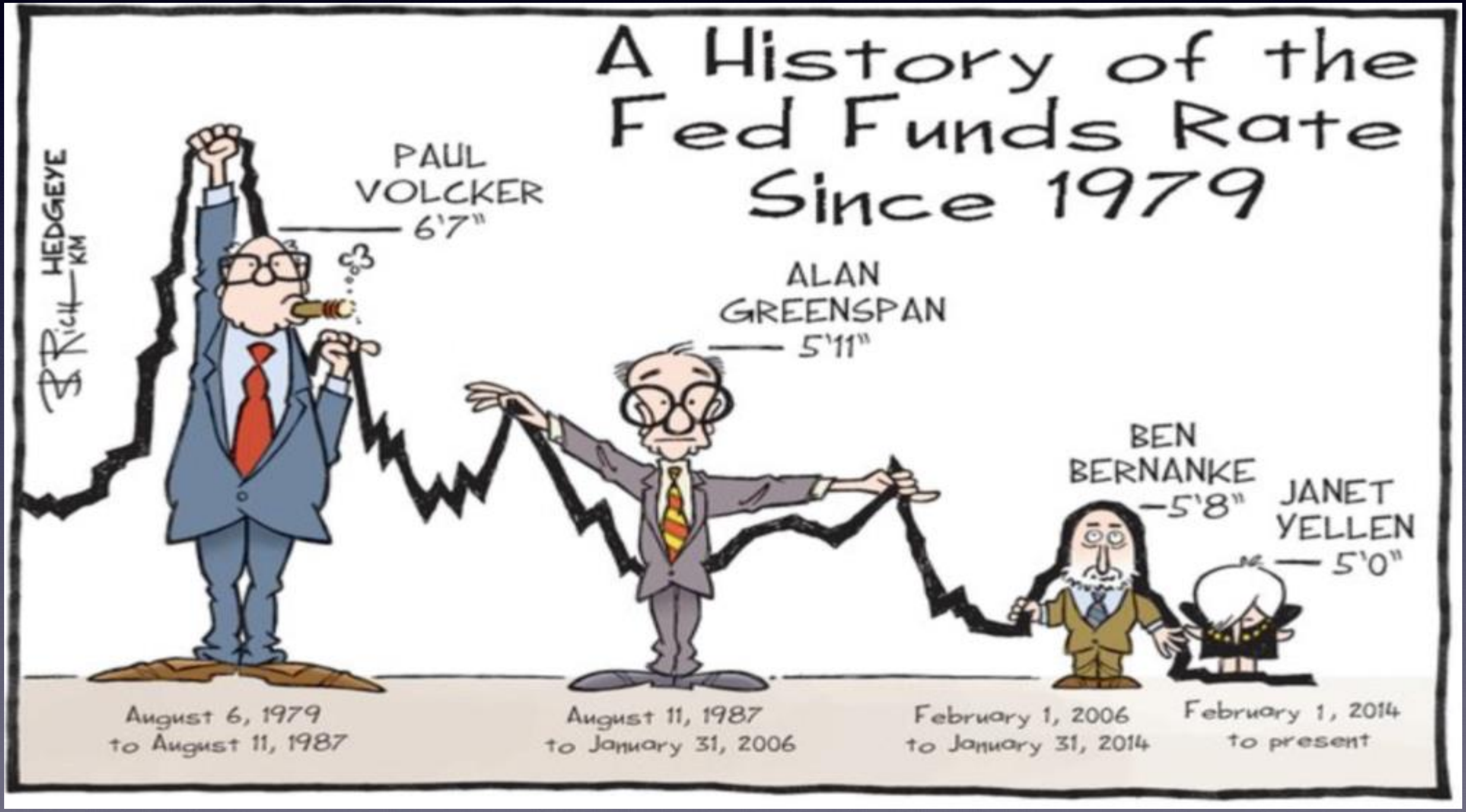
The Markets Now: 12 June, 2017
The Caledonian Club, 9 Halkin St, London SW1X 7DR

Rising Rates and Asset Class Performance

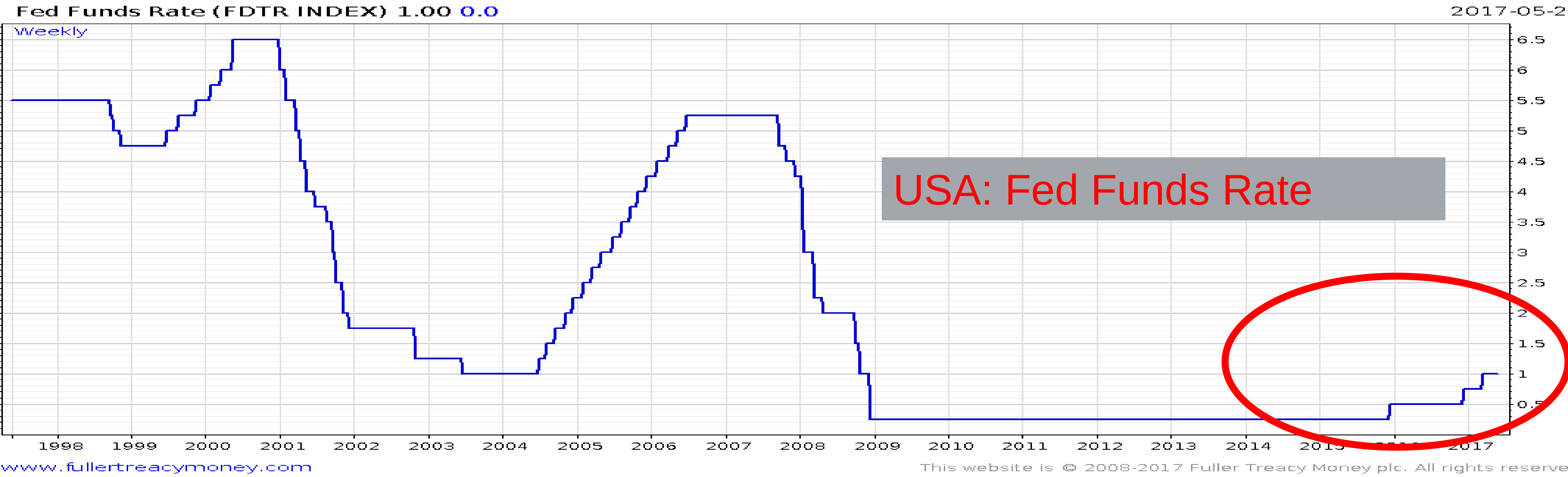
Dr David Brown, PhD, FRSChem, FRSMed

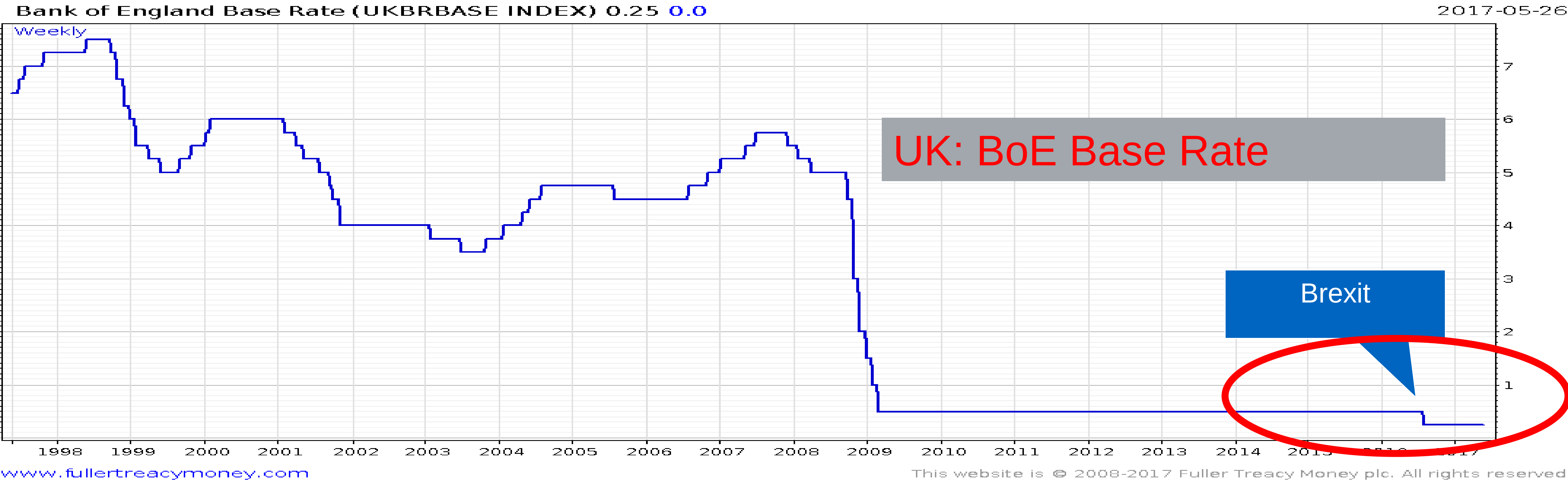
Monthly Investor
https://www.monthlyinvestor.co.uk/

Can’t go down much further!



The direction is changing
(In the USA at least)





Rates are now more likely to rise than fall

Rising rates often signal the final phase of a bull market

Best-performing asset classes change as rates rise

Key questions:

- *Which asset classes do best?*
- *How long can the bull market last?*
- *What could cause it to end?*

Contents of presentation

1. Current status and history of rate rises.
    - What can we learn from previous rate rise cycles?
2. Asset classes: detailed look at each asset class
    - Shares
    - Commodities
    - Bonds
    - Gold and silver
    - Property
3. Summary

Is this rate rise cycle different? (1 of 3)
Probably yes

'Normalising' is different from 'tightening' - key point

- Rates normally rise as economies over-heat, but economies are <u>not</u> over-heating today.
- Rates are <u>likely</u> <u>to</u> <u>rise</u> <u>slowly</u> compared to most previous rate rise cycles.

Divergence of U.S. and global monetary policy differs from previous cycles.

- U.S. is normalising / increasing rates.
- Europe and Japan continue accommodative monetary policy
- UK rates <u>lowered</u> in 2016 in response to Brexit
- Result: U.S. yields are substantially higher than rest of the developed world

Is this rate rise cycle different? (2 of 3)

- Lower than average global economic growth
- Divergence in global growth - very uneven among major economies
- Global capital may flow to US, suppressing rates
- Inflation is low (lower than governments wish for debt relief)
- Governments between a rock and a hard place
  - Favour high inflation to erode debts!
  - Favour low rates / low interest payments on government debt
- Falling unemployment, low in USA and UK though still high in eurozone due to 'other factors'
- Modest wage growth
- Low commodity prices
- Cautious monetary policy at central banks
- Geopolitical risks create demand for USD and Treasuries

Is this rate rise cycle different? (3 of 3)

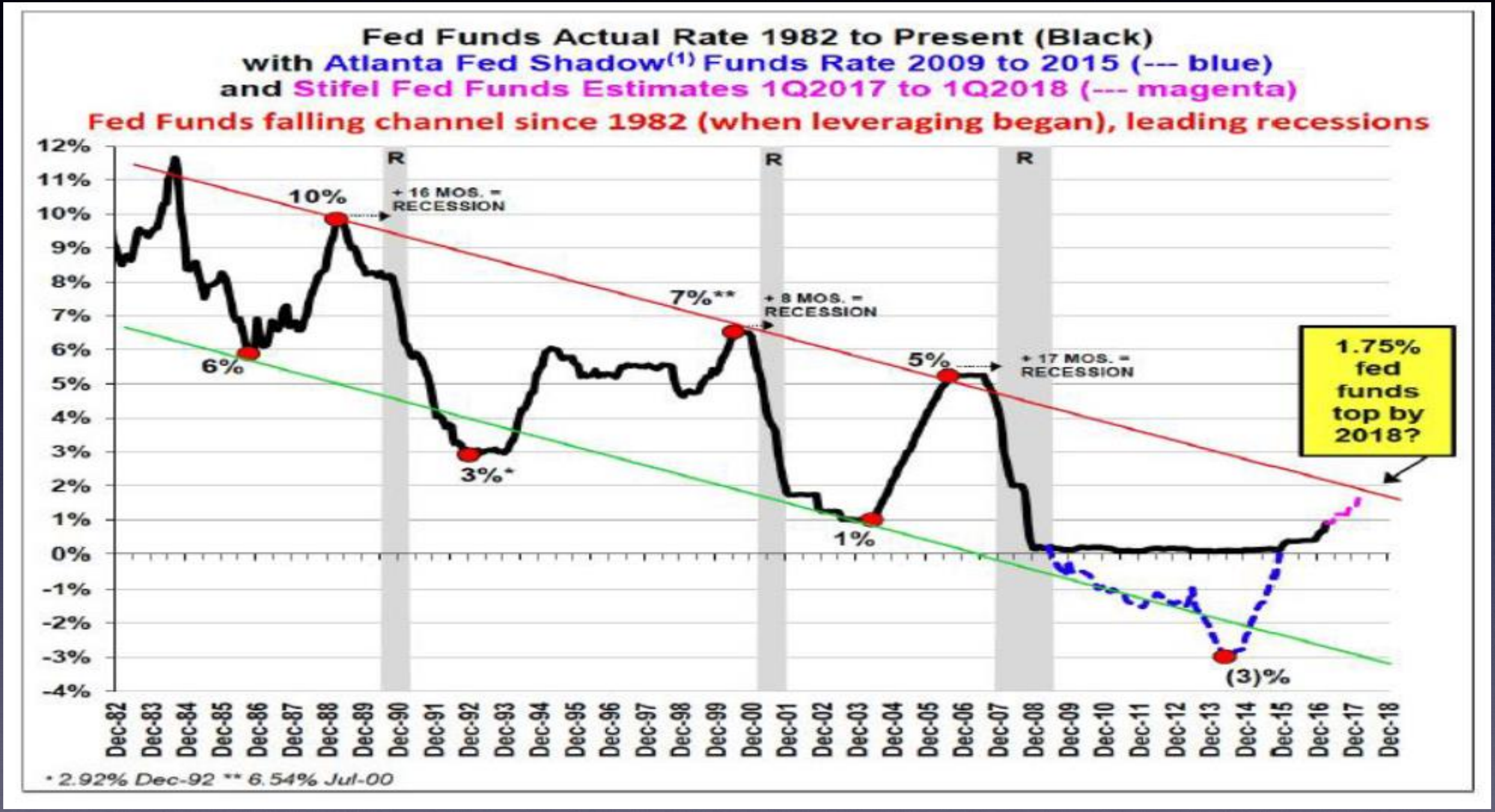
Relatively high U.S. interest rates help suppress long-term yield increases in several ways

- Demand for higher yielding U.S. bonds drives rates lower / prices higher
- USD gains if global money flows into U.S. markets
- This would put downward pressure on U.S. inflation
- Stronger dollar may slow U.S. production / exports / growth, with additional downward pressure on inflation
- The big unknown: Trump wants to weaken USD further? Will he succeed?

Eventual interest rate levels may be lower than in past rise cycles

- Fed estimates that eventually the Fed Funds Rate (FFR, the short rate) might rise to only 3.00%, compared to 5.25% in 2006 and 6.00% in 1995. (3% Fed Funds Rate does not usually spook markets. But see next chart!)

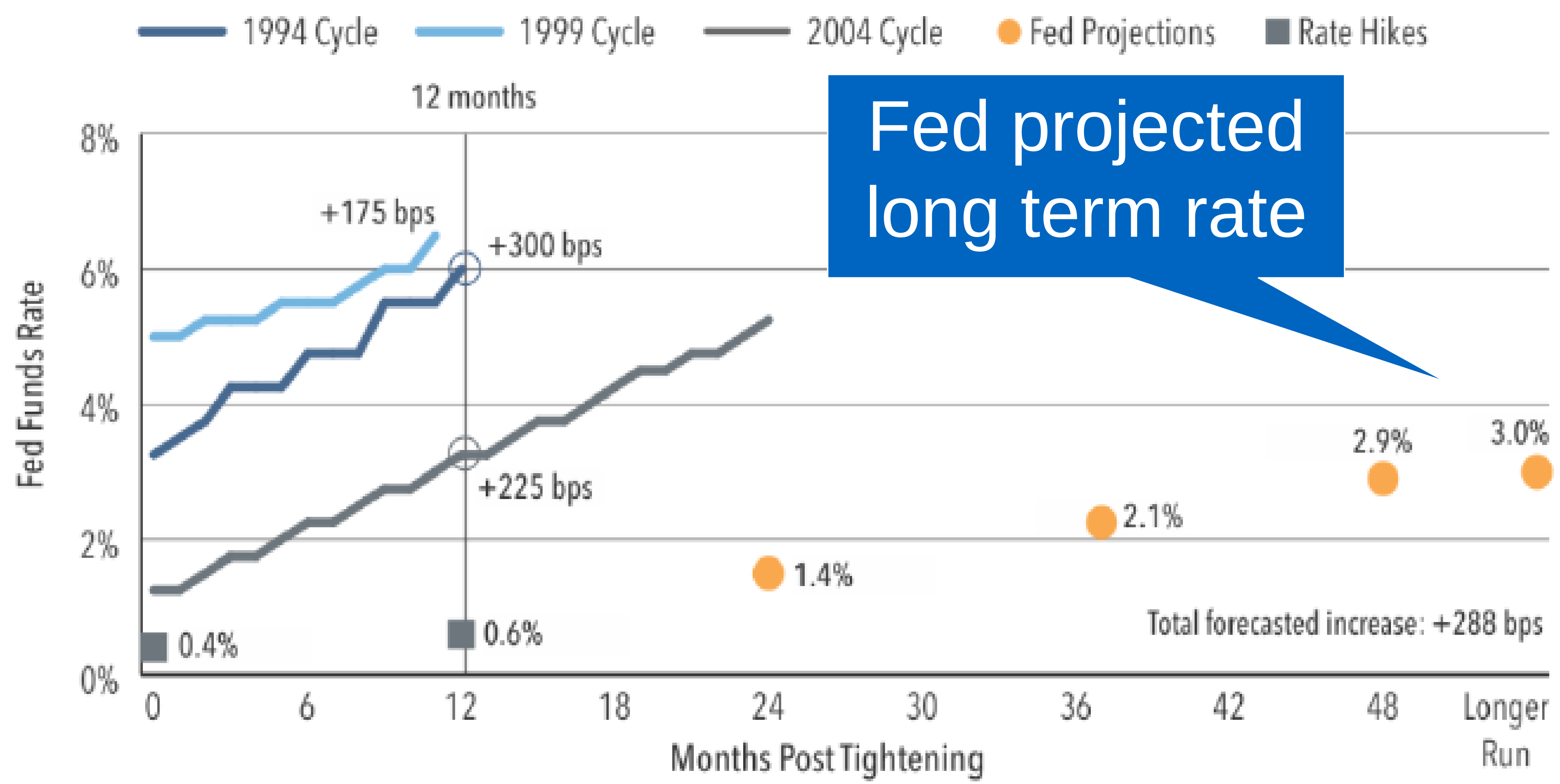
Another factor we must consider:
The US economy has hit trouble at lower peak interest rates in recent years



Will short term rates around 2.0% be a warning?

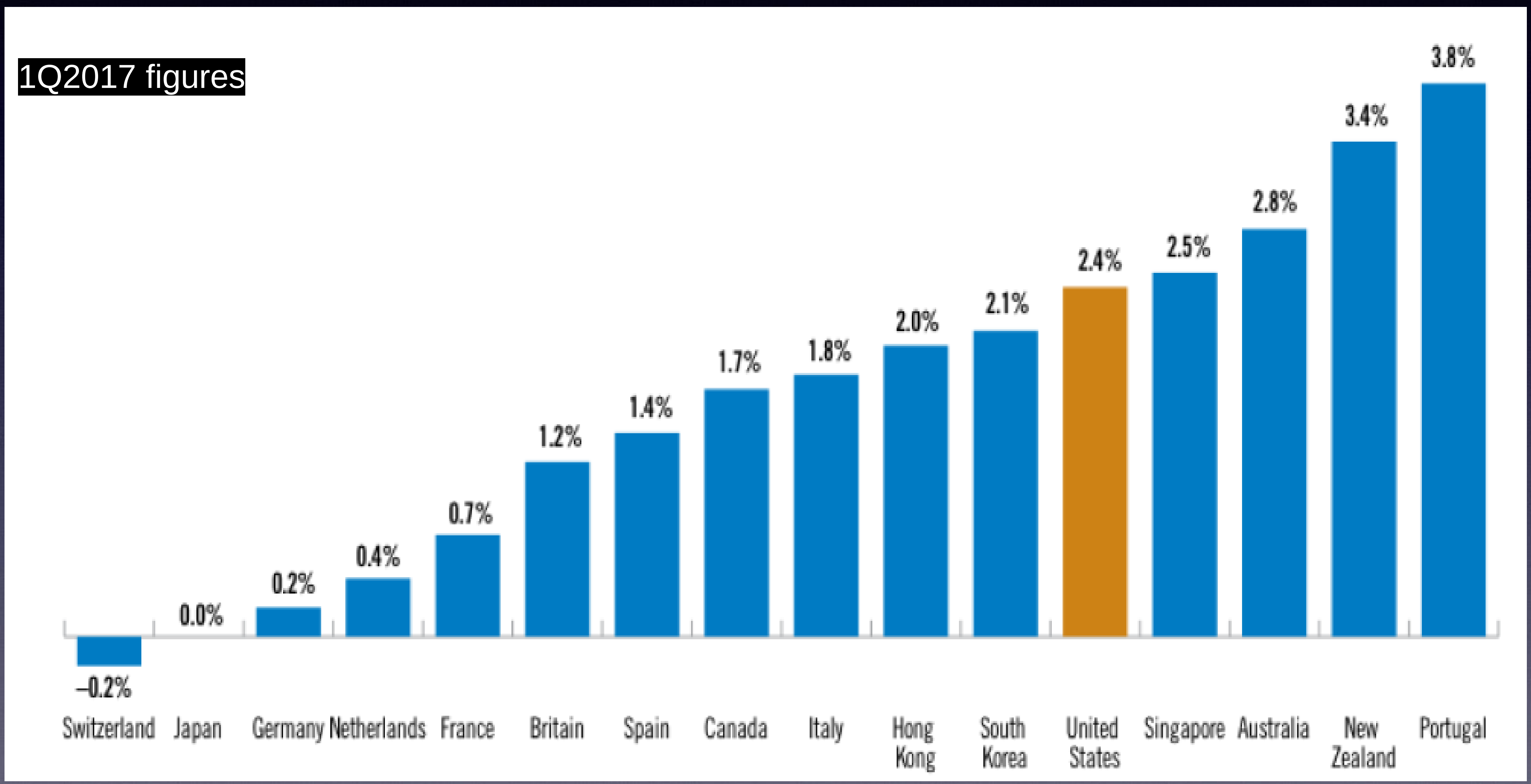
The risk: Fed raises short term rates to 'normalize', then is shocked when long term rates fall more than expected.

1. This tightening cycle starts from a much lower base than previous cycles. 'Normalising'
2. Fed is predicting rates above that 2% line.



Source: Bloomberg L.P., Federal Reserve Projection Materials, December 14, 2016. Fed forecast represents the median forecast of each Federal Open Market Committee participant for the midpoint of the fed funds rate at year-ends 2016, 2017, 2018, 2019 and longer run. Month 0 shows the rate increase in December 2015.

The Fed controls short term rates (FFR), but US long term rates are determined by global factors.

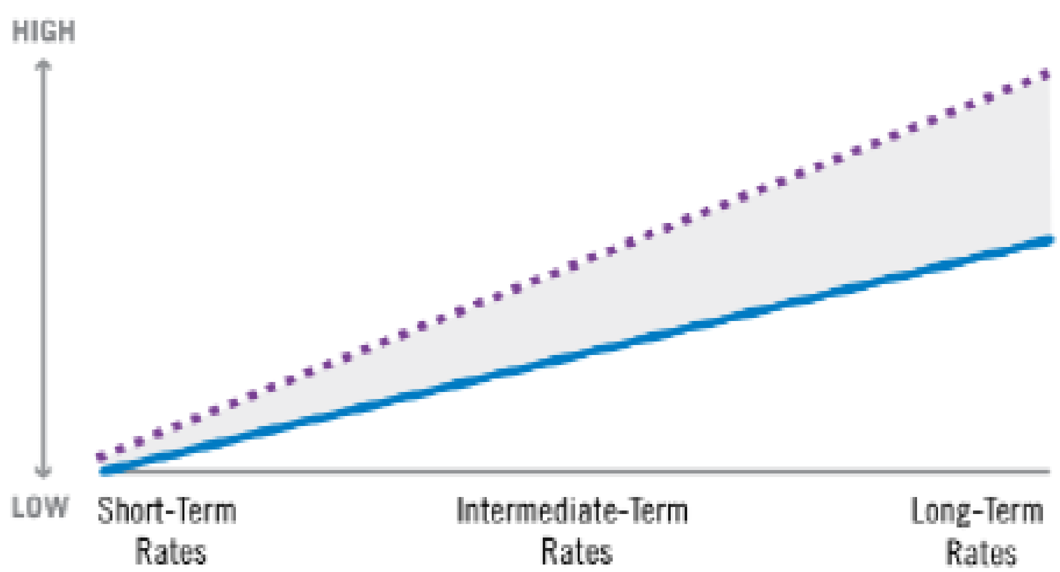


Key point: Low long term rates globally may slow the rise in US long term rates.

- Short-term rates are strongly influenced by central banks.
- Long-term rates are primarily influenced by long-term expectations for economic growth and inflation. They may also be affected by current long-term global market rates.
- Short term and long term rates do not necessarily go up together.
- The yield curve flattened during the last two rate hike cycles, because short-term rates rose faster than long term rates. Yield curve could also flatten if long term rates fall.

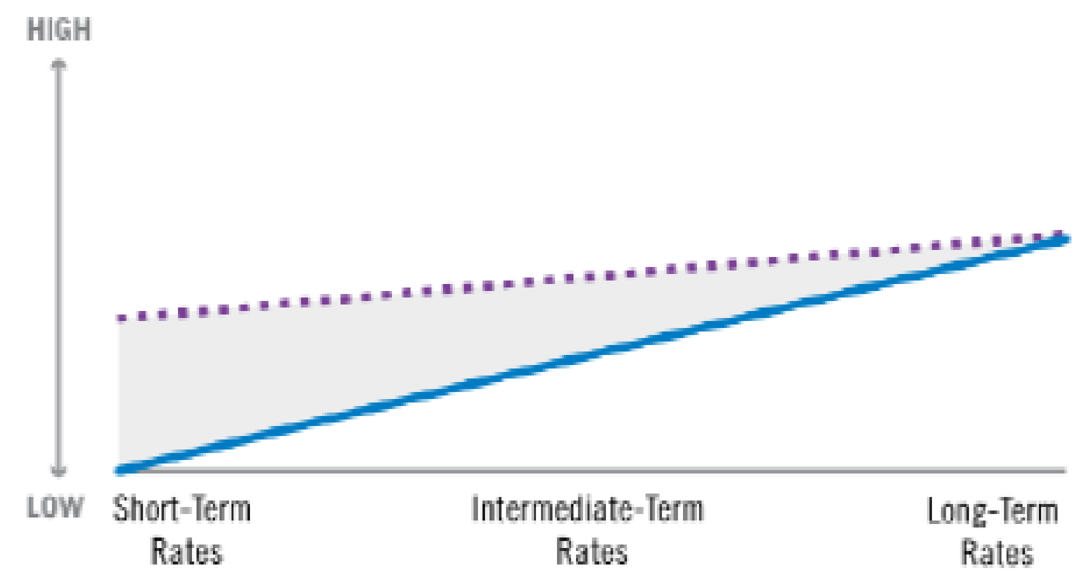
Long rates and short rates can diverge.
This matters!

YIELD CURVE “STEEPENER”



- Short-term rates don’t move since the Federal Reserve is not making adjustments to monetary policy.
- Long-term rates are rising as the market anticipates an increase in economic growth and inflation.

YIELD CURVE “FLATTENER”



- Short-term rates rise as the Federal Reserve tightens monetary policy to help slow a growing economy.
- Long-term rates are not moving as the market does not anticipate a substantial increase in economic growth or inflation.

Credit: Prudential Ltd

Key point: If short rates rise faster than long rates this could flatten the yield curve in the USA and other countries.

Yield curve steepness.
Why does it matter?

- The yield curve is a major determinant of bank lending and therefore economic expansion or contraction.

- During a period of monetary policy tightening, with short-term rates rising more than long-term rates, the yield curve will flatten.

- *Watch for a flatter* yield curve. Monitor carefully for any rapid increase in short-term rates, or fall in long term rates, that produces a negative yield curve.

- If the Fed is right that 10 year yields will stay around 3%, then short term rates need to stay below this level for economic health and stock market health. If 10yr yields are lower, the short term rates need to be low also.

- If it becomes negative, recession is a very high probability, and stock markets will be extremely vulnerable.

US Treasuries 10yr and 2yr from year 1871

Yield curve 10yr-2yr is still +ve, but for how long?

10 year
2.25%
falling?

2 year
1.3%
rising

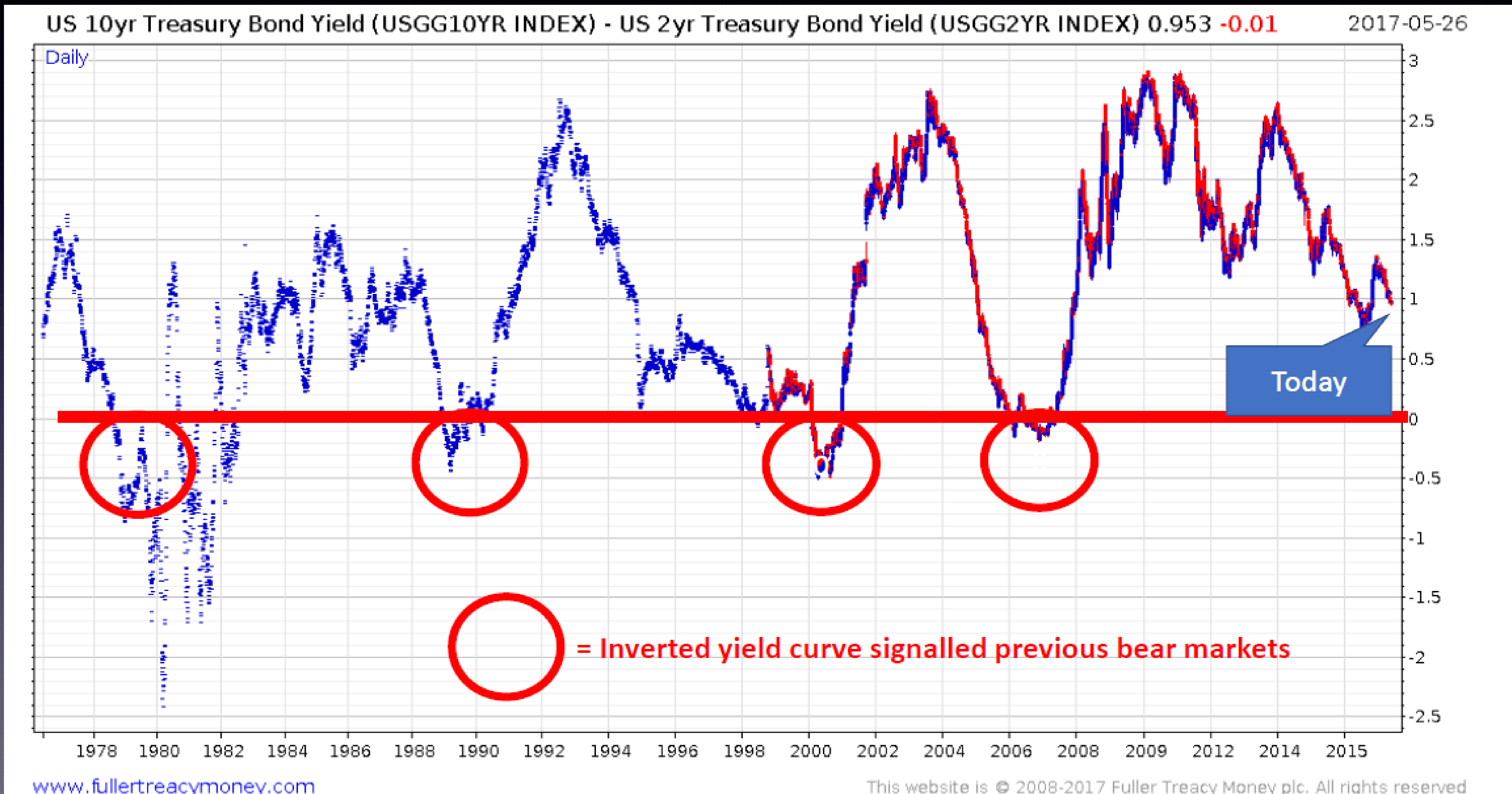
Examples of ways the 10yr-2yr yield curve could invert.

1. Sharp rise in short term rates
    - If economy is over-heating and/ or inflation rising too strongly
    - To protect falling currency

OR

2. Fall in long term rates
    - Reduced expectations of growth and inflation locally and globally

The 10yr-2yr Yield Curve Today



Contents of presentation

1. Current status and history of rate rises.
    - What can we learn from previous rate rise cycles?
2. Asset classes: detailed look at each asset class
    - Shares
    - Commodities
    - Bonds
    - Gold and silver
    - Property
3. Summary

There are significant differences between this rate rise cycle and those of recent decades.

- David Fuller: It takes 7 years or more to recover from a financial crisis. Rates were low for much longer than normal.
- Bond yields are near record lows (prices near record highs).
- Equities remain unloved by the general public. It feels a long way from the euphoria of market tops.
- A reasonable conclusion is that if the economic environment continues to normalise, investors are likely to increase equities and reduce bonds and cash equivalents.

Economic fundamentals seem likely to support rising share prices for a while yet.

- Employment levels are high in both UK and USA and <u>northern</u> Europe.
- Most households in USA and UK have de-leveraged.
- Net worth is now above levels of 2008 financial crisis.
- Housing price rises continue (feel-good factor).
  - Mortgage rates remain relatively low.
- Company profits will benefit, supporting share prices.

Impact of rising rates on stock markets in previous cycles.

- S&P 500 has gained 1-2% per month on average in previous rate rise cycles when 10 year yields were 3-4%.

- Markets began to suffer when yields were 5-6% (though the figure may be lower this time for reasons stated above).

- High rates hit the economy as they discourage borrowing by companies and consumers. Investors desert shares for bonds.

Which shares tend to prosper when rates rise?

- Financial services: banks, brokerage / asset management companies.
- Companies that generate high cash flow and can earn increasingly higher interest income e.g. insurance companies focused on property and casualty (high float); payroll processors.
- Consumer discretionary.
- Industrials.
- Travel.
- Technology large caps (because businesses increase spend on technology when the economy is growing). They also earn more income on their large cash reserves.

Which types of shares tend to lose as rates rise?

- Slow growing businesses.
- Highly-leveraged businesses, those that need to borrow a lot of money: utilities, telecoms, REITs, blue-chip dividend payers, loan-dependent companies eg car manufacturers, home builders.

Emerging Markets

- Emerging markets suffered when rates were rising in the past. But they are more domestically focused now.

- Usually when the dollar goes up, emerging markets suffer. But...when commodities and dollar go up at the same time that has been bullish for EM's.

- But will it be the same this time?

  NEXT SLIDE

Emerging Markets

It may depend on the dollar

❖ US Federal Reserve is leading the move to rate 'normalisation' globally which should favour a relatively strong USD - but President Trump is talking down the dollar.

❖ If US economy strengthens further, and inflation rises, that could lead to more rate hikes, driving the dollar higher.

❖ This could be dis-inflationary or even deflationary in the USA.

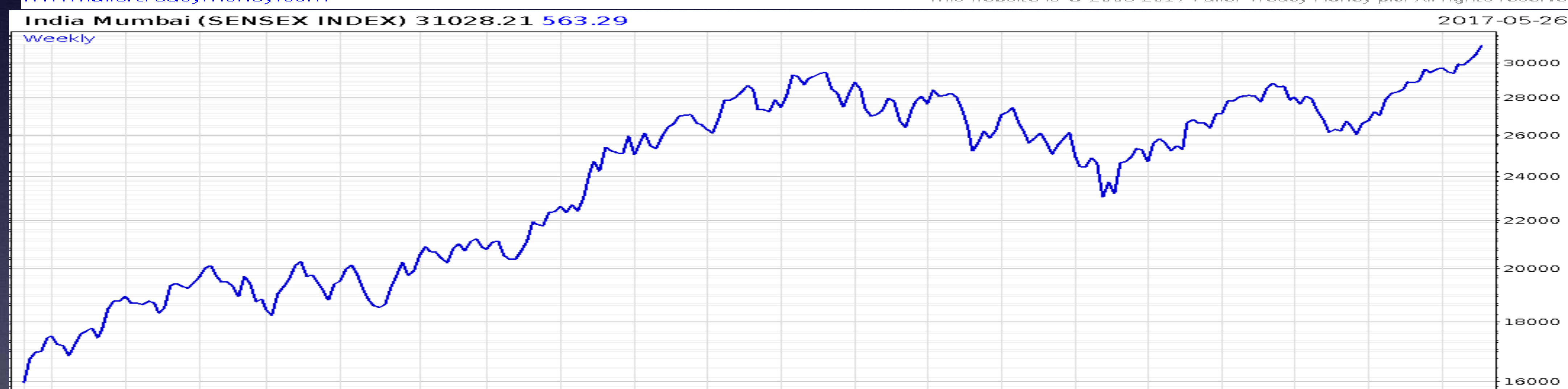
❖ A strong dollar drains liquidity globally by making it more expensive to service debts for nations who borrow in so-called Eurodollars (any country which takes out a US-dollar price loan that is not America).

❖ That is why emerging market assets may perform poorly if the dollar is strong. Or better if the dollar weakens as Trump wants.

What do the charts tell us?

China

India



Brazil

Contents of presentation

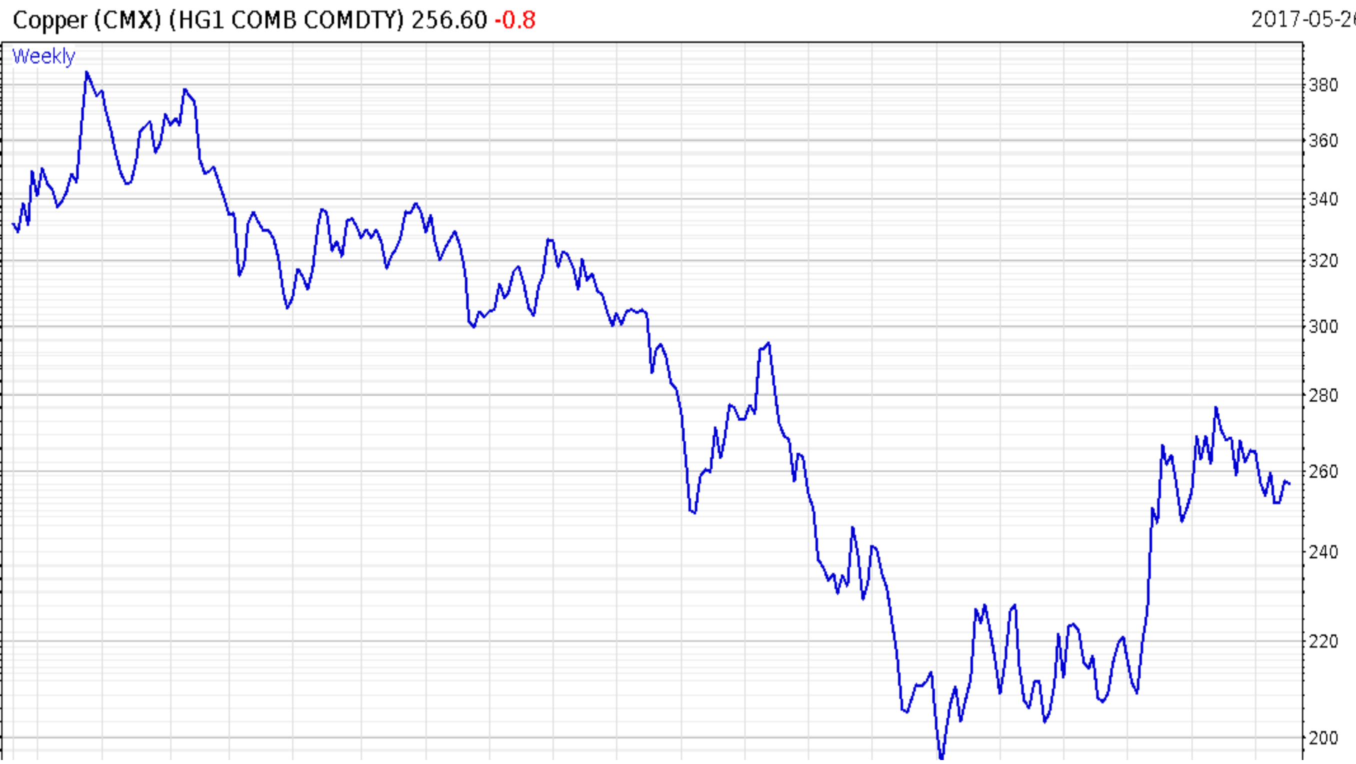
1. Current status and history of rate rises.
   - What can we learn from previous rate rise cycles?

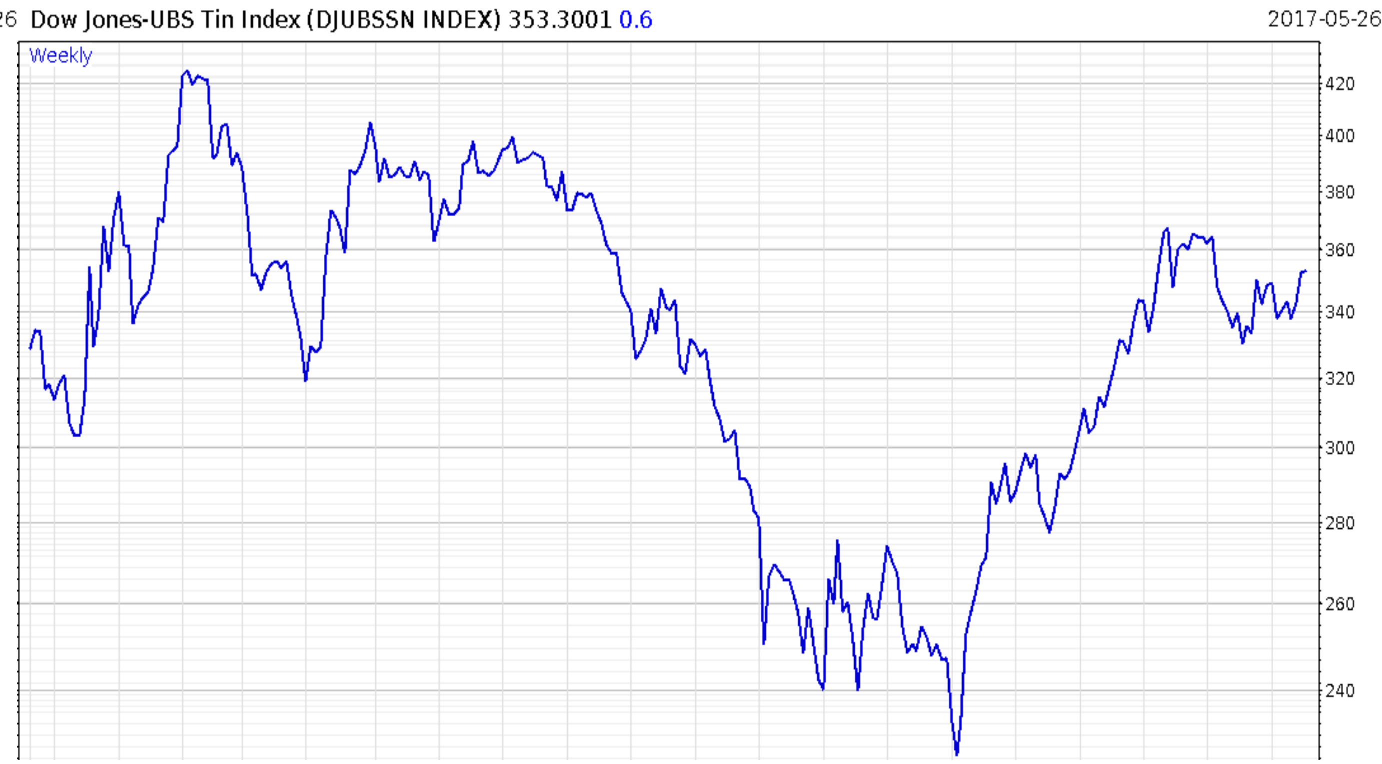
2. Asset classes: detailed look at each asset class
   - Shares
   - Commodities
   - Bonds
   - Gold and silver
   - Property

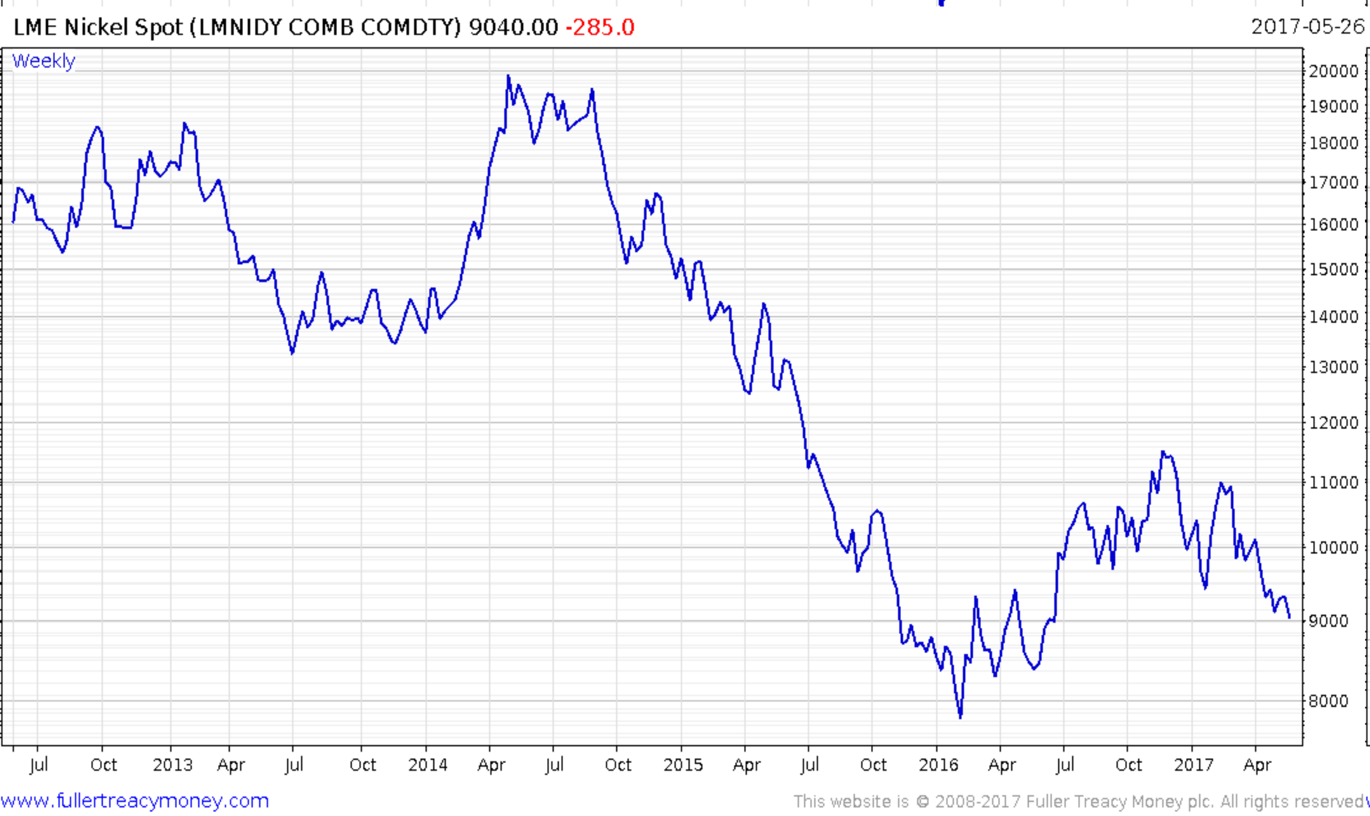
3. Summary

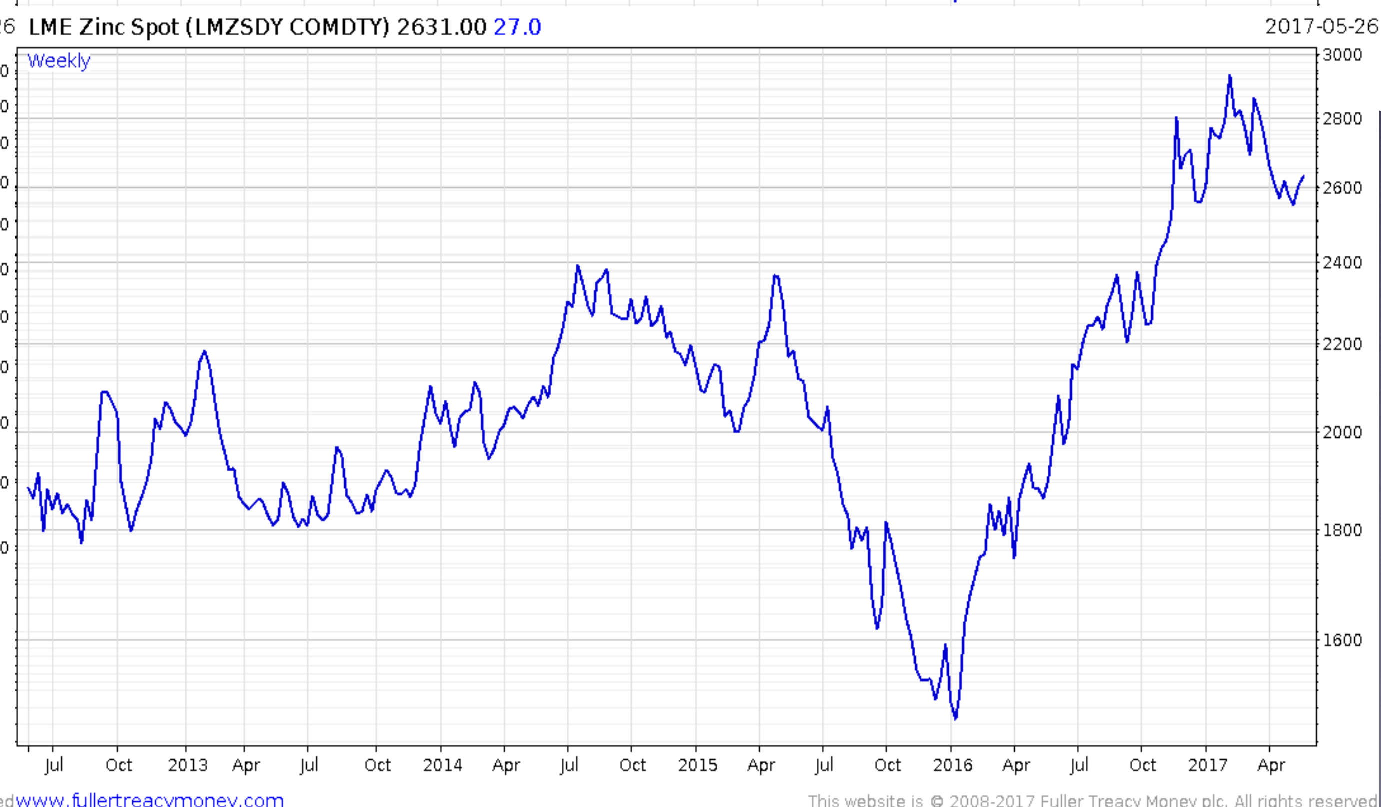
20 year chart, commodities

Metals are likely to do best: copper, tin, nickel zinc









- Commodities benefit from increased demand as global economic growth improves and have historically provided an inflation hedge.
- China drove much of the advance to 2008. But the country is rebalancing to home-consumer goods now.
- Commodities have been falling since 2011.
- Global inflation remains low.
- Demand may be in balance with supply for a while.
- Seasonal and weather factors can impact some commodity prices, e.g. softs.
- Overall, will commodities do so well this time???

Contents of presentation

1. Current status and history of rate rises.
    - What can we learn from previous rate rise cycles?
2. Asset classes: detailed look at each asset class
    - Shares
    - Commodities
    - Bonds
    - Gold and silver
    - Property
3. Summary

In general, bond prices fall when interest rates rise. Why?

- As rates rise, newly issued bonds carry a higher coupon (interest rate) than older bonds, so older bonds are now less attractive to income investors. This leads to a fall in price of older bonds.
  - Remember, rates do not fall in a straight line and when rates decline those older bonds become more attractive to investors.
- Total return on a bond = price + income.
  - As rates rise, the income on a bond can help off-set falling prices, cushioning the overall total return.
  - Investors need to consider how much price will fall against income that might off-set the price decline.

Impact of rising rates on bonds can differ depending in several factors

- The coupon on the bond
- Starting level from which rates start to rise.
- The duration of the bond
- How much they rise
- How fast rates rise

Effect of starting rate, coupon and duration

- COUPON: Lower coupon bonds have greater interest rate risk than higher coupon bonds with the same maturity because they have a lower "yield cushion".
- STARTING LEVEL: The absolute rate level is important because the bond's income helps to cushion its total return from price erosion. Higher starting income levels provide more cushion.
    - At the start of this rate rise cycle, rates were much lower than during previous rate rise cycles. A thin cushion!
- DURATION: In general, changes in short-term interest rates have a greater impact on short-term bonds and changes in long-term interest rates have more impact on long-term bonds.

Longer maturity bonds are at more risk

Change in bond price for each 1% change in interest rates

Yield/coupon	30-year bond	10-year bond	5-year bond
5%	~15%	<8%	4.4%
4%	~17%	~8%	4.5%
3%	~19.5%	~8.5%	4.6%
2%	~22%	~9%	4.7%
1%	~24%	>9%	4.7%

Effect of speed and size of rate rises

- SPEED AND SIZE OF RISES: A steep and rapid increase in rates may result in negative fixed income returns. Conversely, small increases over a longer time frame may have less effect.
    - At the present time, it seems likely that rate increases are more likely to be in small steps and well-separated in time.
- The factors that kept rates low in recent years have not totally disappeared.

Credit spreads may determine attractiveness of corporate bonds (1 of 2)

- Corporate bonds should benefit from improving economic prospects and low default rate.
- Also, corporate bonds may pay a higher yield / interest rate than otherwise similar government bonds (see earlier slide of government bonds vs S&P500).
- The 'credit spread' is a key factor.
- Credit spreads represent the 'risk premium'.
  - The credit spread is the difference between the yield of e.g. a corporate bond and a 'risk free' government bond. (Applicable to countries that can 'print' their own money to repay loans.)

Credit spreads may determine attractiveness of corporate bonds (2 of 2)

- If credit spreads are wider when rates start to rise, they have more room to tighten.
  - This may help reduce the overall yield increase if spreads tighten. The result is less of a decline in the prices of non-government bonds.
- However, if credit spreads are tight at the start of the rising rate period, there is little potential to off-set falling bond prices.
  - Credit spreads were wider than earlier historical periods when rate rises began in December 2015
  - They have narrowed since then.

Other bond factors

- Short duration bonds give less interest income, but are less vulnerable to capital losses due to rate rises than long term bonds.

- High-yield bonds, such as high-income corporates have historically been less sensitive to rising interest rates due to their higher income.

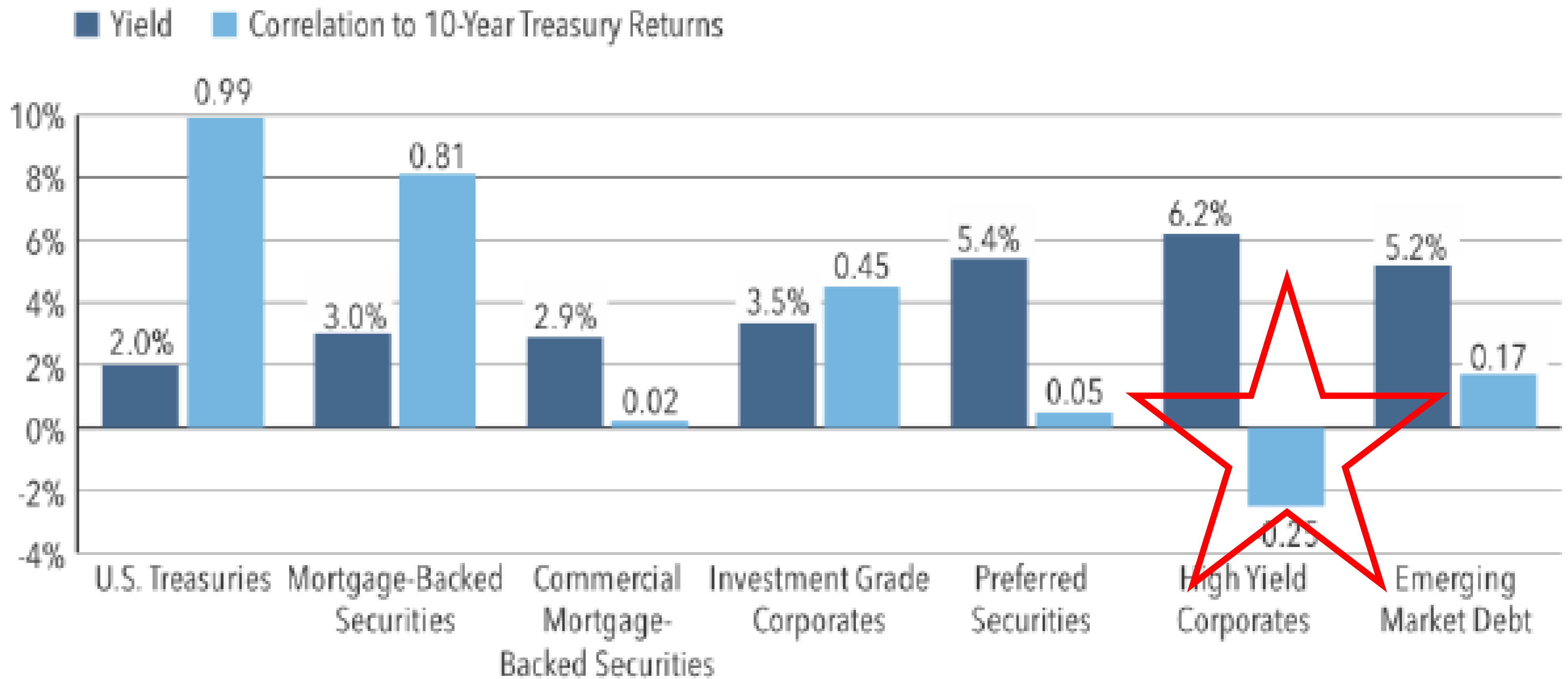
- Floating-rate bonds: interest adjusts regularly alongside short-term rate changes. Like other corporate bonds, these bonds come with the risk that the issuer will fail to make payments. But, if rates continue to rise, floating-rate bonds could do well.

Next 2 slides

Key data for Income investors

(Credit: Nuveen Asset Management)

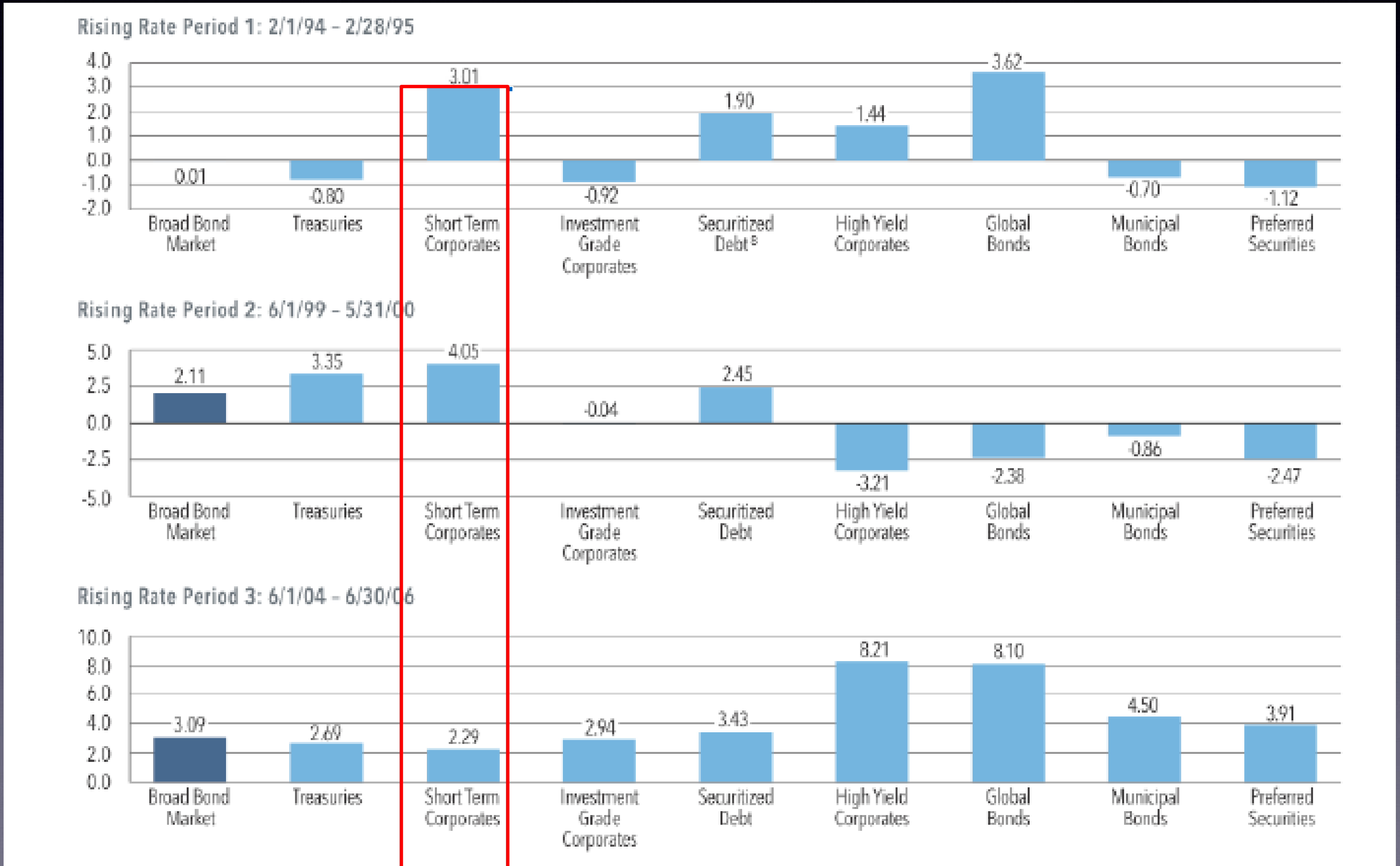
High yield corporate bonds have the lowest correlation with government bonds (favour short duration – see next slide)



Sources: Bloomberg L.P., BofA Merrill Lynch, Morningstar Direct. Yields as of 12/15/2016. Correlation to 10-Year Treasury Returns from 12/1/06 –11/30/16. **Past performance is no guarantee of future results. Representative Indices: 10-Year Treasury:** Bloomberg Barclays U.S. Treasury Bellwether 10-Year Index; **U.S. Treasury:** Bloomberg Barclays U.S. Treasury Index; **Mortgage-Backed Securities:** Bloomberg Barclays U.S. Mortgage-Backed Securities (MBS) Index; **Commercial Mortgage-Backed Securities:** Bloomberg Barclays CMBS Index; **Investment Grade Corporates:** Bloomberg Barclays U.S. Corporate Investment Grade Index; **Preferred Securities:** BofA Merrill Lynch U.S. Preferred Stock Fixed Rate Index for correlation and by the BofA Merrill Lynch U.S. All Capital Securities Index for yield; **High Yield:** Bloomberg Barclays U.S. Corporate High Yield 2% Issuer Capped Index; **Emerging Markets:** Bloomberg Barclays Emerging Market USD Aggregate Index. Indices are unmanaged and unavailable for direct investment. Correlation is a statistical measure of how two securities move in relation to each other.

Fixed interest performance in last 3 rate rise cycles.

Only short duration corporate bonds and securitized debt gave positive returns in all 3 of the last rate rise cycles.



Holding bonds via a bond fund could have a different outcome than owning bonds individually

- A single bond has a maturity date
  - Purchase at issue and holding to redemption should return capital, plus coupon, apart from default. The main risk could be inflation.
- A bond fund – active or passive – has no maturity date and owns bonds with different maturity profiles.
  - As a holder of the fund, not the bonds directly, one has less security.

Contents of presentation

1. Current status and history of rate rises.
    - What can we learn from previous rate rise cycles?

2. Asset classes: detailed look at each asset class
    - Shares
    - Commodities
    - Bonds
    - Gold and silver
    - Property

3. Summary

Real negative rates are usually required to support a bull market in precious metals.

- How?
- The rate of inflation can rise faster than yields.
- Yields can decline below the rate of inflation.
- With yields currently so low, and the Fed determined to raise US rates, a rise in the rate of inflation seems the more likely.
  - Policy makers <u>want</u> higher inflation.
- Essentially, rising inflation or fears of deflation are the best catalysts for precious metals while disinflation (falling inflation amid growth) is negative for PMs.

Contents of presentation

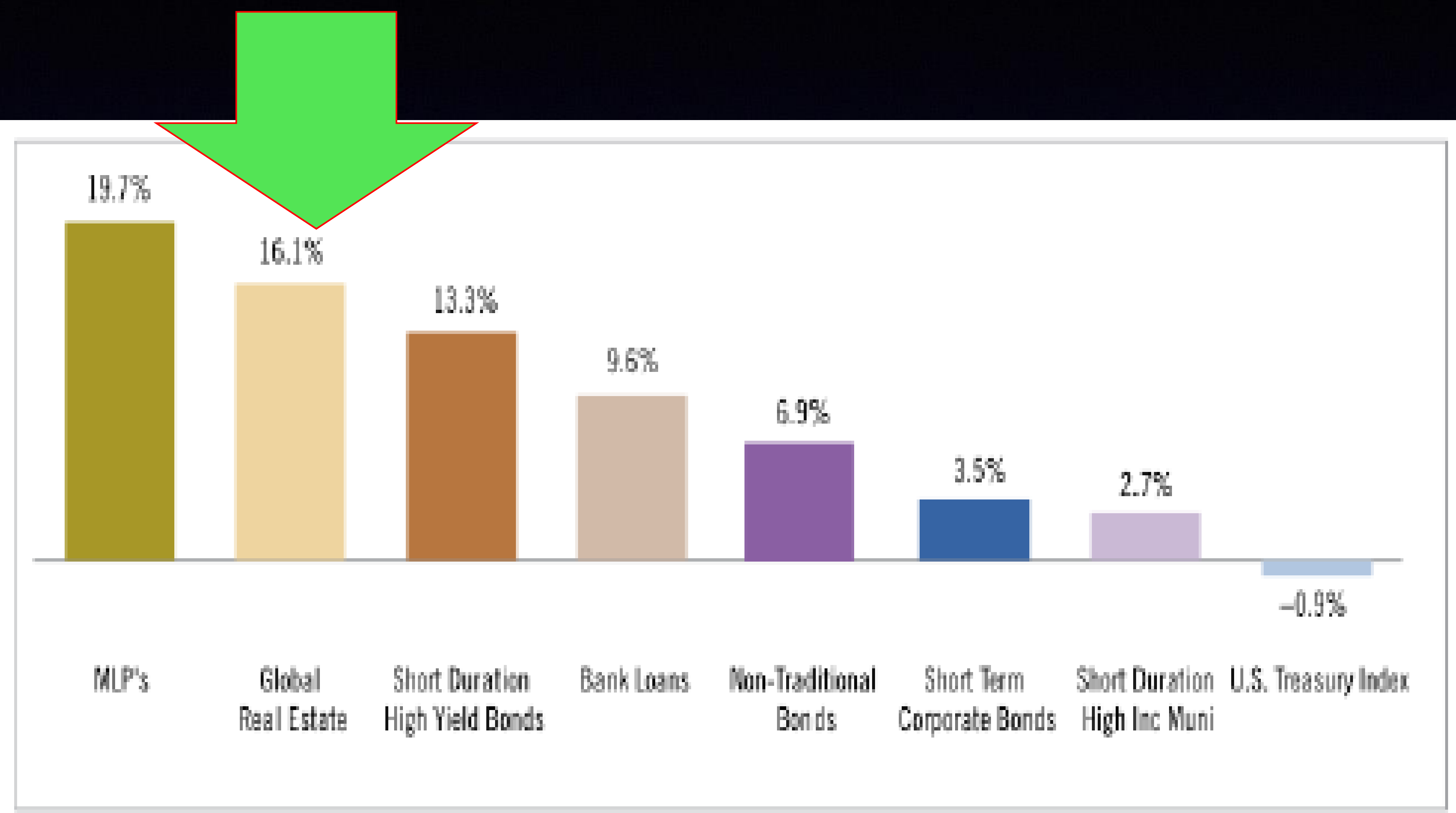
1. Current status and history of rate rises.
    - What can we learn from previous rate rise cycles?

2. Asset classes: detailed look at each asset class
    - Shares
    - Commodities
    - Bonds
    - Gold and silver
    - Property

3. Summary

Property has out-performed in previous rate rise cycles.

Average historical performance during rising rate periods[5] (as shown in the chart above)



[1]Source: Morningstar Direct as of 12/31/16. Calculated by Prudential Investments LLC using data presented in Morningstar software products. All rights reserved. Used with permission. Rising interest rate periods are defined by the monthly movement of the 10-year Treasury yield, using a threshold of 75+ basis points or greater. The 10-year Treasury yield is a commonly used reference point for tracking the general movement of U.S. interest rates. The decision to use a 75+ basis point threshold to define a rising rate period was done so that an investor could see multiple instances of rising rate periods to better assess how different asset classes performed during these types of periods.

[5]Source: Morningstar Direct as of 12/31/16. Calculated by Prudential Investments LLC using data presented in Morningstar software products. All rights reserved. Used with permission. All indices are unmanaged. An investment cannot be made in an index. Please see page 10 for asset class breakdowns and corresponding indices.

Note the 18 year cycle in UK and other property markets, due to peak in mid 2020s.

18 year house price cycle?

- If the historical pattern repeats of an approximately 18 year cycle in house prices, remember the last peak was in 2008.
  - Beware the mid 2020s.
- Previous cycles had a mid cycle slowdown in house price increases, which could be due over the next year or two.

Commercial property

- Modest rates
- Modest gains?

Contents of presentation

1. Current status and history of rate rises.
    - What can we learn from previous rate rise cycles?

2. Asset classes: detailed look at each asset class
    - Shares
    - Commodities
    - Bonds
    - Gold and silver
    - Property

3. Summary

Some thoughts to consider (1 of 4)

Equities

- Equities likely to do well as rates rise until…
- In previous rate rise cycles, equities have climbed as the economy improved, until rates exceeded 4%, <u>or</u> the 10yr-2yr yield curve inverted.
    - Will an inversion occur at lower rates this time?
    - Risk of 10yr rate falling if growth expectations are thwarted.
- No indicator has a history of perfectly predicting recessions and bear markets.
    - It may be wise to respect the seasonal effect (increase cash during the historically weak summer season).

Some thoughts to consider (2 of 4)

Bonds

- Rising rates generally not conducive to capital gains in bonds.
  - Capital losses can be large, especially for long duration bonds.
  - Low bond yields this time provide little to off-set capital losses.
- High yield, short duration has performed best in previous rate rise cycles.
- Corporate bonds more attractive than government as the bull market expands, but will reverse when bull market falters.
- Bonds could surprise at times (on the upside) if global growth falters.

Some thoughts to consider (3 of 4)

Property

- Property bull market could continue if it follows the 18 year cycle.

- Mid cycle slowdown often occurs and is due soon. In the past the mid cycle slowdown has been followed by resumption of price rises, often at an even steeper rate.

Some thoughts to consider (4 of 4)

Commodities

- Not so clear that all commodities will boom this time, though economic improvement could help industrial metals. They are priced in USD so fate of the dollar is a factor.

- In bull markets, oil prices can rise and if the rise is steep (e.g. doubling) that can drive inflation, steep rises in rates, then kill the bull market. Not clear that will happen this time with USA fracking output likely to constrain prices.

Q&A