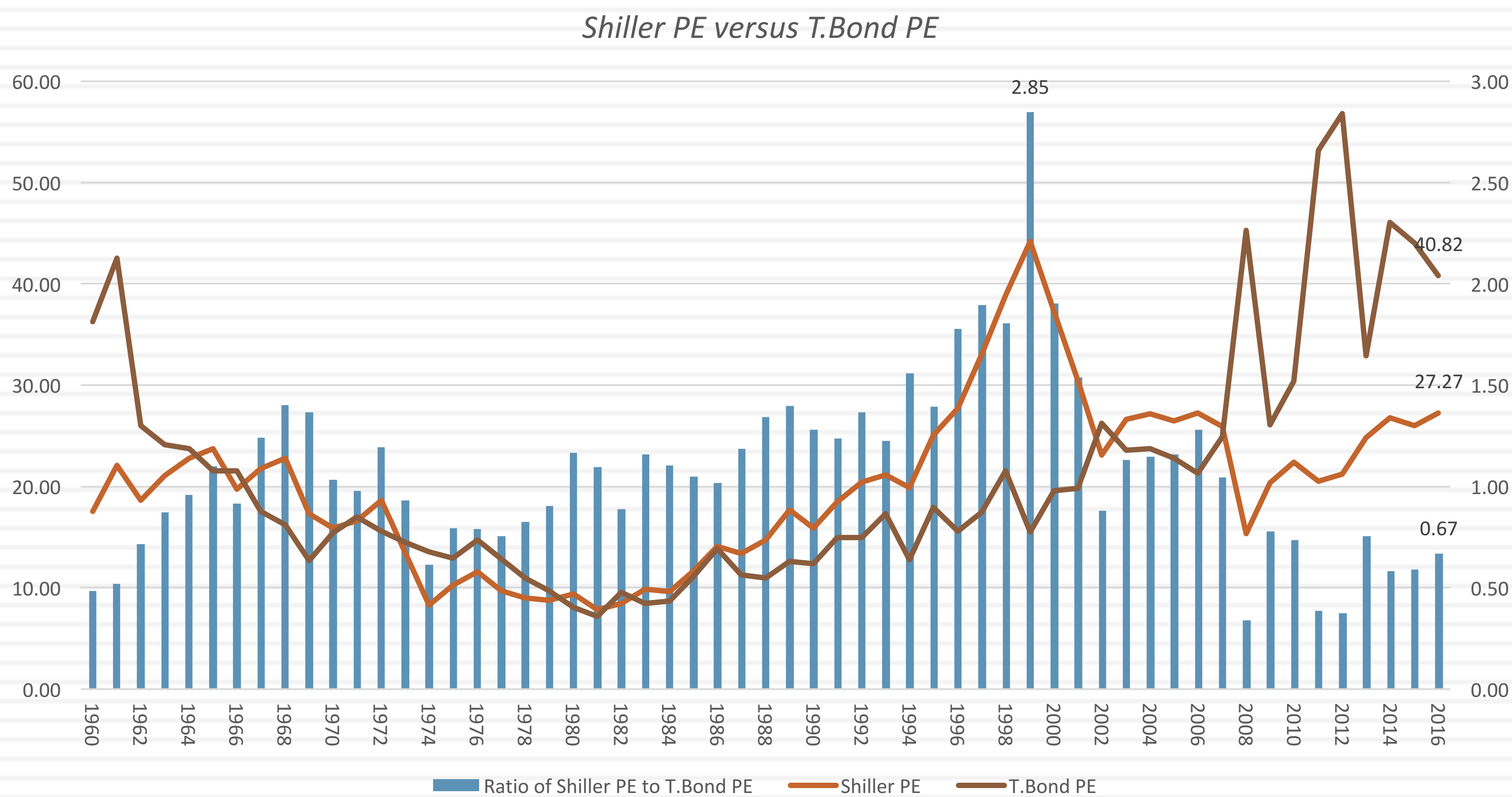
As for T.Bond Rates



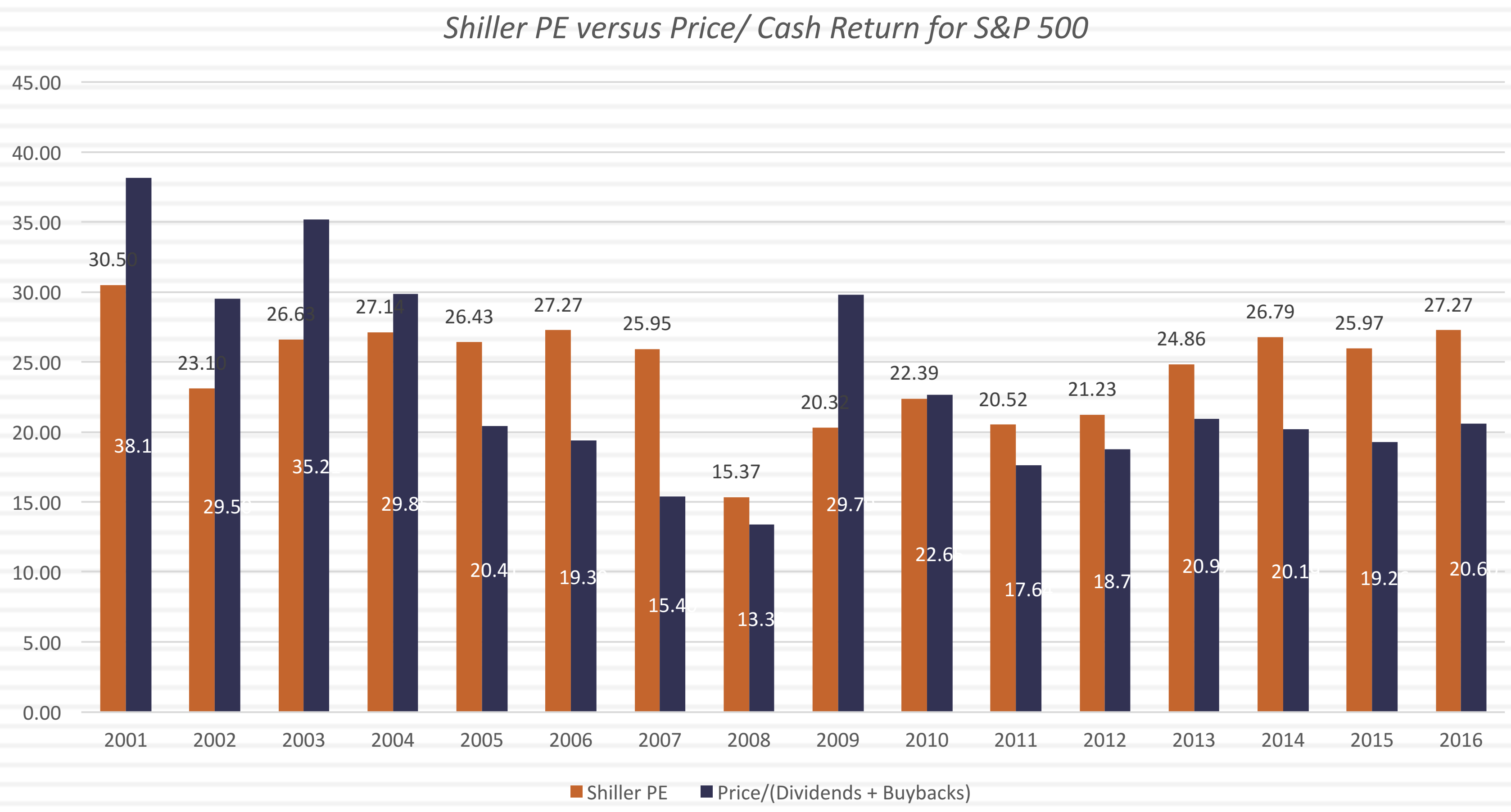
As for PE ratios…



Relative to interest rates..



Explaining the divergence..



In closing

- If there is one lesson that we should learn from 2016, it is that making predictions about overall markets is a fool's game. The market delights in proving experts wrong.
- That said, here are the key questions that we will get answers to next year:
  - Will US treasury bond rates rise above 3% in 2017? Why?
  - How will the tax code change and how will this change play out in earnings and cash flows?
  - What are the crises for this year and how will the market weather them?