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Reducing risk, optimising reward

(Slides for my grandchildren)

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“The whole secret to winning and losing in the stock market is to lose the least amount possible when you're not right”.

William O’Neill

Contents of presentation

1. Secular and cyclical bull and bear markets.

2. Reducing drawdowns:
    - Yield curve as a predictor of approaching recession and bear market.
    - 6 month / 12 month moving average crossover to time market exit.

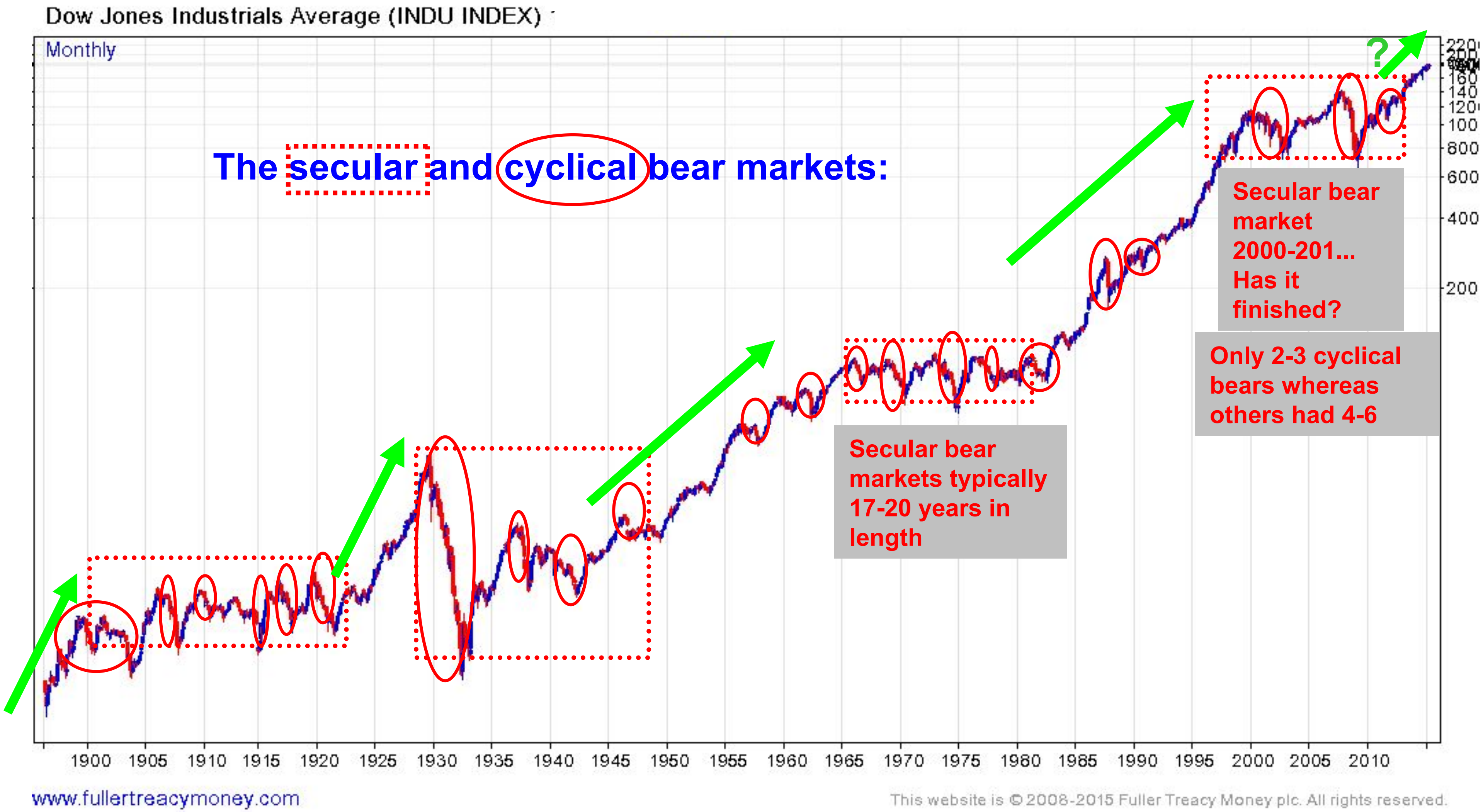
    ...and some other useful indicators.

3. Sell in May? What's the data say?

4. PE / CAPE as a predictor? Not so simple - interest rates matter too.

5. Summary: Current market situation according to these indicators.

1. Understanding secular and cyclical bull and bear markets



The influence of the price of oil

Every global recession since 1970 has been preceded by **at least a doubling of the oil price…**

…and **every time the oil price has fallen by half and stayed down for six months** or so, a **major acceleration of global growth** has followed (delay of 6-12 months). *It halved in late 2014!*

These changes impact inflation / disinflation and hence interest rates and the yield curve - which may be the most important factor of all.

N.B. Solar power may over future years,
gradually reduce the importance of oil as an indicator.

2. Reducing drawdowns: My Traffic Light Indicators

Part published in FullerTreacy Money in 2010 (yield curve as a primary guide).
This is the full version with additional factors.

2 primary indicators

Warning signal: Negative yield curve alerts to approaching bear market.

Timing signal: S&P500 6month/12month moving average crossover times exit to cash.

1 additional safety factor (to protect against 'corrections' not preceded by yield curve inversion)

Market weak season, May-October: Up to 50% cash can provide a third security factor.

Data from last 16 bear markets:

Bear Markets	Average Loss	Length (months)
Recession	-38.2%	18.2
No Recession	-17.9%	9.1

Conclusions:

1. To avoid major losses - spot the recessions. Yield curve is a predictor of approaching recession. Moving average crossover guides timing of exit.

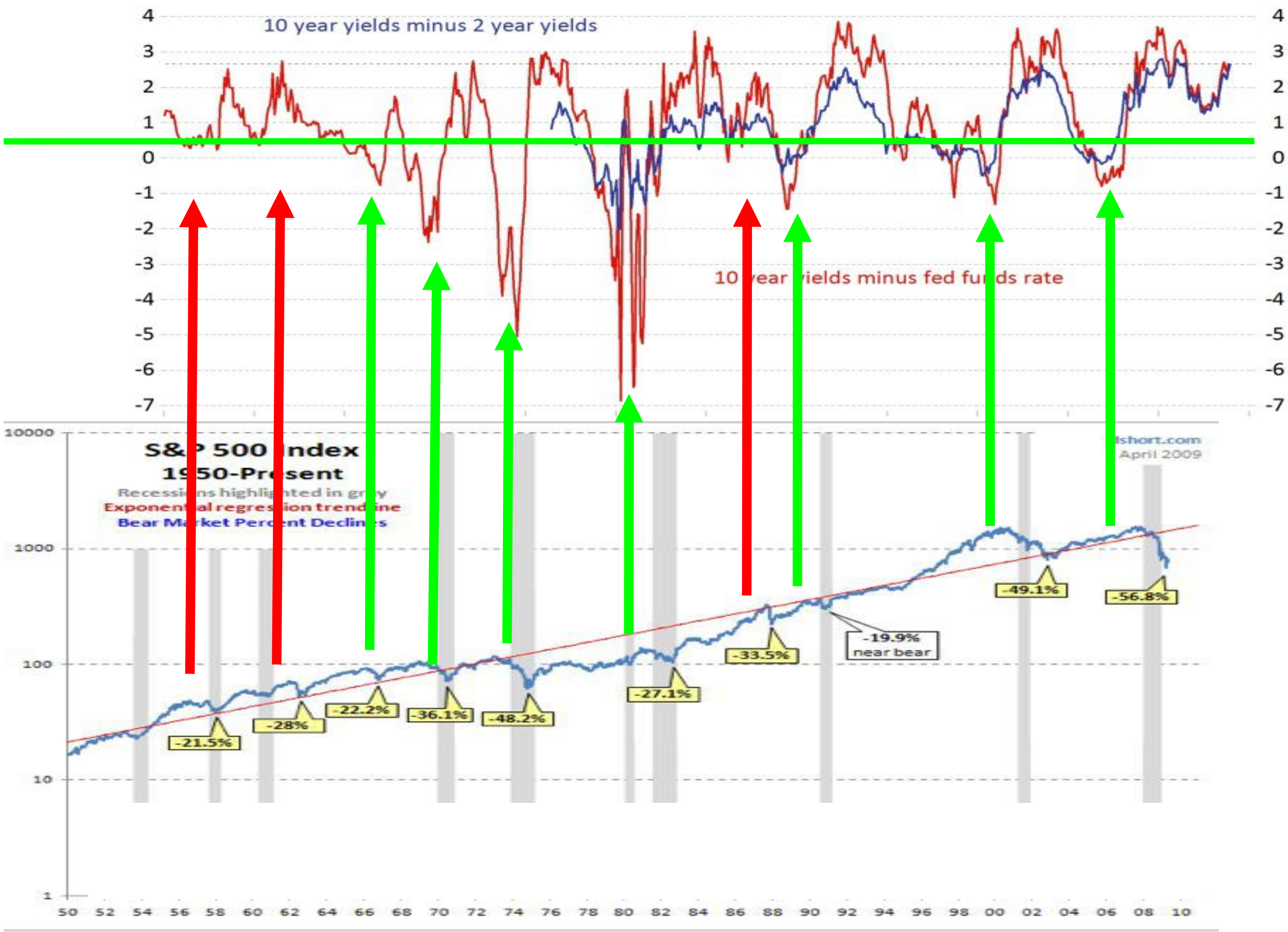
2. To avoid minor losses (no recession): 50% cash in market weak season may achieve this.

Evidence follows on later slides

Yield curve mapped onto bear markets

(US Treasuries:10yr-2yr and 10yr-FFR)

Reasonable correlation over past half century - not perfect.



When and why the yield curve may be a predictor of recessions and bear markets

- Yield curve steeply positive
  - banks make good profits by lending, and their lending supports demand for credit.
  - Increased money supply and aggregate demand prompt the economy to recover/ prosper.

- Yield curve inverts (e.g. when short term interest rates rise)
  - raises the price of credit and discourages bank lending and growth.
  - banks cannot make profits from lending, so lending slows.

- One caveat: sometimes, even with a steep curve, bank lending may not rise and demand for credit may remain weak. The yield curve argument is therefore not applicable in this case.
  - in 1937 the curve was positive yet there was economic recession and markets fell. Neither demand nor supply was able to stimulate the economy. (USD was pegged to gold in 1934).
  - this may occur, for example, if banks need to repair their balance sheets. To some extent we have seen this in recent years, with US banks in better health than European banks.

- So, if using the yield curve as an indicator
  - we must also check whether credit growth is flowing into the economy.
  - Another factor may be currency strength. For instance, a strengthening US dollar will likely attract capital flow into US assets including the stock market.

Money goes where it is treated best. In the end, it is all determined by capital flows.

Yield curve and stock market returns

The four primary phases of monetary policy and how they've influenced the stock market and economy over the last half century.

Phase 1: the Federal Reserve is transitioning from a low interest rate environment to gradual tightening. This happens as the economy starts to improve and inflation begins to rise. In this phase P/E multiples and the bond market begin to peak.
The historical mean return on stocks is around 10%.

Phase 2: monetary policy is now much more restrictive and well into tightening mode. The economy is doing quite well and inflation is running much higher. Commodity prices begin to climb steadily and profit margins are beginning to get squeezed with rising input costs. This is a diificult combination for stocks and the economy, and typically the time when investors should start worrying.
The historical mean return for stocks in this phase is around 2.5%.

Phase 3: policy is tight, interest rates have peaked and may now be rolling over. The Stock market has fallen and the economy is either in or very near recession.
The historical mean return of stocks is -9%.

Phase 4: monetary policy is loose once again, the economy is in recovery mode, and inflation is running low.
This is the best phase for stocks with a mean return around 23%.

The 2nd factor: Timing – the impossible task?

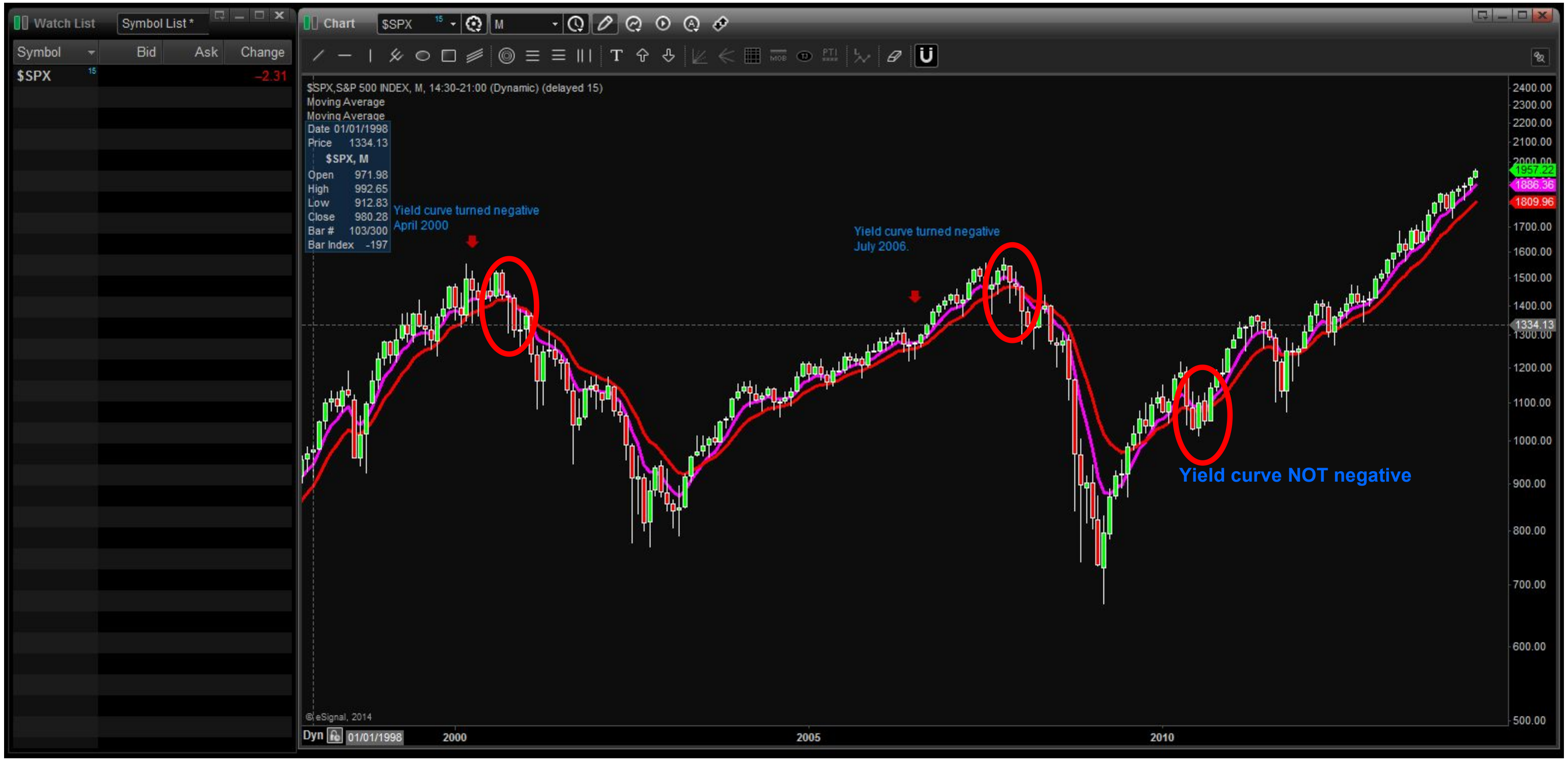
Negative yield curves have heralded all recessions and market falls over the past half century or more, with a lag time of 0-24 months.

Markets often accelerate in the final phase of a bull market, so exit too early could lead to missing big gains.

Worse still, one may exit based on the yield curve signal then re-purchase at higher prices – just before the bear market starts!

Can one time market exit within that 0-24 months?

Monthly chart: 6m/12m moving average crossover, 1995-2015



Monthly chart: 6m/12m moving average crossover, 1985 - 2000

Putting these 2 indicators together: Following inversion of the yield curve, 6 month / 12 month MA crossover may guide timing of market exit.

- Moving Average crossover: ***Once the yield curve inverts*, *the monthly chart 6 month /12 month moving average crossover signal could be used for timing exit of all long positions***.

- ***Note that the MA crossover is not used alone (50% failure rate)*, *it must be preceded by an inverted yield curve.***

- Used together, these 2 'Traffic Light Indicators' have a high success rate back to 1971 in identifying the time to exit equities due to an oncoming bear market. The only exception was 1987, when the market fell steeply (without a recession) but still gave a positive return of 5.2%.

3. Sell in May? What's the data say?

USA DJIA data from the Stock Trader's Almanac (1950-2012)

- $10,000 invested at the beginning of May and sold at the end of October every year showed a loss to $9,322
- $10,000 invested on every November 1 and sold at the end of April grew to $826,984

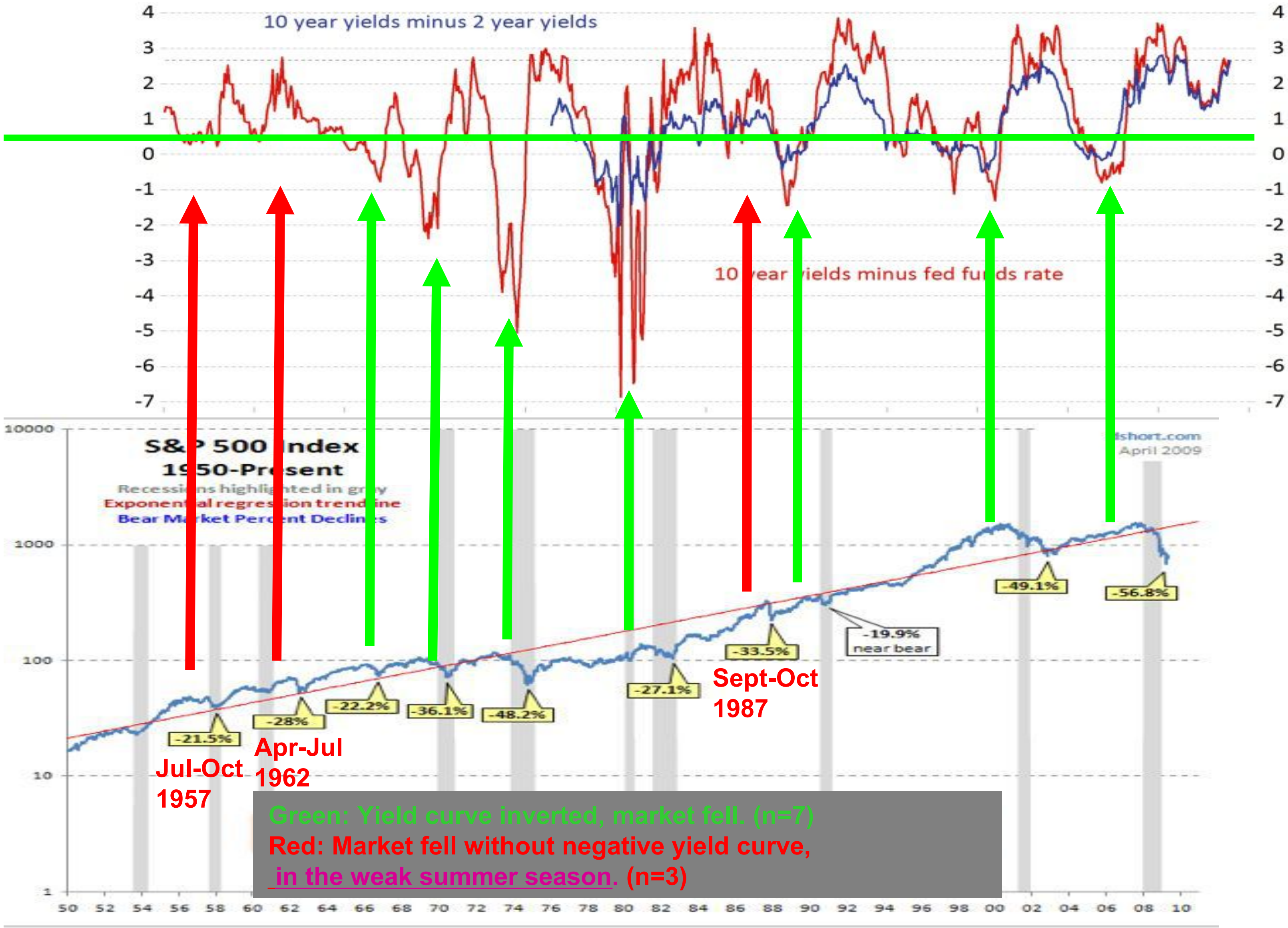
- But one can improve returns further. A key determining factor is the presence of a bear market.
- **If a bear market is ongoing in May, prices fall 92% of the time by the end of September.**
- **If a bull market is running in May, prices rise 75% of the time over the summer period.**

- There have been just three times when the "good 6 month season" lost more than 10% (1969, 1973 and 2008 - and my Traffic Light Indicators would have signalled to exit the market anyway ahead of these three falls).

- During the "bad six month season" there have been 11 losing years of 10% or more.

So, using all three offers maximum protection.

1. Yield curve inversion
2. Following inversion, 6 month / 12 month moving average crossover to time exit.
3. Increase cash in market weak season anyway as added protection.



Some additional supporting indicators

Leading Index calculated by St Louis Fed

https://research.stlouisfed.org/fred2/series/USSLIND

- The Leading Index calculated by St Louis Fed has, in the past, proved a reliable indicator of economic conditions.
- **Note how it fell towards - then below - zero.**

  It followed the yield curve to zero and predated recessions and stock market falls.
- A trend of lower lows and a fall below 0.5 may be a signal to reduce equity exposure

NB Only 4 data points.

- housing permits (4 measures)
- initial unemployment insurance claims
- delivery times from the Institute for Supply Management (ISM) manufacturing survey
- yield curve: 10-year Treasury bond and the 3-month Treasury bill.
- non-farm payroll employment
- average hours worked in manufacturing
- unemployment rate
- wage and salary disbursements deflated by the consumer price index (U.S. city average).

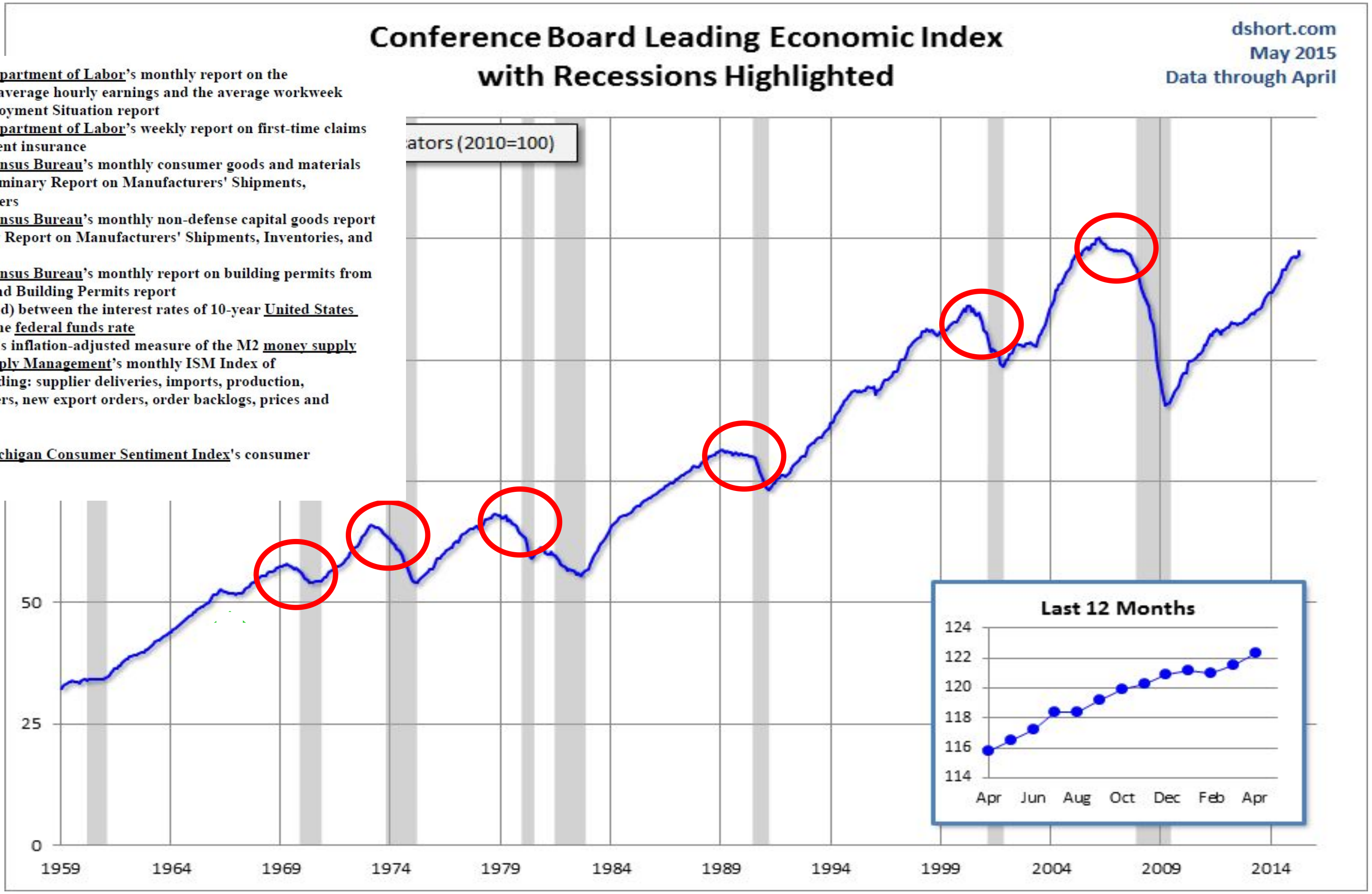
Conference Board LEI also is informative.

Doug Short monitors and publishes this on his website.

It does seem to lead. It may be useful together with the Traffic Light Indicators.

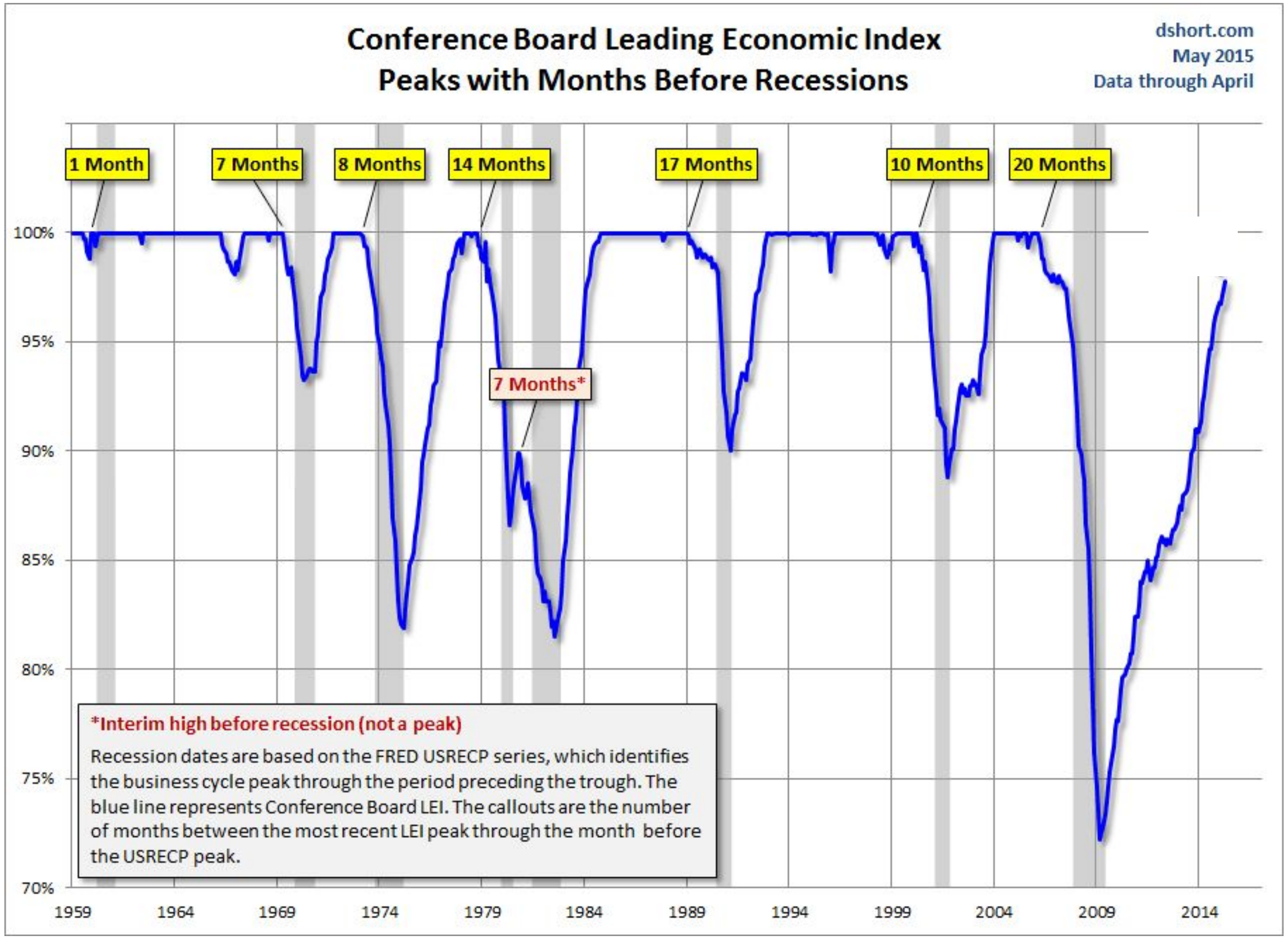
LEI determines the value of the index from the values of ten key variables.
These variables have historically turned downward before a recession and upward before an expansion.

- The United States Department of Labor's monthly report on the unemployment rate, average hourly earnings and the average workweek hours from the Employment Situation report
- The United States Department of Labor's weekly report on first-time claims for state unemployment insurance
- The United States Census Bureau's monthly consumer goods and materials report from the Preliminary Report on Manufacturers' Shipments, Inventories, and Orders
- The United States Census Bureau's monthly non-defense capital goods report from the Preliminary Report on Manufacturers' Shipments, Inventories, and Orders
- The United States Census Bureau's monthly report on building permits from the Housing Starts and Building Permits report
- The difference (spread) between the interest rates of 10-year United States Treasury notes and the federal funds rate
- The Federal Reserve's inflation-adjusted measure of the M2 money supply
- The Institute for Supply Management's monthly ISM Index of Manufacturing including: supplier deliveries, imports, production, inventories, new orders, new export orders, order backlogs, prices and employment.
- The S&P 500
- The University of Michigan Consumer Sentiment Index's consumer expectations



By how much does it lead?

Percentage off the previous peak for the index and the number of months between the previous peak and official recessions.



So, like the yield curve for market tops, which leads by 0-24 months, LEI leads by 1-20 months.

4. PE / CAPE and interest rates.

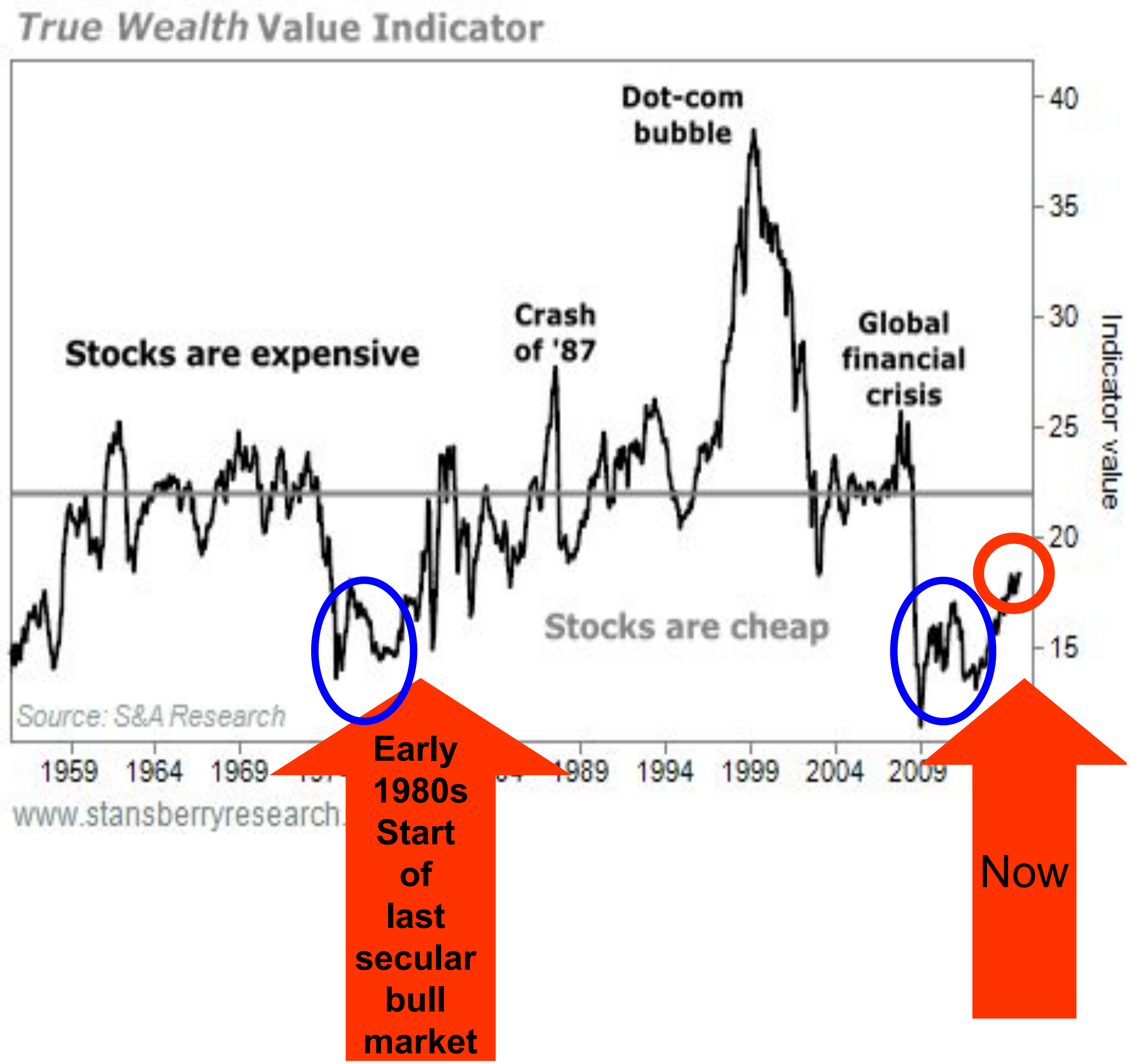
"Investors are willing to pay less for a certain level of earnings when inflation is high, and **more for a certain level of earnings when inflation is low** (and expected to remain so)". Investopedia

- PE and CAPE do not take interest rates into consideration. Whether PE or CAPE can go higher may depend on interest rates.

- This chart suggests that in a low interest rate environment, PEs can go high. But they cannot go so high in a high Interest rate environment.

- The sum of PE + interest rates can go as high as 22, according to research by Steve Sjuggerud, Florida, USA).

- Current situation resembles start of the last secular bull market in early 1980s.



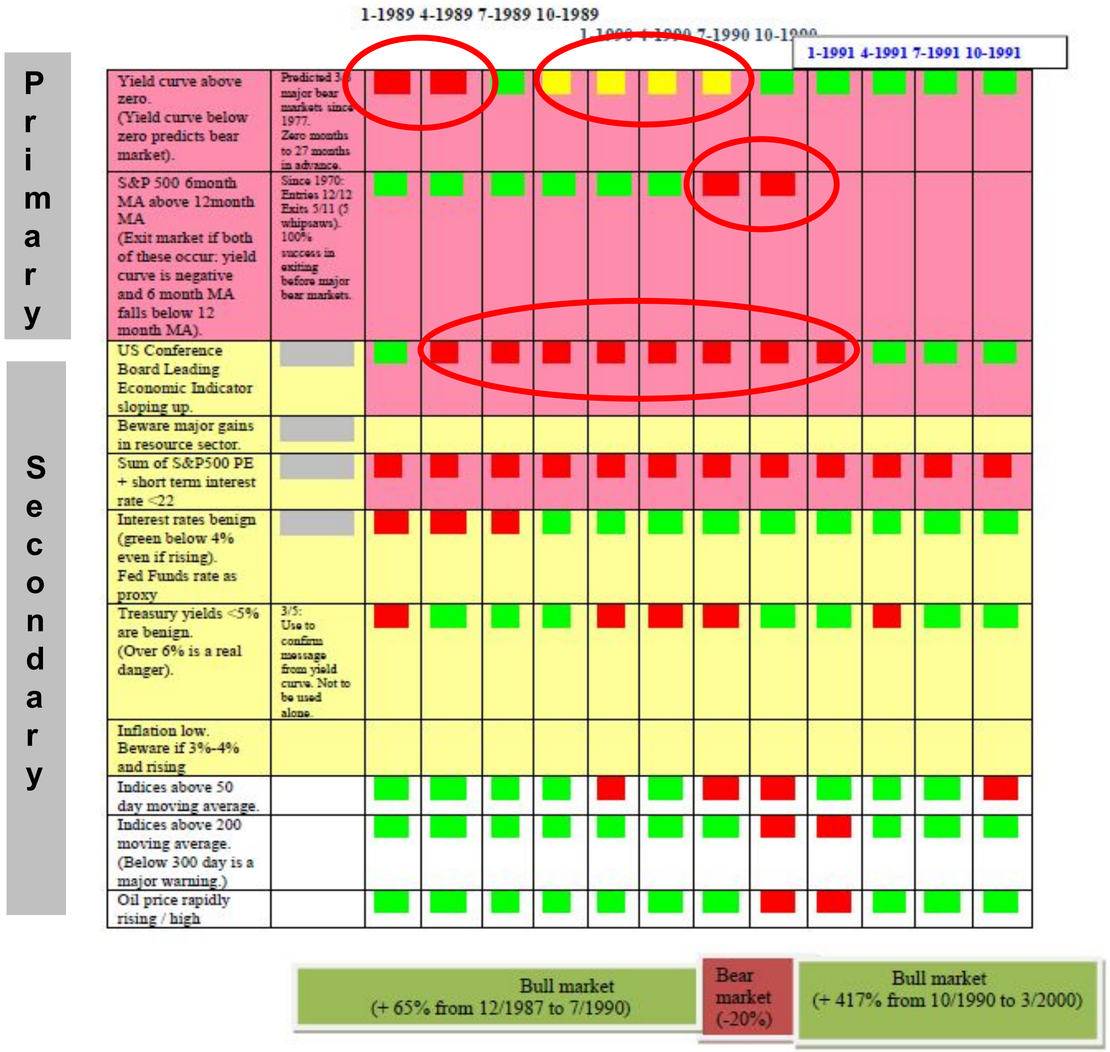
The charts on the following slides show my complete Traffic Light Indicator system from the 1980s

The top 2 boxes are the primary indictors of Yield Curve and 6 month / 12 month Moving Average crossover.

The lower boxes are secondary indicators. They provide added strength to the primary signals.

Complete record back to 1977, but subset shown here.

Traffic Light Indicators 1989-1991



Yield curve negative 1989 and July 1990. 6m/12m MA crossover mid 1989. Bear market ahead.

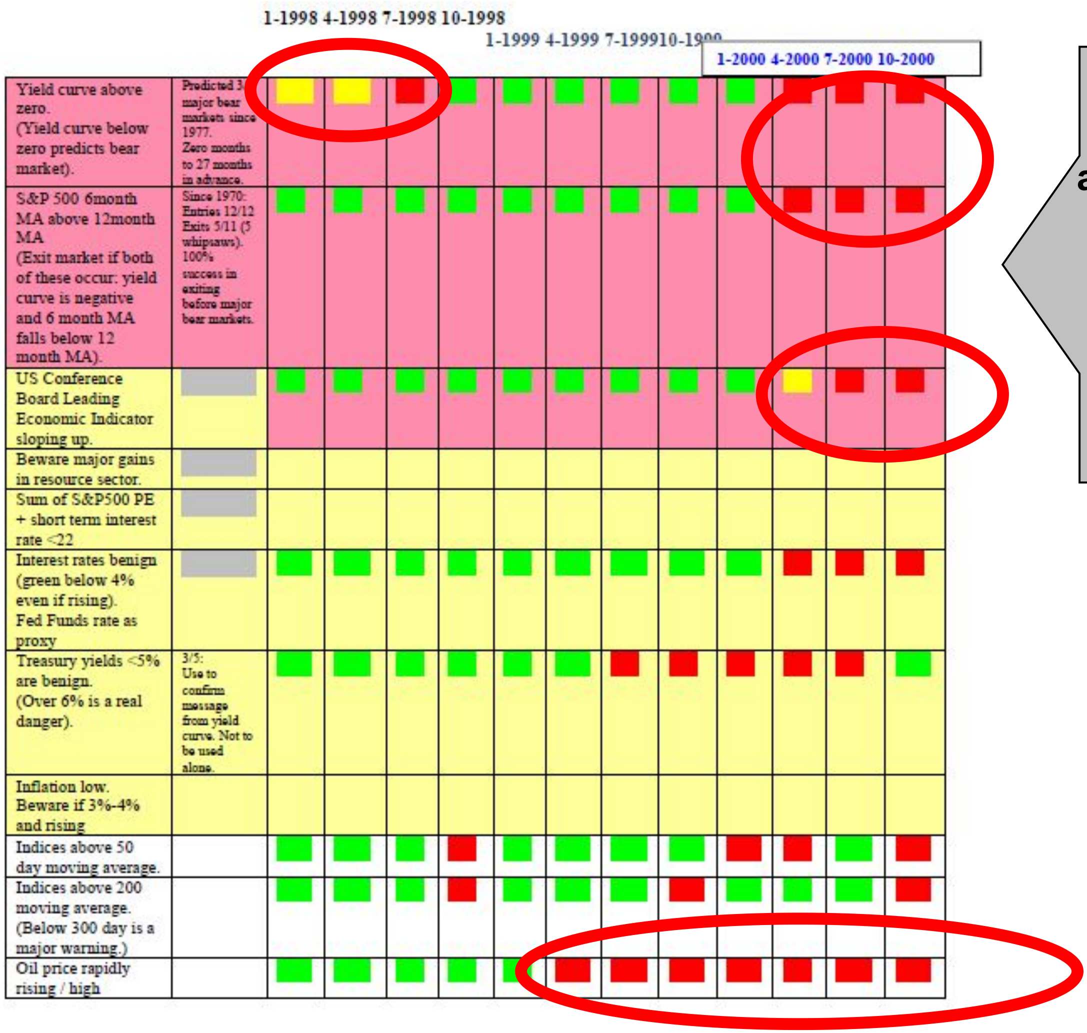
Secondary indicators 'red' too.

Traffic Light Indicators 1992-1994

		1-1992	4-1992	7-1992	10-1992	1-1993	4-1993	7-1993	10-1993	1-1994	4-1994	7-1994	10-1994
Yield curve above zero. (Yield curve below zero predicts bear market).	Predicted 3/3 major bear markets since 1977. Zero months to 27 months in advance.												
S&P 500 6month MA above 12month MA (Exit market if both of these occur: yield curve is negative and 6 month MA falls below 12 month MA).	Since 1970: Entries 12/12 Exits 5/11 (5 whipsaws). 100% success in exiting before major bear markets.												
US Conference Board Leading Economic Indicator sloping up.													
Beware major gains in resource sector.													
Sum of S&P500 PE + short term interest rate <22													
Interest rates benign (green below 4% even if rising). Fed Funds rate as proxy													
Treasury yields <5% are benign. (Over 6% is a real danger).	3/5: Use to confirm message from yield curve. Not to be used alone.												
Inflation low. Beware if 3%-4% and rising													
Indices above 50 day moving average.													
Indices above 200 moving average. (Below 300 day is a major warning.)													
Oil price rapidly rising / high													

Bull market (+ 417% from 10/1990 to 3/2000)

Traffic Light Indicators1998-2000



April 2000.
Yield curve negative again (and 1998), followed now by 6m/12m MA crossover.
Bear market ahead.
Many secondary indicators 'red' too.

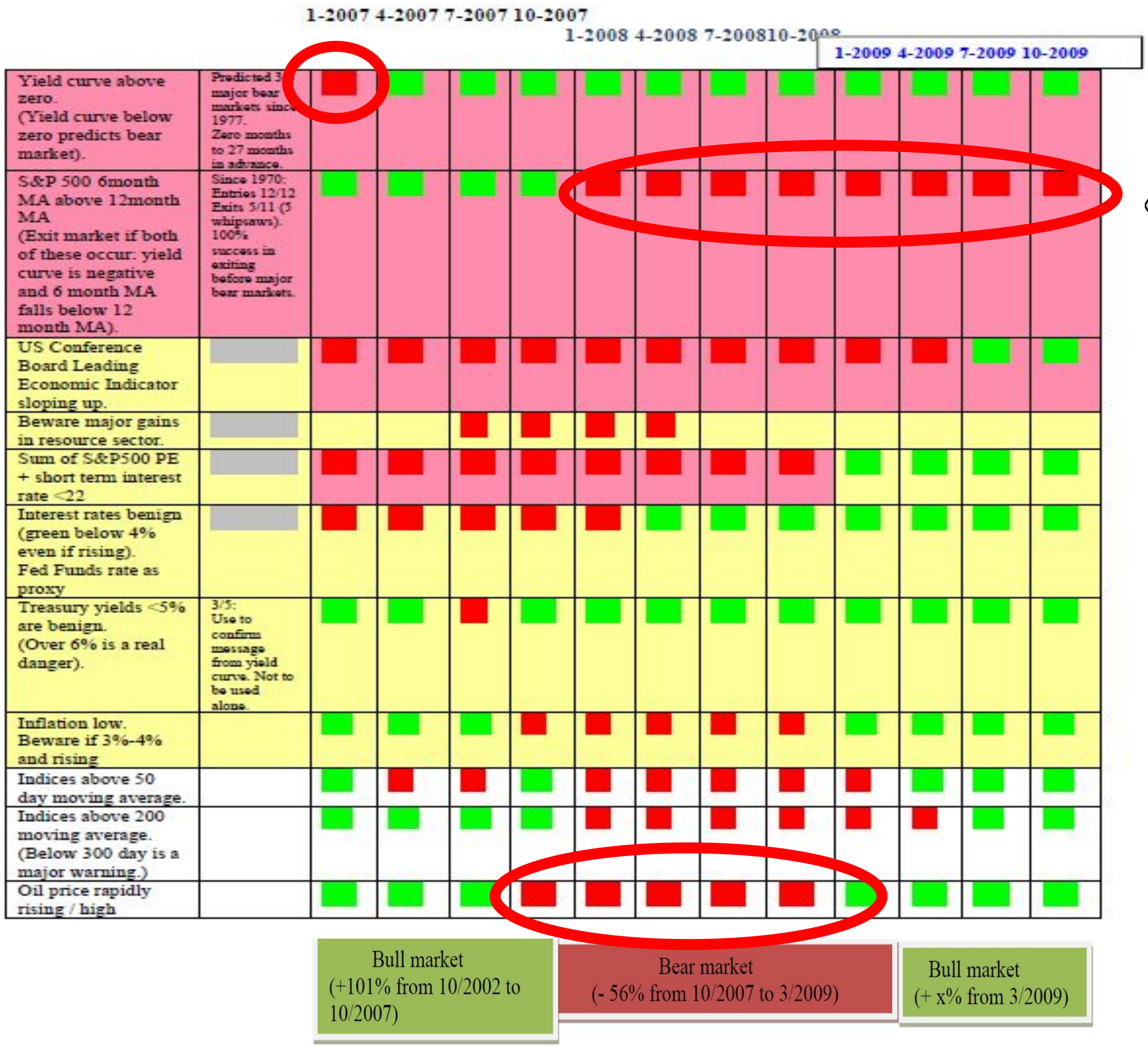
Bull market (+ 417% from 10/1990 to 3/2000)

Bear market
(- 49% from 4/2000 to 10/2002)

Traffic Light Indicators 2004-2006

Yield curve negative, but no 6m/12m MA crossover yet.

Traffic Light Indicators 2007-2009



January 2008
Yield curve negative in 2006-7, followed now by 6m/12m MA crossover.
Bear market ahead.
Many secondary indicators 'red' too.

Traffic Light Indicators 2010-11

	Accuracy	1-2010	4-2010	7-2010	10-2010	1-2011	4-2011	7-2011	10-2011
Yield curve above zero. (Yield curve below zero predicts bear market).	Predicted 3/3 major bear markets since 1977. Zero months to 27 months in advance.								
S&P 500 6month MA above 12month MA (Exit market if both of these occur: yield curve is negative and 6 month MA falls below 12 month MA).	Since 1970: Entries 12/12 Exits 5/11 (5 whipsaws). 100% success in exiting before major bear markets.								
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Indices above 50 day moving average.									
Indices above 200 moving average. (Below 300 day is a major warning.)									
Oil price rapidly rising / high									

Traffic Light Indicators 2012- 2013

	Accuracy	1-2012	4-2012	7-2012	10-2012	1-2013	4-2013	7-2013	10-2013
Yield curve above zero. (Yield curve below zero predicts bear market).	Predicted 3/3 major bear markets since 1977. Zero months to 27 months in advance.								
S&P 500 6month MA above 12month MA (Exit market if both of these occur: yield curve is negative and 6 month MA falls below 12 month MA).	Since 1970: Entries 12/12 Exits 5/11 (5 whipsaws). 100% success in exiting before major bear markets.								
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Indices above 200 moving average. (Below 300 day is a major warning.)									
Oil price rapidly rising / high									

Traffic Light Indicators 2014-2015

	Accuracy	1-2014	4-2014	7-2014	10-2014	1-2015	4-2015	7-2015	10-2015
Yield curve above zero. (Yield curve below zero predicts bear market).	Predicted 3/3 major bear markets since 1977. Zero months to 27 months in advance.								
S&P 500 6month MA above 12month MA (Exit market if both of these occur: yield curve is negative and 6 month MA falls below 12 month MA).	Since 1970: Entries 12/12 Exits 5/11 (5 whipsaws). 100% success in exiting before major bear markets.								
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Indices above 200 moving average. (Below 300 day is a major warning.)									
Oil price rapidly rising / high									

5. Summary: Current market situation

- Yield curve is positive - and may be steepening.
- Conference Board LEI is positive with higher reaction lows and higher reaction highs.
- Major markets have broken out above the 'secular bear box' to new all-time highs.
- PE + interest rate chart pattern resembles start of the 1980s secular bull market.
- Energy prices have fallen dramatically - perhaps for ever?
- Approaching end of the 30 year secular bull market in bonds
  - a vast amount of money will move out of bonds - sometime - into equities.
  - risk this also could initially cause stock-market turbulence re liquidity issues?

<u>And</u> the Third Industrial Revolution technologies are driving accelerating change!

They will be a key driver of the coming secular bull market.

Q & A