Fasanara Investor Call

October 11th 2017

FASANARA CAPITAL

MARKET FRAGILITY

HOW TO POSITION FOR TWIN BUBBLES BUST

Financial booms do not go on indefinitely; they can fall under their own weight.

Claudio Borio, BIS, 2017

The first casualty of war is truth.

Hiram Johnson,
US Senate, 1917

Be greedy when others are fearful, and fearful when others are greedy

Warren Buffett

Only when the tide goes out do you discover who's been swimming naked

Warren Buffett

If you are waiting for the catalyst to show itself, you are going to be selling at a lower price.

Jeff Gundlach, DoubleLine, 2017

When the train of history hits a curve, the intellectuals fall off

Karl Marx

Markets have forgotten how much of current valuations is due to QE, at a time in which QE is being phased out

F.C.

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OUR PREVIOUS NOTES ON THE SUBJECT…

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FAKE MARKETS: HOW ARTIFICIAL MONEY FLOWS KILL DATA DEPENDENCY, AFFECT MARKET FUNCTIONING AND CHANGE THE STRUCTURE OF THE MARKET
http://www.fasanara.com/03052017

THE POSITIVE FEEDBACK LOOP BETWEEN FAKE MARKETS AND INVESTORS CREATES SYSTEM INSTABILITY, AND DIVERGENCE FROM EQUILIBRIUM
http://www.fasanara.com/25072017

Here we discuss **ARTIFICIAL FLOWS**
https://www.cnbc.com/2017/06/28

Here we discuss the **EQUITY BUBBLE**
http://www.fasanara.com/cookie-24082017

Here we discuss the **BOND BUBBLE**
http://www.fasanara.com/cookie-11092017

Here we discuss **THE TRAP OF SHORT VOL ETFS**
http://www.fasanara.com/cookie-20072017

WHY IS THIS A MARKET BUBBLE

FINANCIAL BOOMS DO NOT GO ON INDEFINITELY; THEY CAN FALL UNDER THEIR OWN WEIGHT

Claudio Borio, BIS, 2017

TWIN BUBBLES

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10 YEARS OF MASSIVE PASSIVE PUBLIC FLOWS BY MAJOR CENTRAL BANKS (TOGETHER WITH NIRP POLICIES) LED TO FEW YEARS OF LARGE-SCALE PASSIVE FLOWS BY A PRIVATE SECTOR MADE OF ETFS, RISK PARITY FUNDS, VOL FUNDS, TREND-CHASING ALGOS

TWIN BUBBLES IN ASSET MARKETS

EQUITY BUBBLE
(Especially in the US)

- *Compared to economic growth, the S&P is more expensive than ever before*
- *Fasanara's "Peak Peg ratio" shows a level higher than the notorious tech bubble in year 2000*
- *Oftentimes, we are told that stocks are not so expensive when compared to bonds, and their minuscule yields*

BOND BUBBLE
(Especially in Europe)

- *Bonds are in a Bubble themselves*
- *Real rates are now more negative than at any point in modern financial history.*
- *Measured against trend growth, the expensiveness of govies is off-the-chart*
- *Fasanara's 'Real Rate to Growth' ratio' shows a major disequilibrium*

1. We have bubbles in major equities and major bonds at the same time, **AT A MOMENT WHEN EMERGENCY POLICYMAKING AND ULTRA-LOOSE MONETARY POLICY ARE BEING PHASED OUT** due to:
   - ✓ Capital destruction on core EU savers after inflation resurrected
   - ✓ Capacity constraints (no more bunds to buy past mid-2018)
   - ✓ Income inequality threatening to trigger regime change
2. The speed at which risk premia is re-built into the system will determine the **ODDS OF A DISORDERLY ADJUSTMENT** and one cannot just assume - as complacent markets do today - that it will be smooth sailing all the way through
3. The bond market says nothing much will change in the next two years. We doubt that the adjustment can take that long and we expect it to cause **POTENTIAL DEEP RE-PRICINGS ALONG THE WAY**.

MEASURING THE EQUITY BUBBLE

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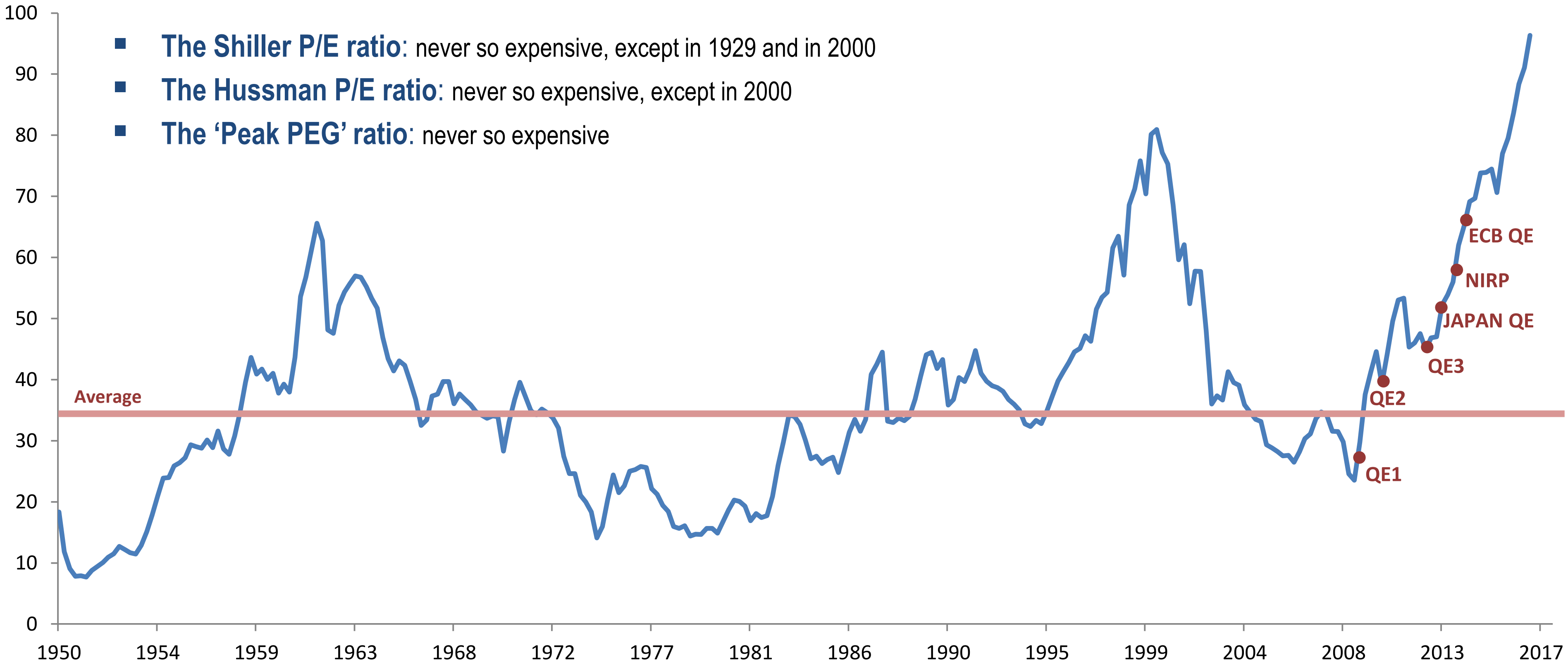
THE 'PEAK PEG' RATIO: price to peak earnings, adjusted for trend growth, on the S&P



Source: Fasanara Capital ltd

Data Set:

- S&P quarterly price data, source Bloomberg
- Corporate Profits After-Tax, quarterly data, average of the two highest quarters over the previous 10 years, source FED St Louis
- US Real GDP % Change, rolling 10-year average, quarterly data, source IMF

TODAY IS SIMILAR TO ALL 13 BUBBLES BEFORE..

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THIS MAY NOT BE A MARKET BUBBLE, BUT IT SHOWS STARK SIMILARITIES TO ALL PREVIOUS 13 HISTORICAL PARALLELS OF PRICE COLLAPSES

- Robert Shiller: *"The US stock market today looks a lot like it did at the peak before all 13 previous price collapses. That doesn't mean that a bear market is imminent, but it does amount to a stark warning against complacency."*

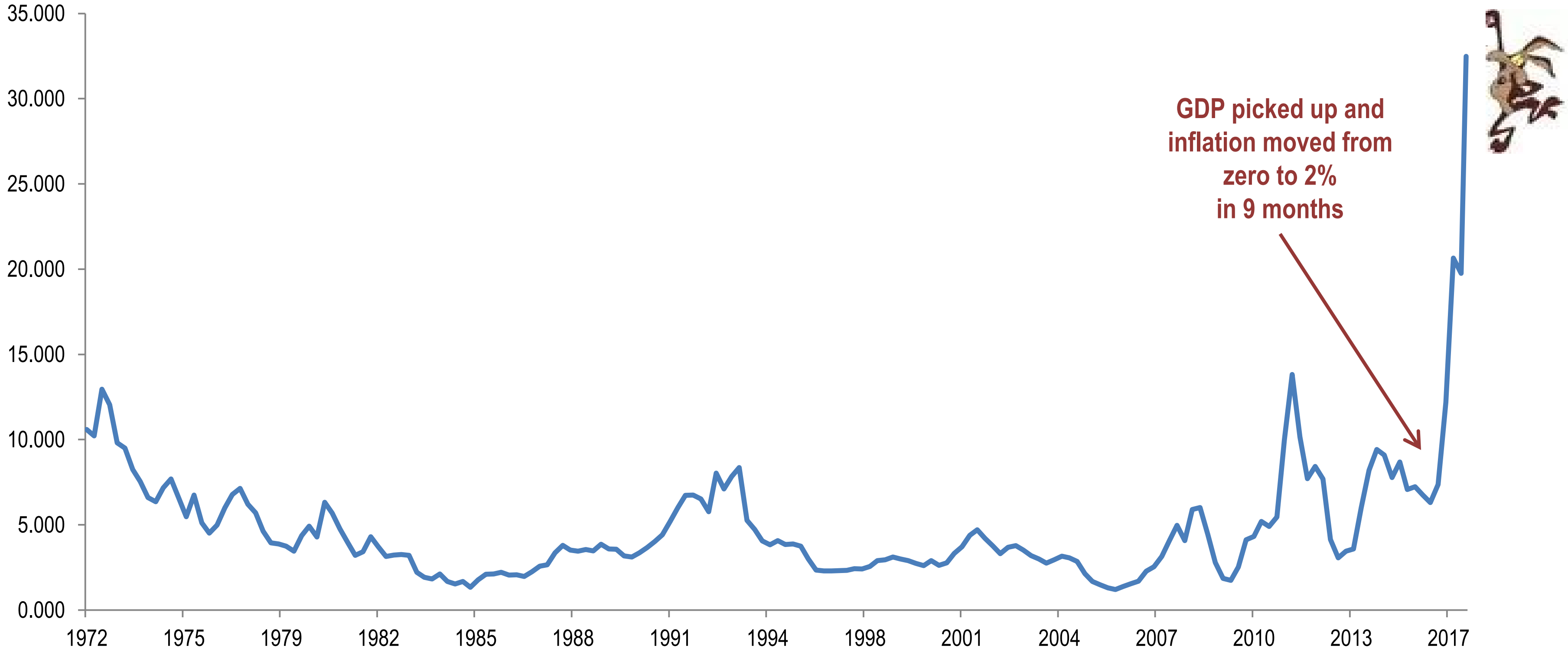
WE HEAR THIS IS NO BUBBLE BECAUSE OF HIGH EARNINGS AND LOW VOLATILITY. PROF SHILLER NOTES THAT PAST MARKET PEAKS TEND TO SHOW HIGH EARNINGS GROWTH AND LOW MARKET VOLATILITY

- Rising Earnings: *"peak months before past bear markets also tended to show high real earnings growth: 13.3% per year, on average, for all 13 episodes.* ***Moreover, at the market peak just before the biggest ever stock-market drop, in 1929-32, 12-month real earnings growth stood at 18.3%."***

- Lower volatility: *"**stock-price volatility was lower than average in the year leading up to the peak month preceding the 13 previous US bear markets**, though today's level is lower than the 3.1% average for those periods. At the peak month for the stock market before the 1929 crash, volatility was only 2.8%.*

MEASURING THE BOND BUBBLE

The REAL RATE to GROWTH ratio, on German Bunds



Source: Fasanara Capital ltd
Data Set:
- German CPI YoY, quarterly data, source OECD
- German 2year government bond yield to maturity, quarterly data, source Bloomberg
- German GDP YoY %Change, rolling 5-year average, quarterly data, source IMF

MEASURING THE BOND BUBBLE

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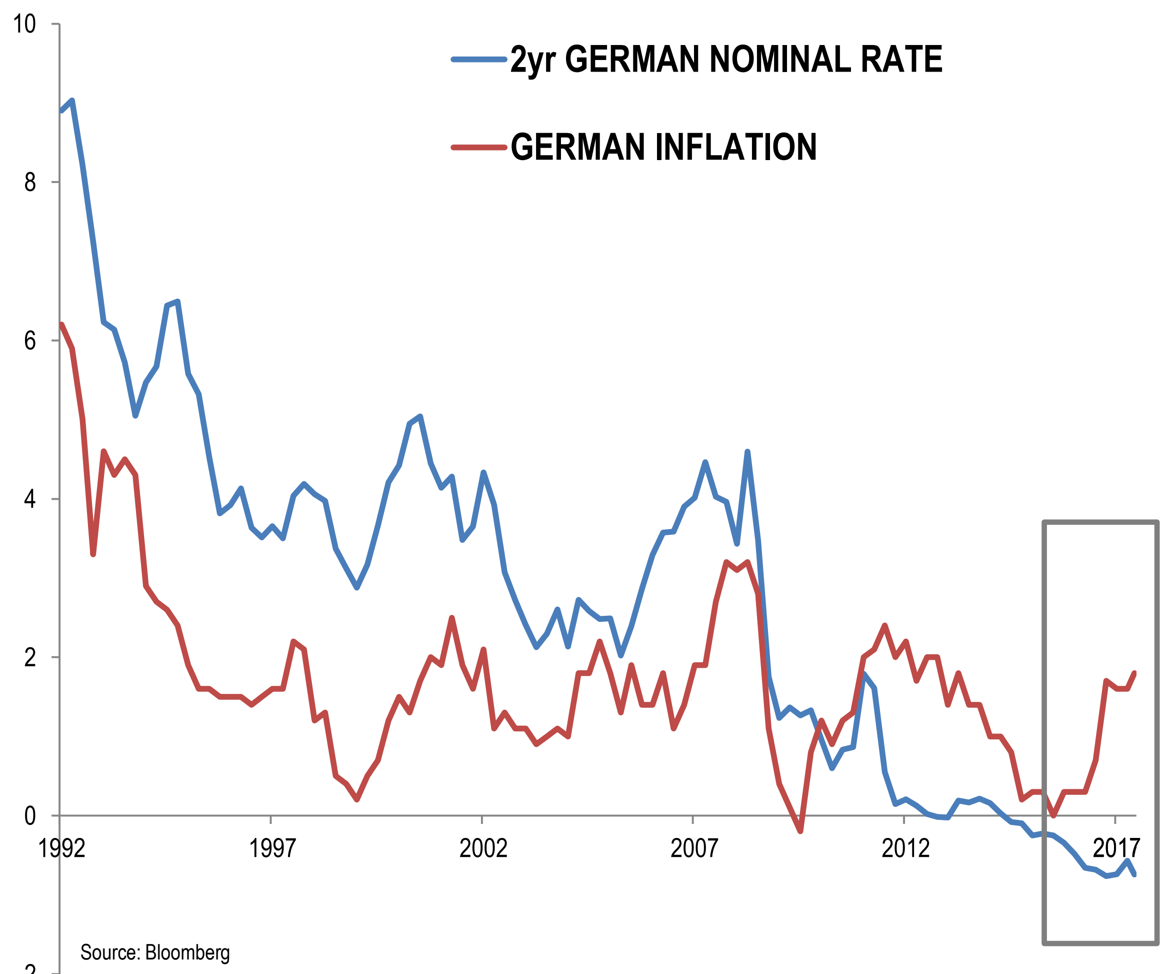
REAL RATES DIPPED DOWN RECENTLY AS INFLATION RESURRECTED FROM ZERO, WHILE NOMINAL RATES HELD STEADY

2-Year Yields

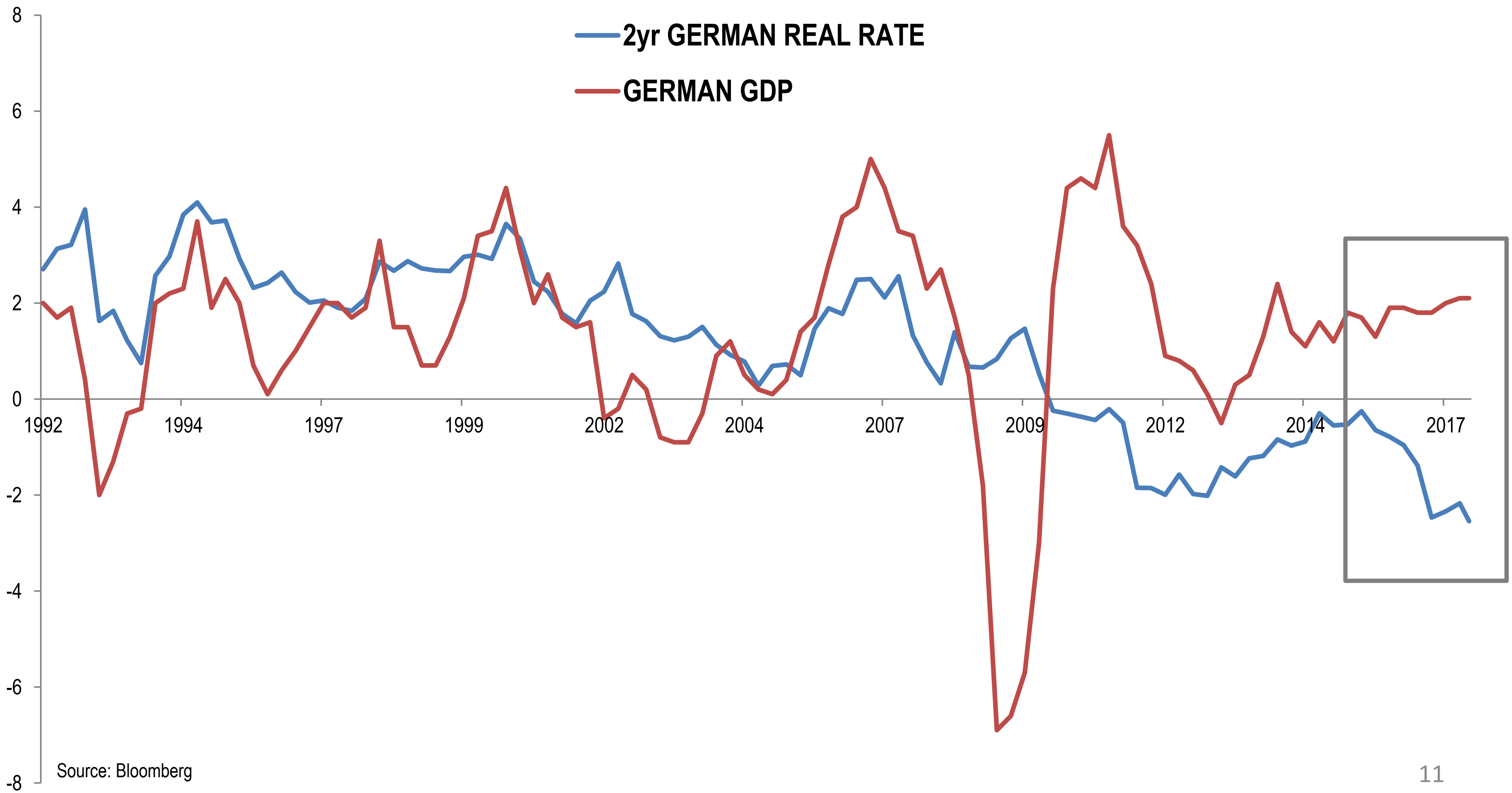
Country	*2-year Yields*	*CPI*	*Real Yields*
SWEDEN	-0.683%	2.20%	-2.880%
UK	0.164%	2.60%	-2.436%
GERMANY	-0.749%	1.67%	-2.422%
BELGIUM	-0.549%	1.78%	-2.330%
DENMARK	-0.646%	1.49%	-2.139%
NETHERLANDS	-0.691%	1.33%	-2.021%
SPAIN	-0.356%	1.55%	-1.904%
FRANCE	-0.589%	0.72%	-1.307%
FINLAND	-0.699%	0.53%	-1.227%
ITALY	-0.073%	1.10%	-1.172%
SWITZERLAND	-0.815%	0.30%	-1.115%
NORWAY	0.596%	1.53%	-0.935%
USA	1.138%	1.73%	-0.590%
JAPAN	-0.148%	0.40%	-0.548%
IRLAND	-0.512%	-0.20%	-0.314%
POLAND	1.697%	1.80%	-0.108%
CANADA	1.237%	1.16%	0.073%
CHINA	3.573%	1.40%	2.173%
GREECE	3.174%	1.00%	2.175%
RUSSIA	7.820%	3.86%	3.955%
BRAZIL	8.265%	2.71%	5.553%

As of: 29-08-2017 Source: OECD Data - ©Fasanara



MEASURING THE BOND BUBBLE

REAL RATES DIPPED FURTHER DOWN RECENTLY, CREATING THE MOST DISCONNECT TO GROWTH RATES IN NON-CRISIS MARKETS IN AGES



Source: Bloomberg

VOLATILITY INDEX BOND + EQUITY: NEW ALL-TIME LOWS

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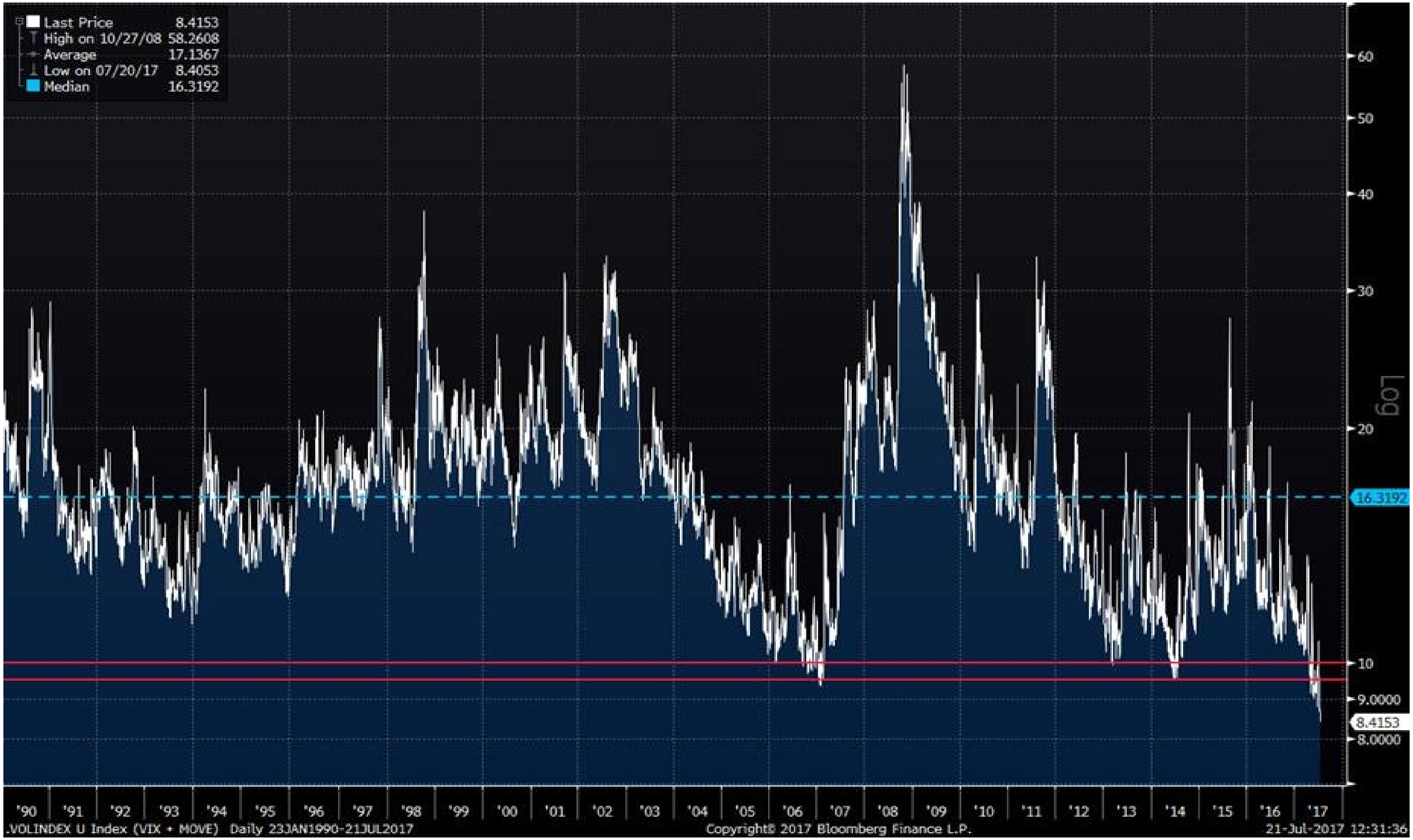
MOVE + VIX, REBASED, LOGARITHMIC SCALE



Source: Bloomberg, Fasanara Capital

HOW DID WE GET HERE

MARKETS HAVE FORGOTTEN HOW MUCH OF CURRENT VALUATIONS IS DUE TO QE, AT A TIME IN WHICH QE IS BEING PHASED OUT

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IT'S THE FLOWS, STUPID!

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- **THE DRIVERS OF SECULAR STAGNATION ARE KNOWN:** Falling Productivity of Credit on Excess Indebtedness, Disruptive Technologies and Jobless Growth (the Amazon effect), Globalization & China, Demographics & ageing Baby Boomers. **THE STRUCTURAL DEFLATION THAT ENSUED PROVOKED A EXTRAORDINARY, NON-CONVENTIONAL MONETARY POLICY: QE, ZIRP, NIRP.**

- Collateral effects to such policy are inflating asset bubbles. **$15 TRILLIONS** printing **FROM MAJOR CENTRAL BANKS** in 8 years provoked assets rising and volatility collapsing, both to unprecedented levels in humankind

- **MULTIPLE EXPANSION JUSTIFIED 110% PLUS OF STOCK ADVANCES FOR SEVERAL YEARS**. The pick-up in earnings over the last 12 months helped justify some of the advance, although, as SocGen notes, ''EPS levels on the MSCI are merely back to where they stood in November 2014, when MSCI was 15% lower; and overall profits have yet to exceed 2008 levels, when the index was 30% lower''.

- **PASSIVE MONEY FLOWS** have relentlessly grown over recent years, to be the second biggest buyer: a juggernaut of **$8 TRILLIONS** global firepower(*), long-only, mostly fully invested, often accounting for 90%+ of equity daily flows in the US. This number is arrived at by summing three categories of passive-type investor vehicles: (i) ETFs/ETPs and index funds, (ii) risk parity and volatility-driven funds, (iii) trend-chasing algos.

Source: *ETFs/ETPs at $4trn after leverage, according to Morningstar, Strategic Insight, Risk-Parity funds or Volatility-driven strategies at $3.75trn after leverage, according to RBC, trend-following algos/CTA at $0.5trn*

SECULAR STAGNATION HYPHOTESIS

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DEPRESSED ECONOMY: MAIN DRIVERS

1 FALLING WORKING POPULATION / FALLING PRODUCTIVITY RATES

Demographics affect long-term anti-cyclical growth. An ageing population is much of a global issue (including China), although it is clearly more visible in countries like Japan, Italy and Germany. In Japan in particular, the depressed economy of the 90s owed much to the combination of falling fertility rates (from 1.8 children per woman from 1980 to 1.4 from 2010) and increased life expectancy. That, coupled with Japan's stance over no immigration, no women at work, no job cuts and no wages cut, helped fuel 24 years of depressed economy (Japan's' lost decades'). Undoubtedly, a falling working population played a big role

2 OVER-INDEBTEDNESS

As inflation moved lower, debt ratios went higher for most large economies globally. Debt diverts resources away from productive investments into sterile debt service. Even at minimal interest rates, such diversion is material. Over-indebtedness constraints the wings of productivity and growth from opening up

3 DIMINISHING EFFECTS OF MONETARY PRINTING AND THE CREDIT CYCLE / FALLING PRODUCTIVITY OF CREDIT

This is visible when looking at the 40-year chart of 'Money Multiplier' (how many $$$ of commercial bank money for any $ of Central Bank money, how many $$$ of money supply for any $ of monetary base, the famous $$$ lent to the real economy) and 'Velocity of Money' (how many $$$ of GDP produced for any $ of loans extended to the real economy). The end of the Bretton Woods System triggered by Nixon's New Economic Policy in August 1971, unleashed the full power of the fractional-reserve banking system, and the beauty of credit expansion and its multiplier effect on growth and productivity. Has the credit-based expansion now run into some kind of a dead end? Has it permanently gone into exhaustion mode, or are there ways to reigniting the virtuous cycle? The impossibility of exponential growth in a finite environment makes us propend to think it cannot

4 TECHNOLOGICAL ADVANCES

Striking difference to past occurrence of secular stagnation. When Alvin Hansen in 1938 referred for the first time to 'secular stagnation' he enlisted 'low technological advances' as a key driver. Today, in contrast, we believe we are in the middle of a technological revolution (Google, Apple, Amazon, 3-D printing etc), reshaping the world we live within. However, incidentally, such technological revolutions calls for

- ✓ *Shredding jobs (Nike employed 106k less people in 2013 due to automation, WhatsApp was a 50-employee company when it was valued as much as Nokia, an employee- and plants-rich company)*
- ✓ *Reducing unit production costs to levels where one can live almost without working or working less (even sequencing the human genome used to cost $ 2.5bn in 1990, it now costs $ 750 to be produced)*
- ✓ *Increasing income inequality and further concentrating wealth into elites, while reducing the economy's capital intensity*

Less labour, but also less capital. Less investments needed

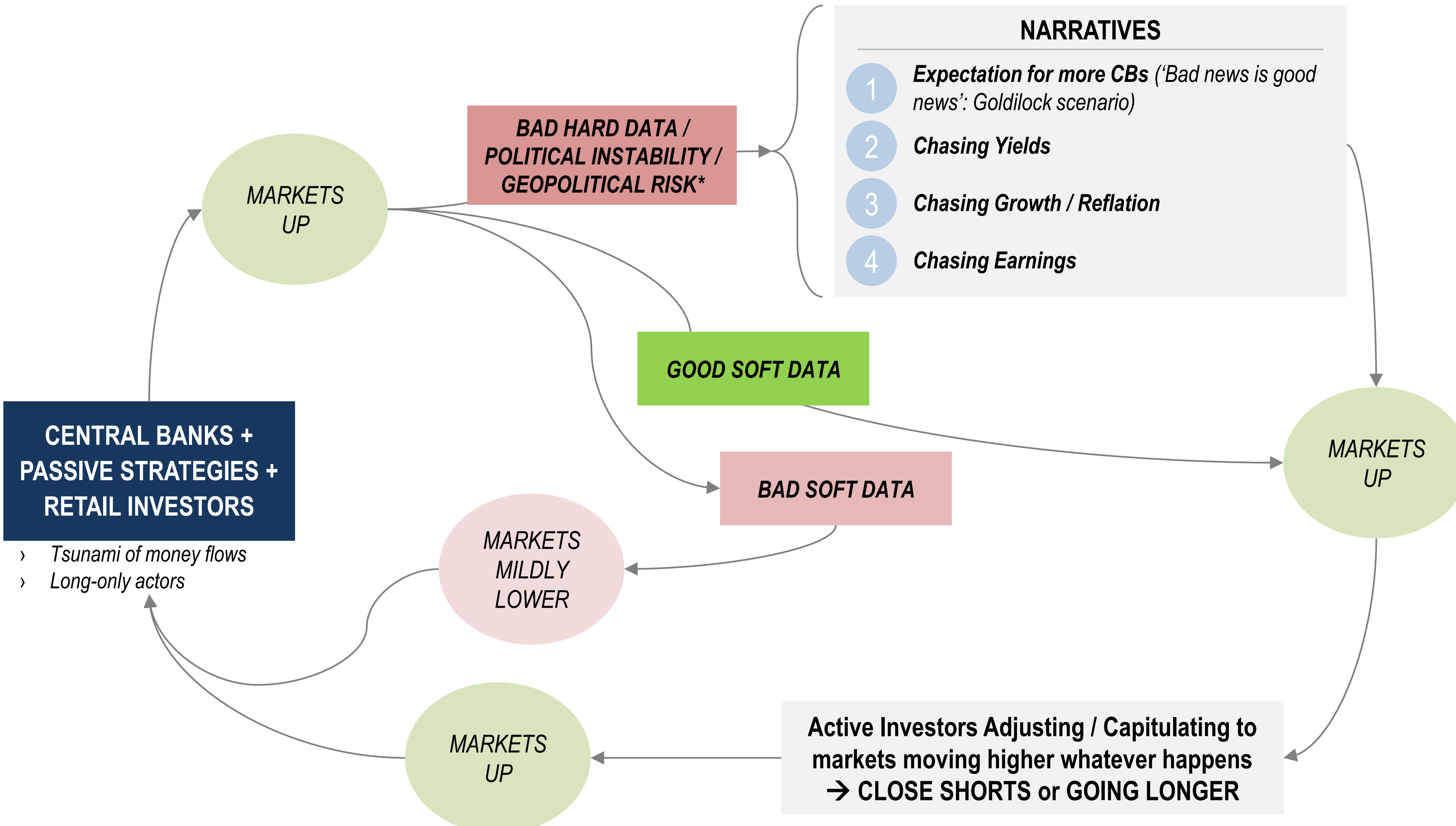
CHANGING MARKET STRUCTURE – MARKET FRAGILITY

BE GREEDY WHEN OTHERS ARE FEARFUL, AND FEARFUL WHEN OTHERS ARE GREEDY

Warren Buffett

FAKE MARKETS' CYCLE

HOW NARRATIVES AND MONEY FLOWS TRUMP HARD DATA. WHAT IMPACT ON ACTIVE INVESTORS



* Bad hard data: US Q1 GDP shocker, EU unemployment. Political instability: populism on election, EU break-up risk. Geopolitical risk: North Korea, Syria.

CHASING NARRATIVES

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HOW NARRATIVES EVOLVE TO COVER FOR FAKE MARKETS

1. Chasing Yields

- *Financial repression and negative yields pushed investors into riskier assets*
- *Equities still bought at whatever multiples of cyclically-adjusted earnings*

2. Chasing Growth

- *As of July last year, yields bottomed out and started rising*
- *Following Trump elections, global equity and EM FX rallied in expectation of 'Trumpflation' and fast GDP recovery*
- *Soft Data advance impressively to price in the recovery to come, invisible in Hard Data*

3. Chasing Earnings

- *'Trumpflation' gets downgraded, Soft Data collapse, flattening out on hard data, which never moved*
- *Geopolitical red lines are drawn on concrete (not sand), and a nuclear war is threatened in North Korea*
- *Focus moves to earnings, the one bit of information that came out well, the dominant data and the only one that matters*

4. ?

WHAT WILL MARKETS CHASE NEXT, IF EARNINGS DO NOT HOLD?

- *Earnings may fade and a new narrative be needed*
- *Since 2009, real profits growth was the slowest in 30 years, margins stand at a 70-year record levels on rates being at rock-bottom historical levels (and now rising)*
- *There is an ageing working population, slow productivity and global political instability / populism*

POSITIVE FEEDBACK LOOPS

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CHANGING MARKET STRUCTURE: A REVIEW OF MARKET PLAYERS

MASSIVE PUBLIC PASSIVE FLOWS

1. $15tn printed in last 10 years by major central banks, $3.6tn just in 2017
2. Trending bull markets
3. Financial repression of volatility

POSITIVE FEEDBACK LOOPS with PRIVATE INVESTORS
$8tn of which is now passive

creates ***SYSTEM INSTABILITY*** *and* ***DIVERGENCE FROM EQUILIBRIUM***

- ETF and Passive Index Funds
- Risk Parity & Vol target Funds
- Short Vol ETF
- Trend Algos
- ARP and Factor Investing
- Machine Learning and AI
- Active Investors, Stop Worry, Go With the Flow
- EXIT: Value Investors, Bears

1. Massive High-Beta Long-Bias in disguise
HOT MONEY FLOWS
2. Crowding in Private Passive Flows
3. Illusory Liquidity
4. An unstable equilibrium is state in which a small disturbance will produce a large change

UNSTABLE EQUILIBRIUM, MARKET FRAGILITY

1. LARGE POTENTIAL FOR HOT MONEY FLOWS / WEAK HANDS TURNING WHEN MOMENTUM DOES
2. UNCERTAIN DIVERSIFICATION, CROWDING EFFECT, NARROW EXITS
3. UNCERTAIN LIQUIDITY
4. SMALL DISTURBANCE ENOUGH TO PROVOKE LARGE ADJUSTMENT
5. …And now the liquidity tide that created it all starts petering out…

TIPPING THE BALANCE OF UNSTABLE EQUILIBRIUM

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More generally, these are potential risk triggers popping Twin Bubbles:

1. **LIQUIDITY TIDE PETERING OUT**
   The Global liquidity tide from Central Banks is soon to be past its peak. Flows work in reverse, for the first time in 10 years. First real crash test for momentum.

2. **RATES RISING.** It started raining. Over-indebtedness may have closed on to Minsky point.

3. **(IL)LIQUIDITY EVENT.** The liquidity in markets is deceptive and ephemeral, likely to dissipate as markets move lower.

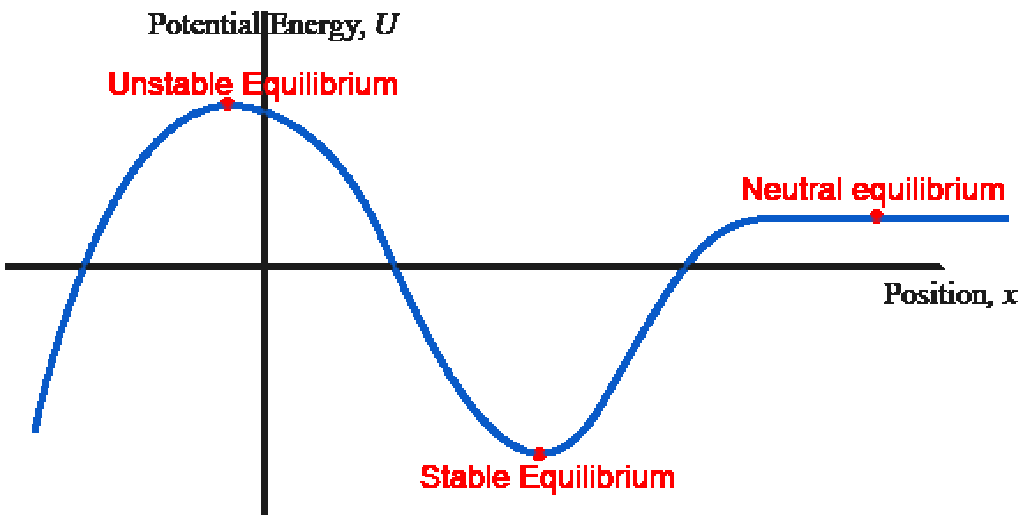
4. **VOLATILITY SPIKING.** Volatility is like a balloon held underwater. Its rise may trigger a chain effect across major market players (Risk Parity funds, Short Vol ETFs, Low Vol ETF, momentum strategies, etc.)

5. **GEOPOLITICS / POLITICS.** From populism in developed countries (Germany, Catalonia, Italy, Brexit, Trump latest cases in point) to confrontations in North Korea / Middle East (end of Pax Americana)

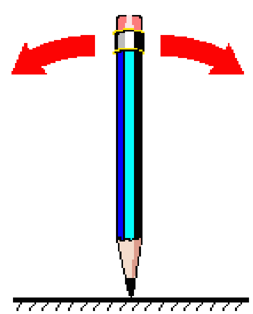
UNSTABLE EQUILIBRIUM

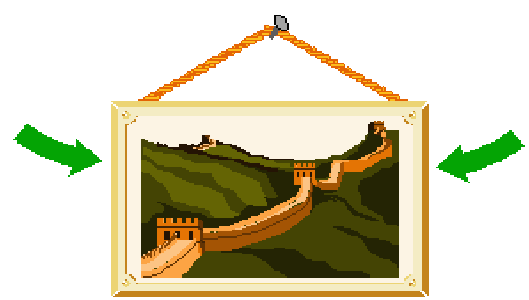
AN EQUILIBRIUM CAN BE STABLE OR UNSTABLE

A body is said to be in unstable equilibrium, if it does not return to its original position after a small disturbance. The small disturbance can instead trigger outsized moves.



TODAY'S MARKETS ARE PENCILS, NOT PAINTINGS





A LONG LIST OF MARKET ANOMALIES

THE FIRST CASUALTY OF WAR IS TRUTH

Hiram Johnson,

US Senate, 1917

WHAT WOULD WE SEE IF WE WERE RIGHT...

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Assume for a second this is indeed a major market bubble, and an unstable equilibrium about to snap..
What would you be on the lookout for as confirming signs?

- **CENTRAL BANKS PANICKING** at the first signs of market weakness..
- A growing list of **DISLOCATIONS** across markets.. Happening with increasing frequency..
- Price discovery impaired in multiple ways.. Arbitrage plays ineffective.. Further **DIVERGENCE FROM EQUILIBRIUM**
- **WARREN BUFFETT MOVING TO CASH** for record amounts..

CENTRAL BANKS PANICKING AT THE FIRST SIGNS OF MARKET WEAKNESS

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Asian stocks jump on Yellen easy-money remarks - CBS News
https://www.cbsnews.com/news/asian-stocks-jump-on-yellen-easy-money-remarks/
12 Feb 2014 - TOKYO - Global **stocks** were higher Wednesday after the new head of the Federal Reserve vowed a continuation of low interest rates. Stronger ...

Thank you, Janet Yellen! Stocks surge after Fed statement - Mar. 18 ...
money.cnn.com/2015/03/18/investing/stocks-markets-surge-federal.../index.html
18 Mar 2015 - The **stock** market soared after the Federal Reserve suggested that rate hikes are ...
Related: This is the U.S. dollar's fastest **rise** in 40 years.

Stocks jump as oil prices rise and Fed chief Janet Yellen calms investors
www.latimes.com/business/la-fi-financial-markets-20160606-snap-story.html
6 Jun 2016 - **Stocks** jumped Monday after Federal Reserve Chairwoman Janet **Yellen** again managed to soothe investors' jangled nerves. The Standard ...

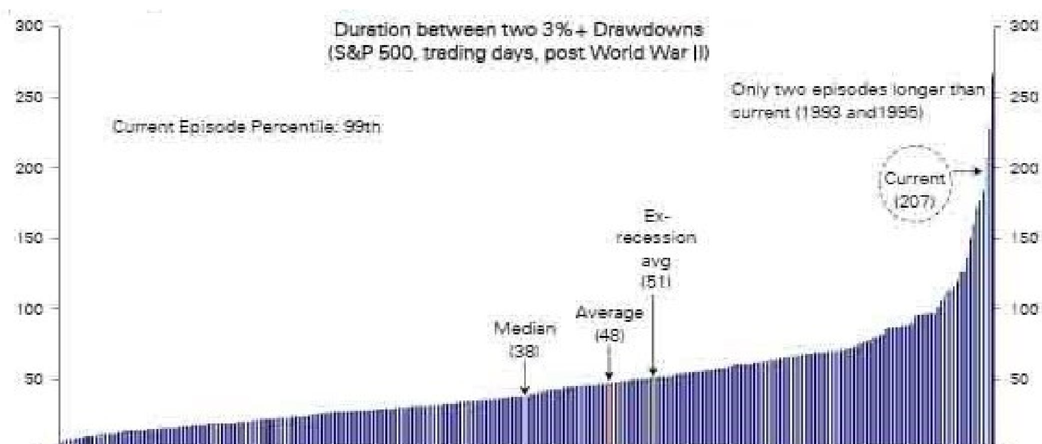
World Stocks Soar to Record Highs After Yellen's Upbeat Remarks ...
fortune.com/2017/02/15/msci-usd-dax-ftse-yellen/
14 Feb 2017 - World **stocks** hit 21-month peaks and the dollar rose for the 11th straight ... Reserve Chair Janet **Yellen** flagged a possible interest rate **rise** next ...

"FED Became Slave to the S&P", [Kevin Warsh]

Stocks rise, US dollar down after Yellen signals rate rise | Reuters
https://www.reuters.com/article/us-global-markets-idUSKBN16A023
3 Mar 2017 - Wall Street **stock** indexes and the U.S. dollar both posted gains for the week on Friday after Federal Reserve Chair Janet **Yellen** confirmed ...

Australia Stocks Jump on Yellen's Dovish Testimony | Fox Business
www.foxbusiness.com/features/.../australia-stocks-jump-on-yellens-dovish-testimony.ht...
13 Jul 2017 - Australian **shares** rose strongly on Thursday, mirroring other Asian-Pacific markets, after Federal Reserve Chairwoman Janet **Yellen** sounded ...

ALMOST 10 MONTHS WITHOUT A 3% SELL-OFF... THE LONGEST PERIOD SINCE WW2



Source: Haver, Deutsche Bank

MARKET ANOMALIES

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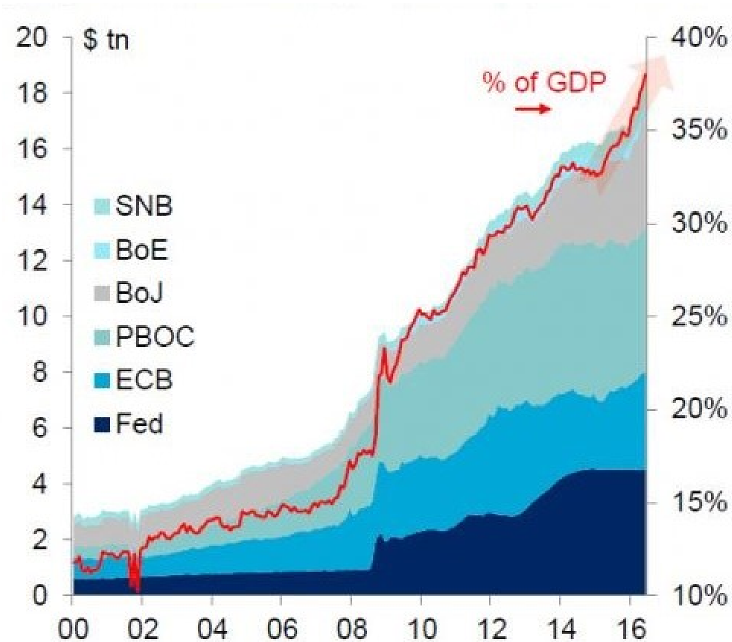
GIVEN THE FREQUENCY WITH WHICH MARKET ANOMALIES COME UP, A POINT OF ADJUSTMENT MAY BE APPROACHING

- The **BANK OF JAPAN NOW OWNS ALMOST 80% OF THE ENTIRE JAPANESE ETF** equity market. The BoJ will likely be the major shareholder in 55 companies by the end of 2017. BOJ holds 39% of Japan's govt debt, equates to 79% of Japan's GDP
- The **SWISS NATIONAL BANK BOUGHT $ 100BN BETWEEN US AND EUROPEAN STOCKS**. It now owns 26 million Microsoft shares
- The listed stock of the **SWISS NATIONAL BANK ROSE 120% IN THE LAST 2 MONTHS**; up almost 400% in 1 year
- **USD-DENOMINATED RUSSIAN BOND YIELD TRADING BELOW TREASURY YIELD**, as ETF buy indiscriminately and irrespective of valuations
- **ARGENTINA** uses defaults as a recurrent macro-prudential policy, to tackle debt overloads from time to time. Most recently in 2014, 2001, 1989. Yet, this year, the country **ISSUED A 100-YEAR BOND FOR 7.9% YIELD**. Red-hot demand. It was oversubscribed 3.5x.
- **LEVERAGE TO BUY STOCKS AT THE NYSE (MARGIN DEBT) HIT AN ALL-TIME RECORD** of $549bn this year (read), and went up in lockstep with the S&P as both doubled up since 2009.
- Is it 2007 all over again in CLOs? No, way better than that. **COVENANT-LITE LOANS ARE OVER DOUBLE WHAT THEY USED TO BE IN 2007**. Assuming 2007 was a credit bubble and covenant-lite was one of the thermometers taking temperature, this is twice a bubble
- Anomalies in ETF land - **CLOSE TO 90% OF EQUITY FLOWS** (from 7% 15 years ago) **ATTRIBUTABLE TO PASSIVE FUNDS** or ETFs

DISTORTIONS TO BOND MARKET

- BOJ holds 39% of Japan's govt debt, equates to 79% of Japan's GDP
- Percentage of global bond market monthly returns explained by the monthly change in Central Bank balance sheets has dramatically increased in recent years
- Bond vigilantes are now fugitives!

AGGREGATE BALANCE SHEET OF LARGE CENTRAL BANKS
$Tn & % of GDP



Source: Citi Research, Haver

CENTRAL BANKS HAVE BECOME THE BOND MARKET

Source: BofAML Global Investment Strategy, Bloomberg

EU JUNK BONDS YIELD LESS THAN US TREASURIES

- European High-Yield bonds are currently trading at a lower yield than the US 10year Treasury.
- This convergence started in mid-2016 and continued throughout 2017.

EU HIGH YIELD INDEX VS US GENERIC 10YR YIELD

Source: Bloomberg

RUSSIA BONDS YIELDING LESS THAN US TREASURIES

- We learned from Steve Bregman at Horizon Kinetics that, on certain days, yields on Russian Bonds (USD denominated) are below those of US Treasuries of comparable maturity
- The Russian Bond 2030 is the largest exposure of the most liquid EM bonds ETFs.
- This anomaly coincides with the exponential increase in AUM inflows for EM Bond ETFs - *see for example the Blackrock iShares ETF in orange below*

RUSSIA 2030 USD Denominated Bond Yield vs US Generic 10yr Yield & Total Assets of the Blackrock iShares EM BOND ETF

Source: Bloomberg, Fasanara Capital

DISTORTIONS IN EQUITY MARKET

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- Lockheed Martin Corporation made a spike of +242% since 2013 after being flattish for almost a decade. This was achieved with no particular improvement in revenues or earnings, while its **total debt more than doubled** in less than 4 years.

- What can possibly justify an 80% angle rise? And P/E moving from 10 to 25 (more than Apple) ?

LMT US EQUITY PRICE

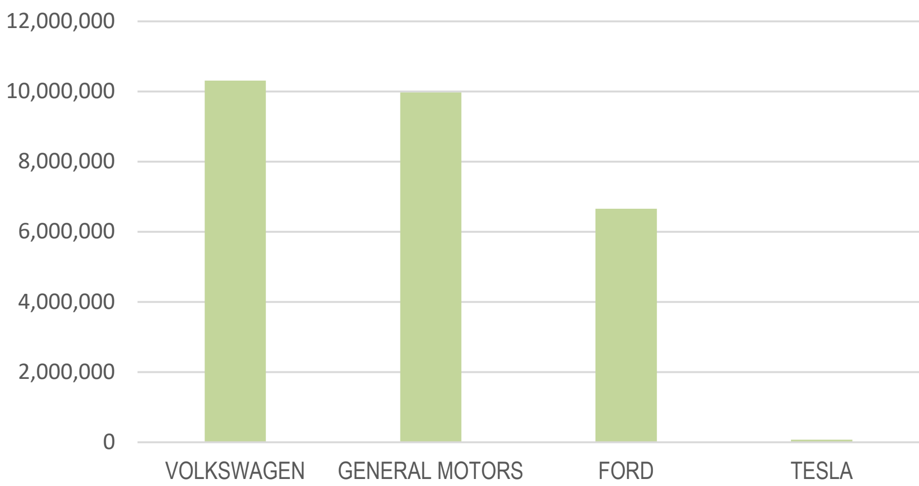
+ Total Debt	6,152.0	6,142.0	15,261.0	14,282.0	14,283.0
Enterprise Value	50,957.5	65,163.0	79,967.5	84,772.7	102,335.5
Revenue, Adj	45,358.0	45,600.0	40,536.0	47,248.0	49,045.0
Growth %, YoY	-3.9	0.5	-11.1	16.6	12.7
Gross Profit, Adj	4,519.0	5,374.0	4,492.0	5,142.0	5,315.0
Margin %	10.0	11.8	11.1	10.9	10.8
EBITDA, Adj	6,524.0	6,640.0	5,820.0	6,717.0	6,910.0
Margin %	14.4	14.6	14.4	14.2	14.1
Net Income, Adj	3,911.4	3,678.8	3,179.0	3,722.5	3,763.0
Margin %	8.6	8.1	7.8	7.9	7.7
EPS, Adj	9.85	11.41	10.10	12.28	12.75
Growth %, YoY	18.4	15.8	-11.5	21.6	21.0
Cash from Operations	4,546.0	3,866.0	5,101.0	5,189.0	5,259.0
Capital Expenditures	-836.0	-845.0	-939.0	-1,063.0	-1,125.0
Free Cash Flow	3,710.0	3,021.0	4,162.0	4,126.0	4,134.0

Source: Bloomberg, Fasanara Capital

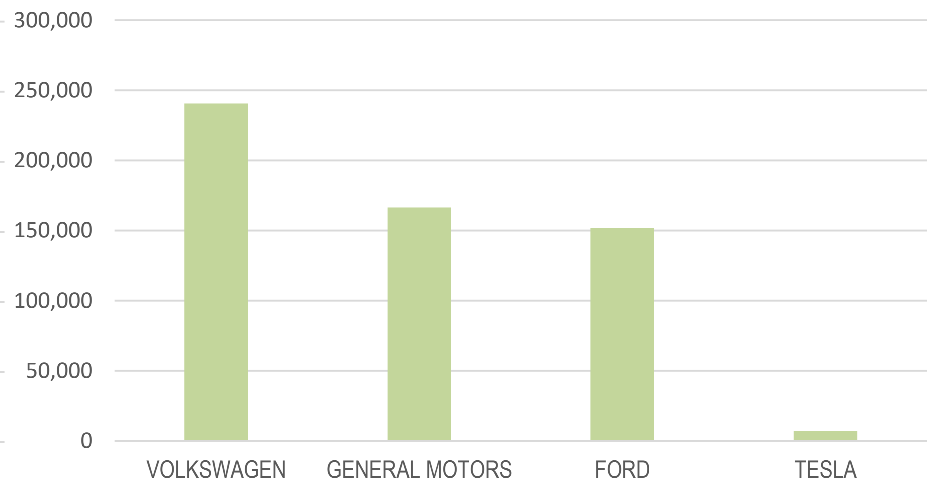
DISTORTIONS IN EQUITY MARKET: TESLA EXAMPLE

FASANARA CAPITAL

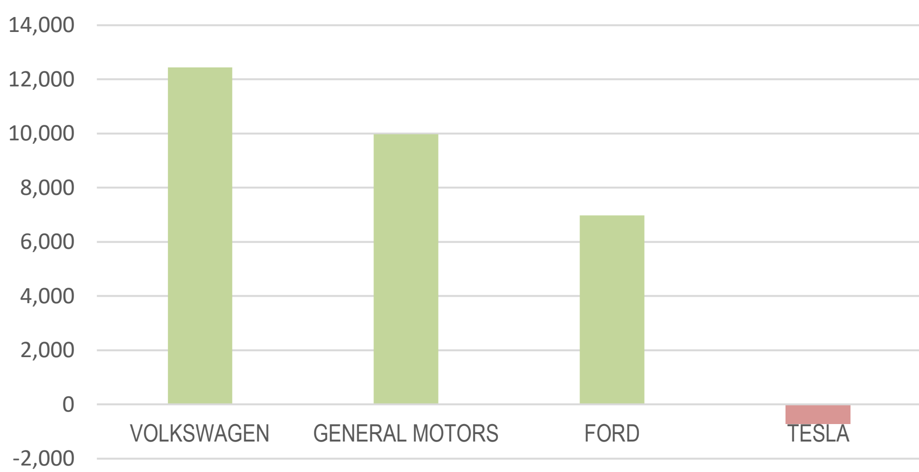
N° VECHICLES DELIVERED 2016



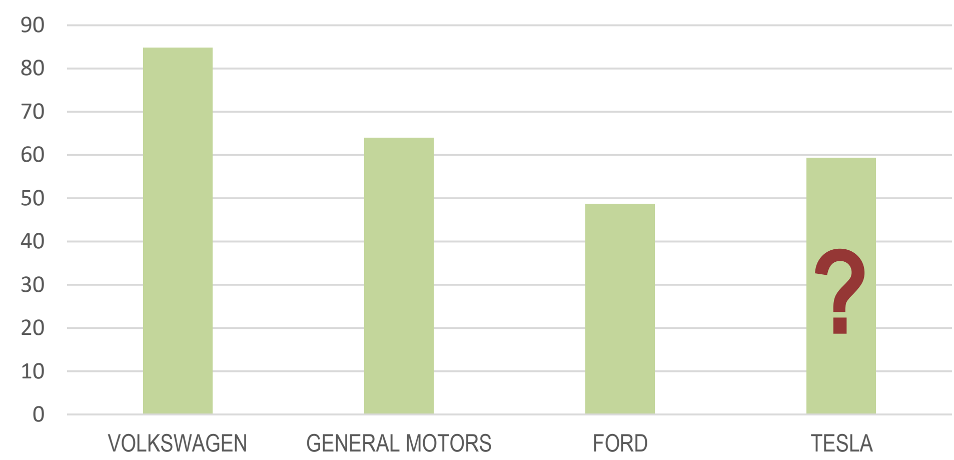
TOTAL REVENUES 2016 *($BN)*



NET INCOME/LOSS 2016 *($BN)*



CURRENT MARKET CAP *($BN)*



Source: Bloomberg, Fasanara Capital

WHAT IF I TOLD YOU….

- that there are two large caps in the food sector...
- both belong to the old economy (so have no top new tech that makes you dream)...
- whose business model is challenged by dominant trends for health nutrition / war on obesity…
- whose revenues fell 20-25% in the last 4 years, while debt increased 30% to 100%...
- whose EBITDA fell -4% and -15% respectively

…WHAT WOULD YOU EXPECT THEIR STOCK PERFORMANCE TO BE?

	Company A **2013 – FY 2017**	**Company B** **2013 - FY 2017**
Revenues	-19.80%	-25.31%
Total Debt	+101%	+34%
EBITDA	-4%	-15%
STOCK PRICE	**- XX %**	**- XX %**

Source: Bloomberg, Fasanara Capital

DISTORTIONS IN EQUITY MARKET

- McDonald and Coca-Cola equities may be other examples of the distortions that global markets are currently experiencing
- Since 2013, they both **lost >20% in revenues**, while their **total debt exploded**. Nonetheless, their equity price managed to show a stellar performance in the 4 year period

	MCD US 2013 – FY 2017	KO US 2013 - FY 2017
Revenues	-19.80%	-25.31%
Total Debt	+101%	+34%
EBITDA	-4%	-15%
STOCK PRICE	**+77%**	**+21%**

Source: Bloomberg, Fasanara Capital

HIGHER LEVERAGE, YET LOWER CREDIT PROTECTION

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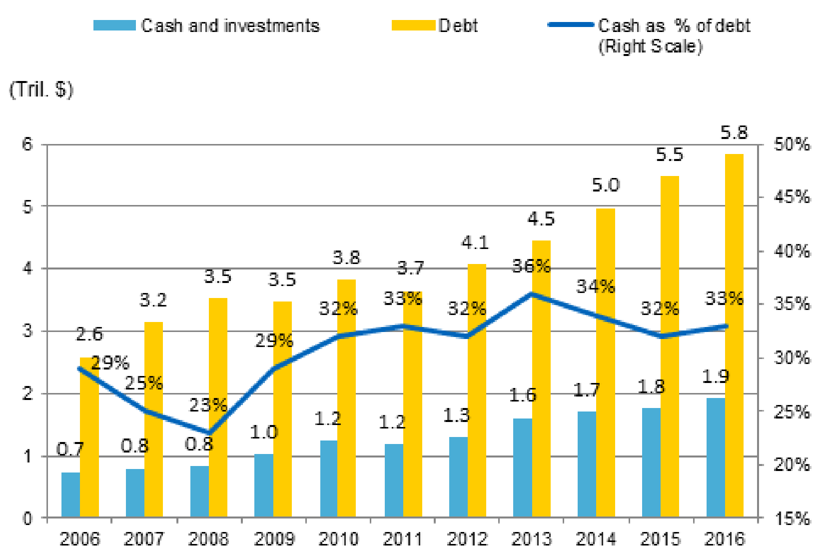
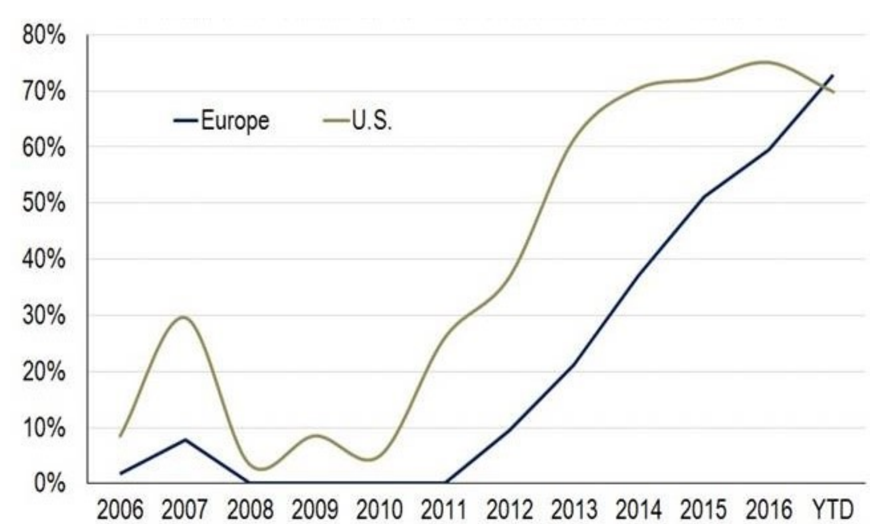
- Total debt outstanding continues to rise faster than cash on corporate balance sheets, resulting in rising net debt
- **COV-LITE LEVERAGED LOAN ISSUANCE AT ALL-TIME HIGH:** cov-lite loans in both EU and the US reached a staggering 70% of all loan supply in 2017. In 2007 in the US, before the credit bubble bust, it was 30%

HIGHER LEVERAGE FOR US CORPORATES



Source: Standard & Poor's Financial Services LLC.

% OF COV-LITE LOANS SUPPLY IN EU AND US



Source: LCD, an offering of S&P Global Market Intelligence

CASH ALLOCATION LOWEST IN OVER A DECADE

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MERRIL LYNCH'S CLIENTS ALLOCATION TO CASH AS A % OF AUM

Source: BofaAML Global Investment Strategy, BAC Data

THE MYTH OF THE CASH ON THE SIDELINES

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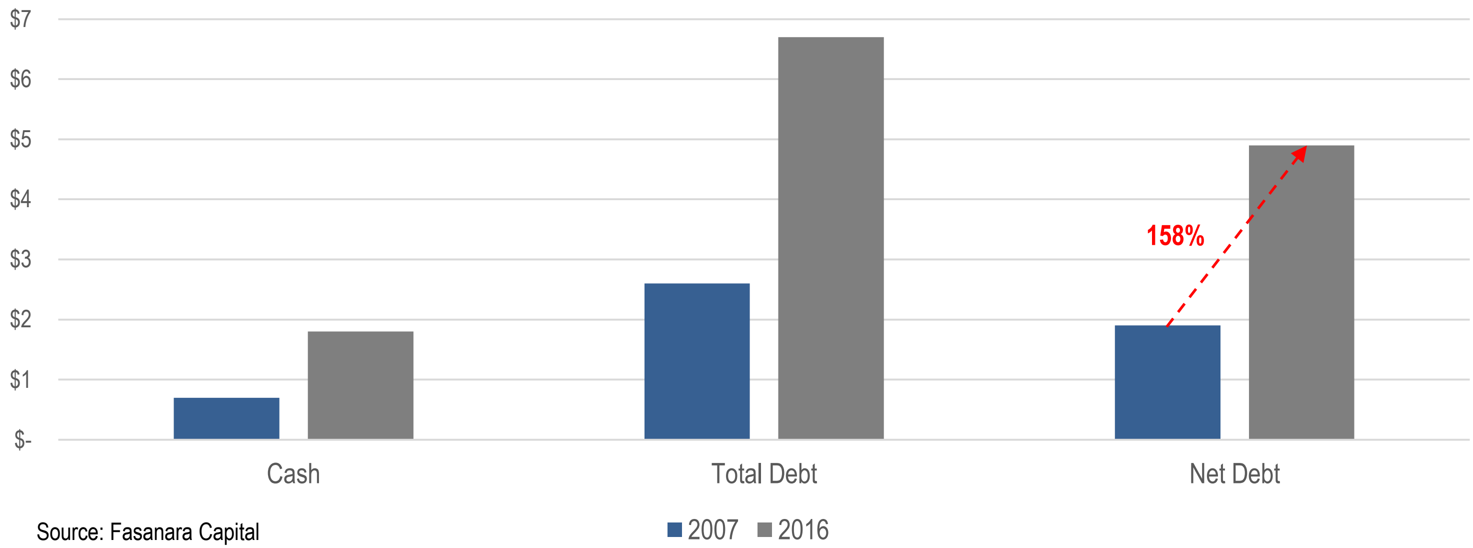
SMOKE AND MIRRORS: CASH OR DEBT ?

- In Corporate land, there is not as much unencumbered liquidity as it is often portrayed. Take the case of US Corporates, for example:
  - **Cash** on their balance sheets increased from **$0.7 trillion in 2007 to $1.8 trillion in 2016**
  - However, **Total Debt** increased too, and way faster so, **from $2.6 trillion in 2007 to $6.7 trillion in 2016**
  - The result is that **Net Debt** substantially increased over the same time span, **from $1.9 trillion to $4.9 trillion**



Source: Fasanara Capital

- Also worth noting that the 5 richest corporates (Apple, Microsoft, Google, Cisco, Oracle) control over 30% of such cash balance
- **Most worryingly, the $4.9 trillion debt bomb now meets rising interest rates**

S&P vs FED & BUYBACKS

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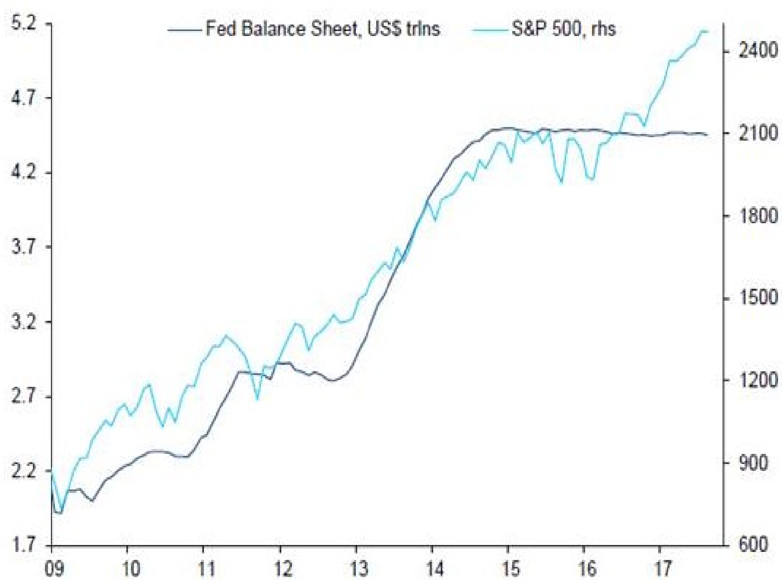
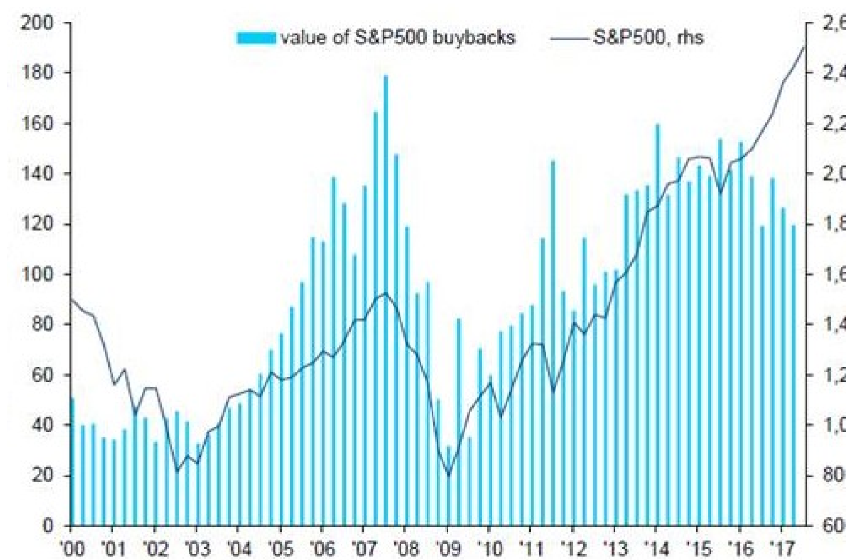
- Equity indexes are running ahead of themselves when compared to key drivers of performance over the past decade
- The disconnect is visible, explained by make-believe economic narratives (tax plans, fiscal spending, yield chasing), and brought the stock market to multiples of earnings never seen before in financial history – see 'Peak PEG' multiples

FED BALANCE SHEET vs S&P



Source: Standard & Poor's Financial Services LLC.

VALUE OF S&P500 BUYBACKS vs S&P



Source: LCD, an offering of S&P Global Market Intelligence

S&P vs VIX

- Expensiveness and Complacency together: the ratio between S&P and VIX has never been so high

S&P / VIX RATIO

Source: John Rubino, Zerohedge, Bloomberg

THE RISE OF PASSIVE INVESTORS

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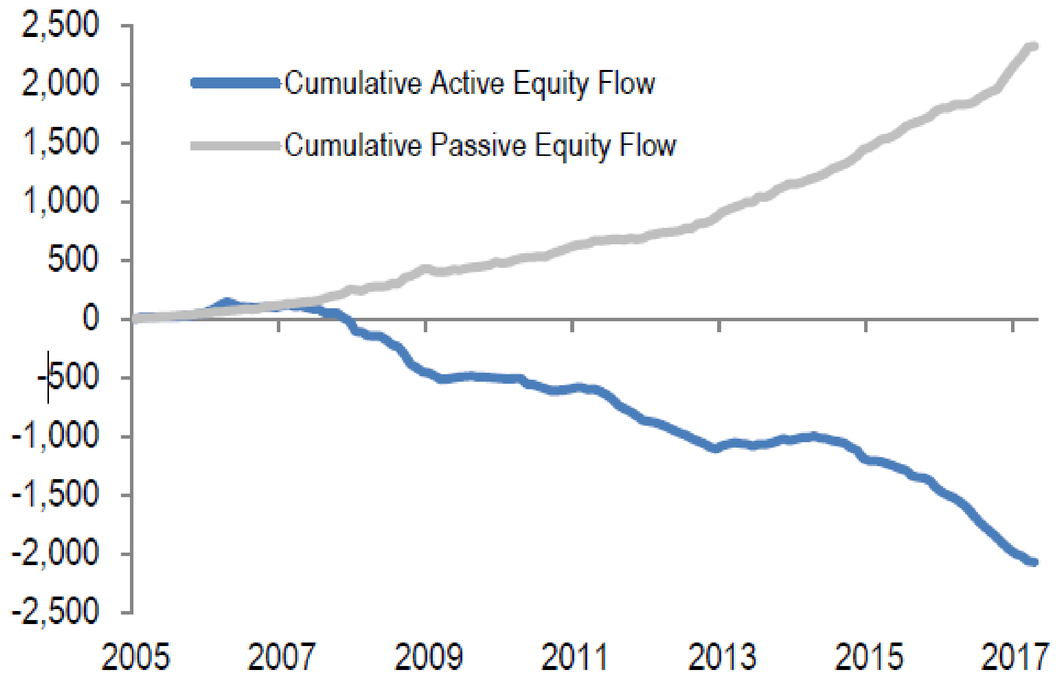
GLOBAL ETF AUM ($bn) & AUM GROWTH BY REGION

CUMULATIVE FLOWS INTO PASSIVE AND ACTIVE EQUITY ETFs AND MUTUAL FUND ($BN)



Source: J.P. Morgan Quantitative and Derivatives Strategy, EPFR Global

ANOMALIES IN ETFs

FASANARA CAPITAL

ETFs ARE TAKING OVER MARKETS

From our May 2017 Investment Outlook:

- As of end January, ETFs and passive funds represented almost 30% of AUM in the US. Close to 90% of equity flows in the US (from 7% 15 years ago) is attributable to passive funds or ETFs
- The product is so hot that Vanguard, to compete, felt compelled to cut fees 3 times from late January to mid-February, in a race-to-zero against rivals.
- An ETF on ETFs was launched in April: TETF will be composed of stocks of companies driving the growth of the ETF industry
- A sought-after Junior miner gold ETF got larger than its index recently. So much so that it was forced to buy other ETFs. Incredibly, there are 10 Canadian companies that this ETF owns where its ownership percentage is more than 18%
- The ETF Select Dividend lost 35% during August 2015 at a time when its constituencies lost just 2.5% on average, showing that disconnections work both ways when the time comes. ETFs are not always synonyms of liquidity.
- One of the largest US Energy ETF has 50% of the fund invested in just four stocks. ETFs are not always synonyms of diversification.
- Low Vol ETFs are filled with tech stocks. Passive aggressive ETFs.
- JPM here explains that 37% of the NYSE trading volumes YTD taking place during the last 30 mins of trading, because of passive funds that rebalance at the end of the day
- Researchers showed that “a single percentage point increase in ETF ownership has demonstrable effects on an individual stock. Over the ensuing year, correlation to the share’s industry group and the broader market ticks up 9%, while the relationship between its price and future earnings falls 14%.”

FAKE LIQUIDITY

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ETFs' LIQUIDITY CONUNDRUM

- According to Horizon Kinetics, **turnover rates for the most popular ETFs are much higher than what people expect** – in some cases reaching 3500%, with an average holding period of about a week. That tends to be dozens of times greater than the trading liquidity of even its most liquid constituents

Annual Share Turnover	
ExxonMobil	90%
IBM Corp	128%
Vanguard 500 Index Mutual Fund (VFINX)	42%
SPDR S&P 500 ETF (ticker SPY)	3,507%
iShares Russell 2000 Index (IWM)	3,624%

Source: Horizon Kinetics

- Recent estimates show that ETF providers collect about $6 billion per year from management fees. But roughly $9 billion is collected from market-making spread

- The ETF Euro Corporate Bond Investment Grade trades with approx. 20 cents bid/offer, while very few of its underlying bonds can enjoy that, and most have 3x that level

FAKE LIQUIDITY

FASANARA CAPITAL

ETFs' LIQUIDITY CONUNDRUM

- Anecdotally, **on Aug 24th, 2015 the price of the Blackrock iShares Select Dividend ETF (DVY) temporarily dropped 35% while its NAV declined by a mere 2.5%**

INTRA-DAY DROP IN DVY US PRICE (24 Aug 2015)

Source: Bloomberg, Fasanara Capital

FAKE DIVERSIFICATION

ETFs' DIVERSIFICATION CONUNDRUM

- The following is an interesting analysis from Horizon Kinetics. In 2005 the S&P moved to a market cap float-adjusted weighting methodology, thus assigning more "importance" within the index to those stocks characterised by more free float, i.e. less insider ownership. As the ETF industry (massively) grew over time, the demand for liquid stocks only increased, with the influx of funds directed into the same limited population of liquid stocks
- **THE RESULT IS THAT STOCKS LIKE EXXONMOBIL, ONE OF THE MOST LIQUID IN THE MARKET, FITS INTO PRETTY MUCH ALL KINDS OF PORTFOLIO ONE CAN IMAGINE**

QUAL	iShares USA Quality Factor ETF
DGRO	iShares Core **Dividend Growth** ETF
HDV	iShares Core High Dividend ETF
IWD	iShares Russell 1000 Value ETF
EXT	WisdomTree Total Earnings ETF
PBP	PowerShares S&P 500 **BuyWrite** ETF
TILT	FlexShares Morningstar US Market Factors Tilt ETF
QUS	SPDR MSCI USA Quality Mix ETF
GSLC	Goldman Sachs **ActiveBeta** US Large Cap Equity ETF
JHML	John Hancock Multifactor Large Cap ETF
TOK	iShares MSCI Kokusai ETF
ACWI	iShares MSCI ACWI ETF
MMTM	SPDR S&P 1500 **Momentum** Tilt ETF
DVP	**Deep Value** ETF
USWD	WisdomTree **Weak Dollar** US Equity ETF

Source: Horizon Kinetics

Exxon AKA the stock for every strategy; Growth, Value, Momentum, etc.

IShares US. Energy ETF (IYE)	
Exxon Mobil Corp	25.0%
Chevron Corp	13.1%
Schlumberger Ltd	7.6%
Occidental Petroleum Corp	4.1%
Total Weight of Largest 4 Holdings	**49.8%**

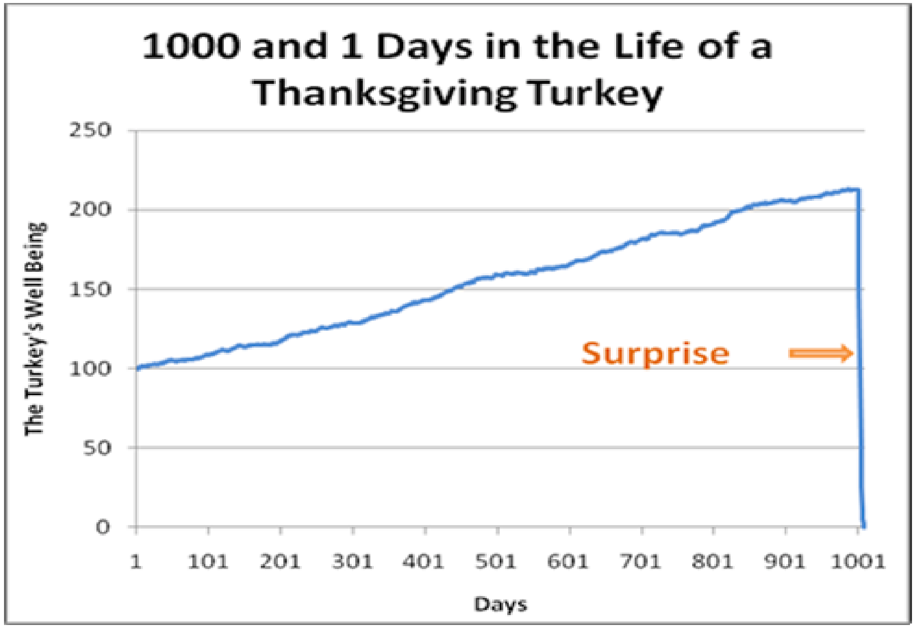
- The phenomenon of structurally channelling money into the most liquid securities bears another significant consequence, as it alters the correlation and risk statistics. As a result, **THE CORRELATION OF THE LARGEST MEMBERS OF THE S&P 500 WITH THE INDEX HAS ABOUT DOUBLED FROM 20 YEARS AGO**, thus the same happened for the ETFs holding those securities

THE TRAP OF SHORT VOL ETFs

HOW CLOSE CAN YOU GET TO A <u>WIPEOUT RISK</u> WITHOUT DAMAGES?

- There is a potential value trap right in today's most fashionable investment products, which risks deflating fast: Short Vol Exchange-Traded Notes and, more broadly, volatility-driven investment vehicles.
- Small moves in volatility are now enough to trigger wipe-out event on some of the short Vol ETFs
- Our Analysis shows that **IF VIX GOES FROM 9.30 TO 20** in absolute values (it was approx. 40 as recently as Aug2015), and stays there for 8 / 10 days, **VIX-BASED ETPs MAY STAND TO LOSE ANYWHERE FROM 50% TO 70%.** For further moves, short positions on long-vol ETF can then lose up to 700% of capital**.** Losses are higher in case of backwardation of the term structure of the VIX (i.e. front contracts trading higher than back contracts), or the longer VIX stays elevated, or clearly the higher it goes.
- Additional risks arise as **'LIQUIDITY GATES'** and **'TERMINATION EVENTS'**

This could well be a real-life modern example of the famous Bertrand Russell analogy: as they get fed day in day out, chickens start inducting that life is good and humans are kind and caring beings – until the one day when they suddenly get slaughtered



Source: from the book 'The Black Swan', by Nassim Taleb

THE TRAP OF SHORT VOL ETFs

FASANARA CAPITAL

REGRESSION ANALYSIS AND FORMULAIC ANALYSIS OF MAJOR VOLATILITY-LINKED ETNs: Losses can compound fast for moves in VIX which are both relatively small and frequent in history. According to both an historical and a formulaic analysis, VIX at 20 implies losses up to ~280% across instruments, depending on the shape of the term structure (contango vs backwardation) and how long a period the drift and shape are sustained for.

REGRESSION ANALYSIS

	VIX % change	VIX level (vs today's spot 9.60)	Contango / Backwardation in %	XIV	SVXY	VXX (short position)	UVXY (short position)
Scenario 1	50	14.4	10%	-20.0%	-20.1%	-21.9%	-50.4%
Scenario 2	50	14.4	0%	-28.1%	-28.0%	-34.0%	-79.8%
Scenario 3	50	14.4	-10%	-35.4%	-35.2%	-47.2%	-114.6%
Scenario 4	50	14.4	-20%	-42.0%	-41.7%	-61.7%	-155.4%
Scenario 5	100	19.2	10%	-36.1%	-36.2%	-50.9%	-128.0%
Scenario 6	100	19.2	0%	-42.6%	-42.6%	-65.7%	-171.3%
Scenario 7	100	19.2	-10%	-48.6%	-48.4%	-81.80%	-222.0%
Scenario 8	100	19.2	-20%	-53.9%	-53.7%	-99.4%	-281.4%
Scenario 9	200	28.8	10%	-42.4%	-54.2%	-103.3%	-302.6%
Scenario 10	200	28.8	0%	-58.8%	-58.9%	-122.8%	-375.7%
Scenario 11	200	28.8	-10%	-63.2%	-63.1%	-144.0%	-460.9%
Scenario 12	200	28.8	-20%	-67.1%	-67.0%	-167.1%	-560.1%

	XIV*	SVXY*	VXX*	UVXY*
Adj R-squared	*0.86*	*0.86*	*0.87*	*0.87*
*beta – VIX**	-0.2881**	-0.2900**	0.2886**	0.5764**
*beta - VX front contract**	0.1013**	0.1019**	-0.0961**	-0.1854**
*beta - VX second contract**	-0.5478**	-0.5481**	0.5413**	1.0725**
beta - Contango/Backwardation	0.0748**	0.0730**	-0.0690**	-0.1323**

**Endogenous end Exogenous variables are intended in returns*

***Statistically significant*

**** From a simple multi-linear regressive analysis the losses these products could incur may be larger than what shown in the table. The beta coefficients are weakened by a great number of central observation. As shown above, fat tails and leptokurtosis apply to this distribution.*

FORMULAIC ANALYSIS

	VIX % change	XIV	SVXY	VXX (short position)	UVXY (short position)
Scenario 1	50	-31.7%	-31.7%	-42.1%	-96.8%
Scenario 2	100	-49.9%	-49.9%	-90.6%	-249.2%
Scenario 3	200	-68.5%	-68.5%	-186.6%	-655.6%

Source: Fasanara Capital

Please refer to our note: How Bad a Damage If Volatility Rises: The Bear Trap of Short Vol ETFs

THE TRAP OF SHORT VOL ETFs

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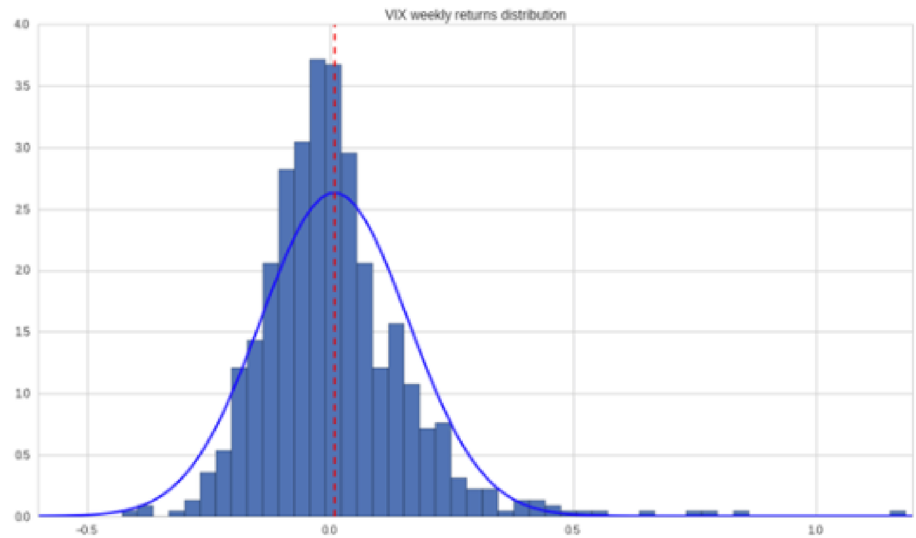
FAT TAIL OF VIX DISTRIBUTION: Extreme returns on VIX are more frequent than a normal distribution would project, as confirmed by the Shapiro-Wilk reject the null hypothesis of normality. A cursory look at the shape of the returns distribution of VIX shows high Leptokurtosis. This is reflected in the frequency with which VIX has doubled up, in a window of just two weeks, 6 times in the last 9 years.



VIX Returns	Mean	Standard Dev	Skew	Kurtosis	Shapiro-Wilk p-value
Daily	0,239%	7,273%	1,335	6,848	0,000
Weekly	0,96%	15,17%	1,75	8,38	0,000
Monthly	1,93%	22,73%	1,86	7,21	0,000

Source: Fasanara Capital

Please refer to our note: [How Bad a Damage If Volatility Rises: The Bear Trap of Short Vol ETFs]

THE TRAP OF SHORT VOL ETFs

FASANARA CAPITAL

CASE STUDY AUGUST 2011: (XIV) VELOCITY SHARES DAILY INVERSE VIX SHORT-TERM ETN

XIV lost almost 75% of its value when the VIX rose from 18 to 45 during the month

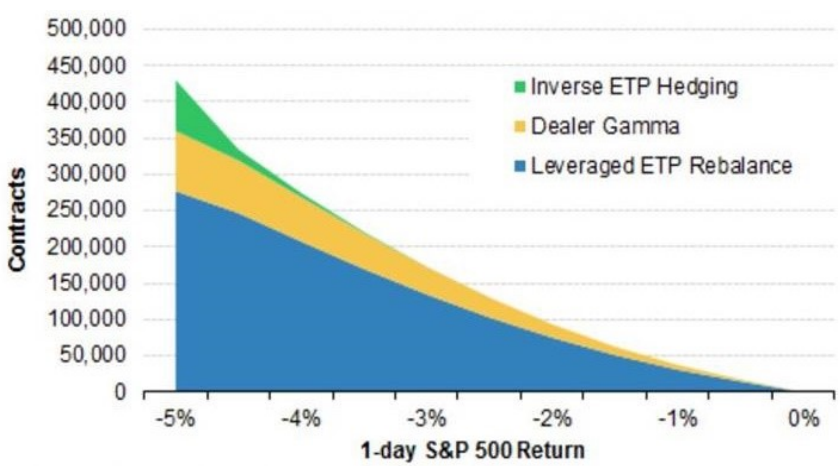
Source: Bloomberg, Fasanara Capital

Please refer to our note: [How Bad a Damage If Volatility Rises: The Bear Trap of Short Vol ETFs]()

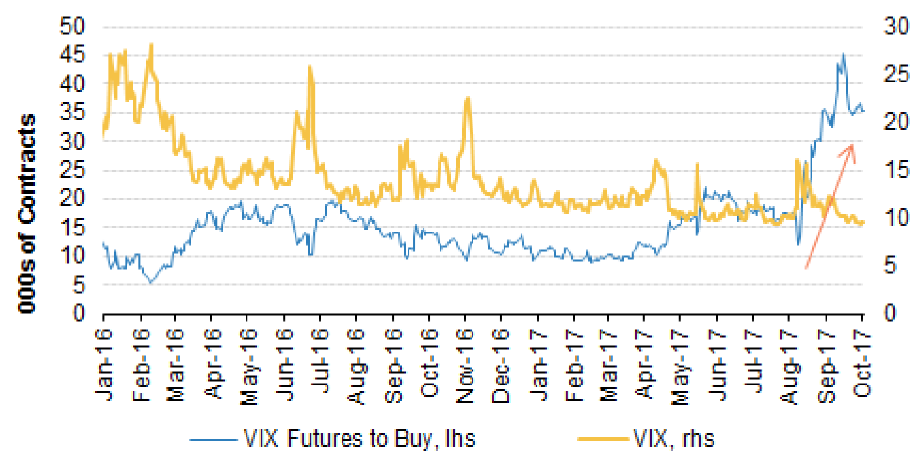
REBALANCING ON VIX IS CONVEX

- Morgan Stanley QDS notes that **VIX hit a new closing low last week. The risk is compounded by the significant amount of short gamma exposure in the VIX market – over 400,000 VIX futures would likely need to be bought if the SPX falls 5% in one day, nearly double what it was in July.**
- **As VIX rises, hedgers will need to buy VIX more than proportionally for rebalancing purposes**

VIX FUTURES TO BE BOUGHT AS THE S&P 500 DECLINES



VIX FUTURES TO BUY / 1 POINT INCREASE IN VIX FUTURES FROM LEVERED ETP REBALANCING

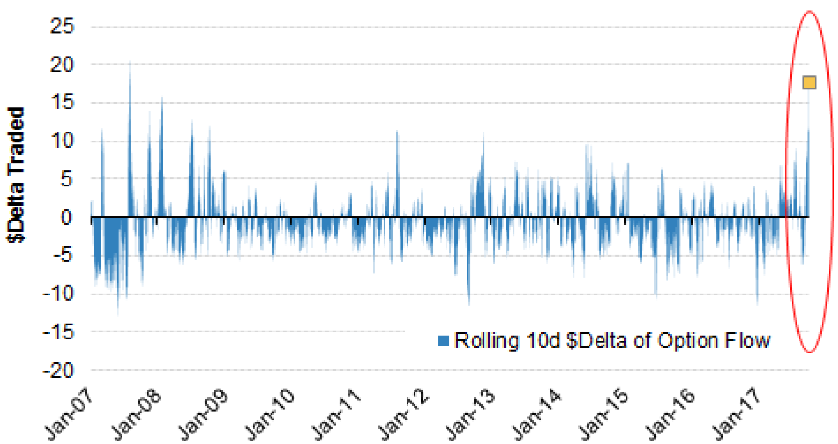


Source: Morgan Stanley QDS. SALES & TRADING COMMENTARY (This is not a product of MS Research)

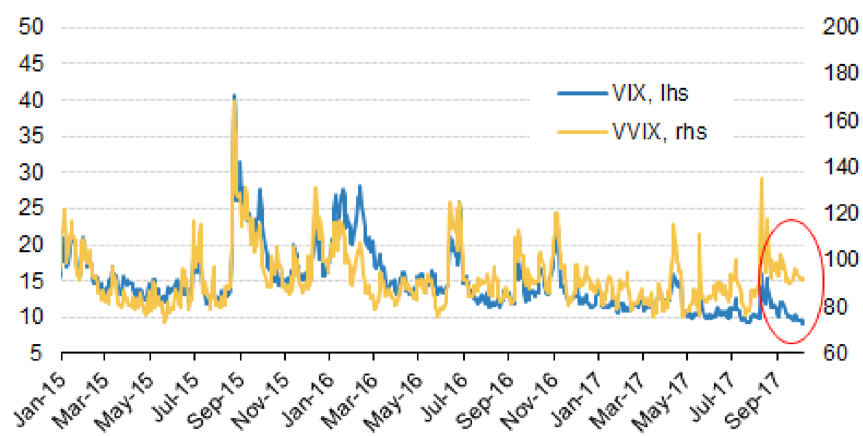
REBALANCING ON VIX IS CONVEX

- Morgan Stanley QDS also estimates that investors in SPX options bought more delta in the last two weeks than at any point since at least 2007. In other words, investors are now finally buying into the rally via upside calls.
- However, Vol of Vol has disconnected from the VIX, remaining a bit less complacent

ESTIMATED SPX OPTION FLOW



VOL OF VOL IS NOT AS COMPLACENT



Source: Morgan Stanley QDS. SALES & TRADING COMMENTARY (This is not a product of MS Research)

IMPACT ON REAL ECONOMY

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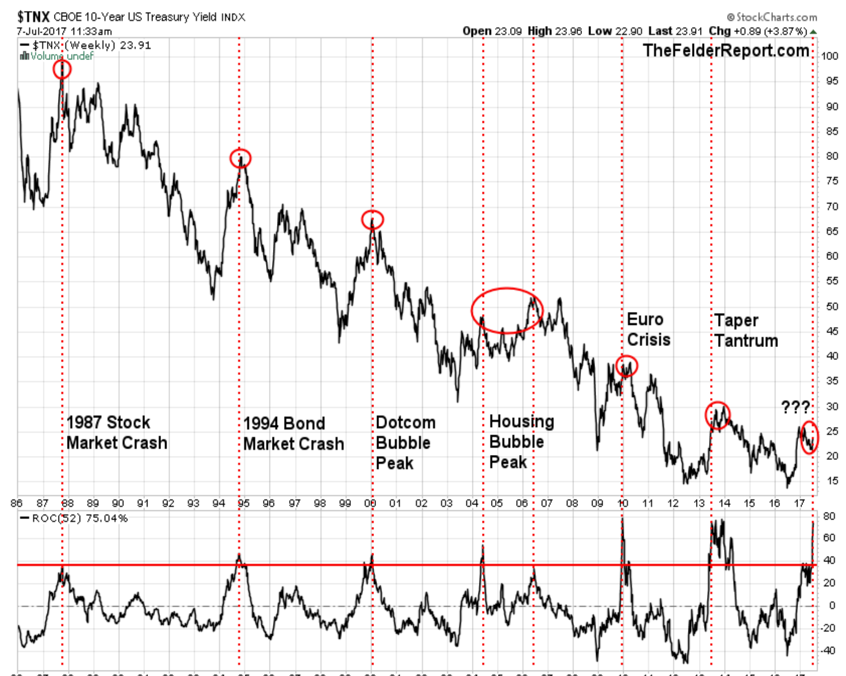
- When interest rates rose this rapidly in the past, it typically led to some stormy weather on risk assets

TIGHTENING FINANCIAL CONDITIONS SUGGEST PEAK EPS

Source: BofAML Global Investment Strategy, Bloomberg, Datastream

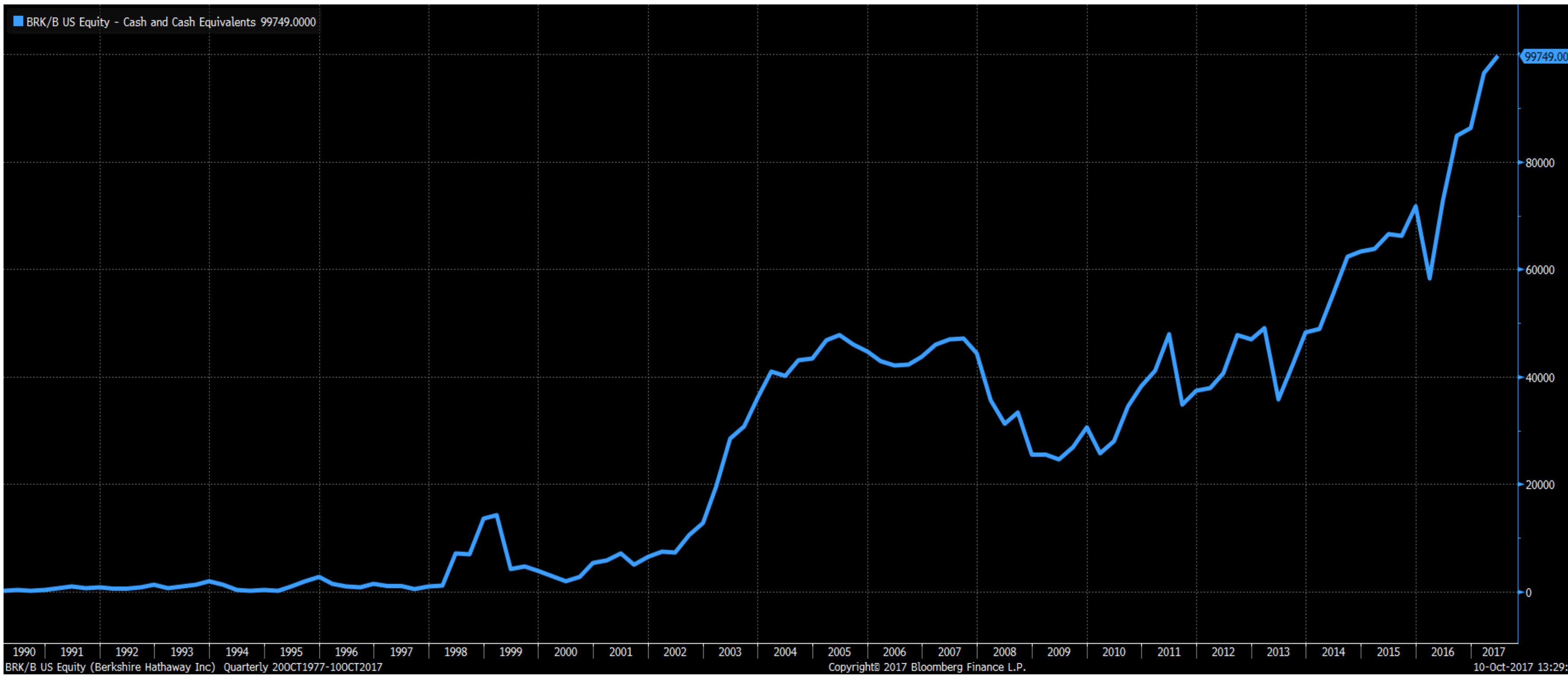
10yr US YIELD & MARKET BUBBLES



Source: TheFelderReport.com

WARREN BUFFETT HAS RECORD CASH

- Berkshire Hathaway cash allocation reached its highest ever at $100bn. Difficult to find buying opportunities?
- Buffett once said: ‘’the price you pay is the single most important determinant of the return you get’’



Source: Bloomberg, Fasanara Capital

VALUE INVESTING IS NOT EASY…

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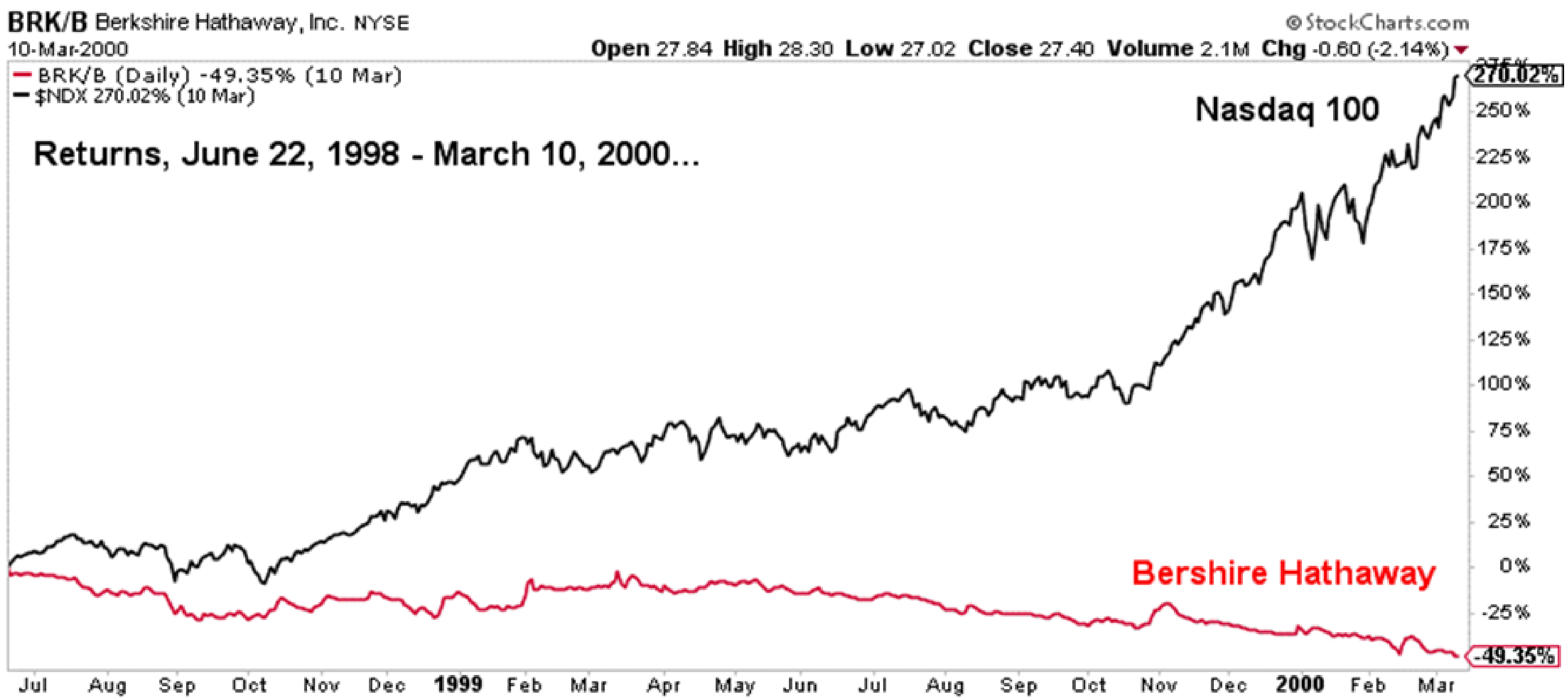

Source: TheFelderReport.com

WHAT HAPPENS NEXT

WHEN THE TRAIN OF HISTORY HITS A CURVE, THE INTELLECTUALS FALL OFF

Karl Marx

INCOME INEQUALITY

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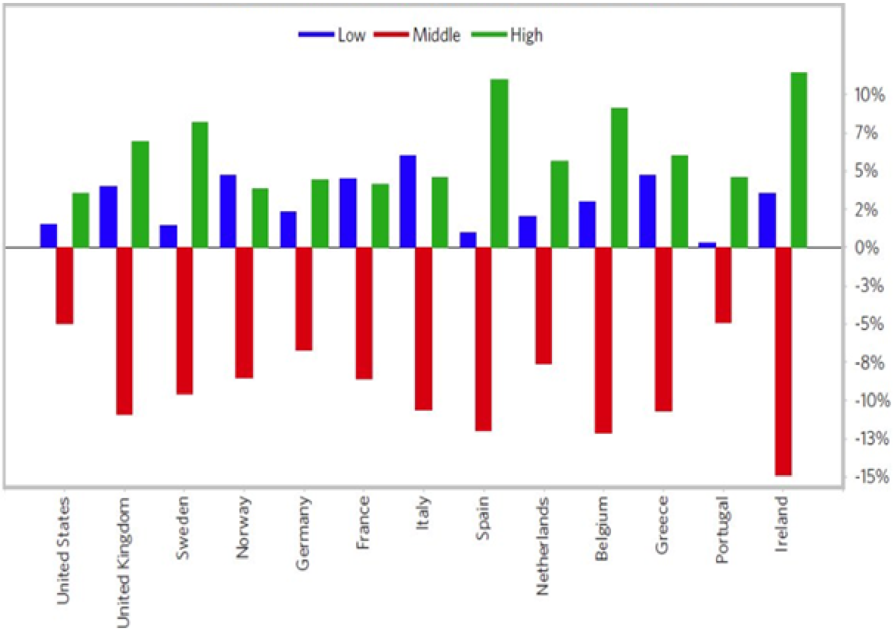
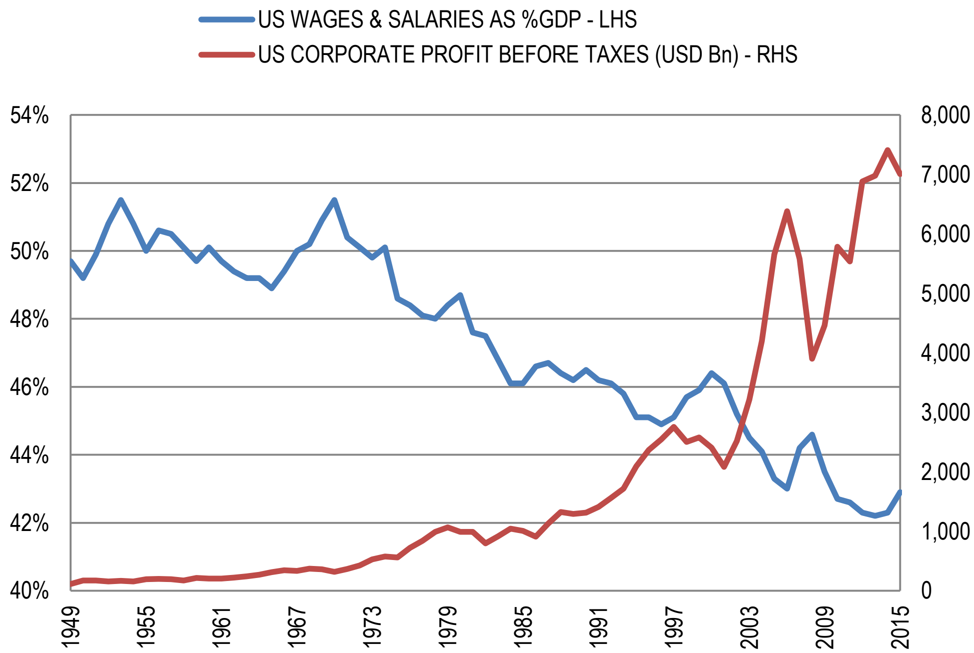
DEMISE OF THE MIDDLE-SKILLED JOBS

CHANGE IN SHARE OF EMPLOYMENT BY SKILL LEVEL SINCE 1990



Source: Bridgewater Associates, Business Insider

GLOBALISATION AND INCOME INEQUALITY

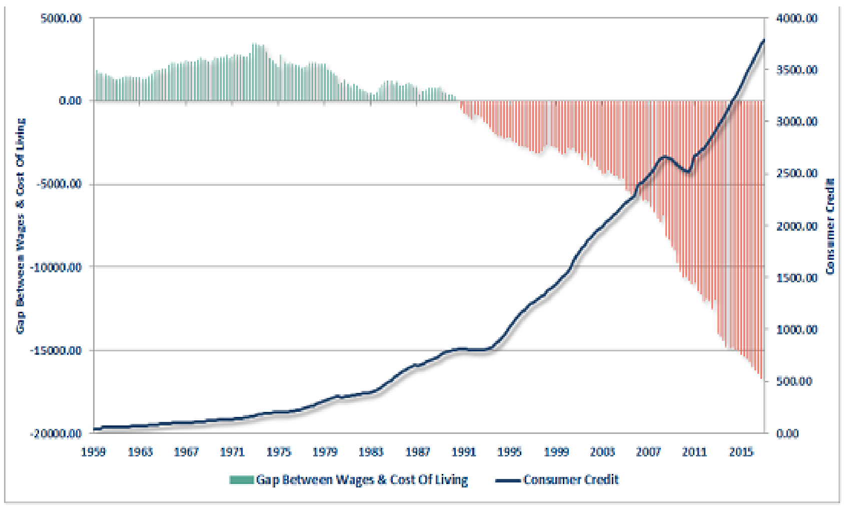


Source: US Bureau of Economic Analysis, St. Louis FED, Fasanara Capital

INCOME INEQUALITY

- Income inequality is at a peak, and growing further
- It fuels populism, like the latest results for AfD in Germany testifies, thus adding to the odds of regime change

DEBT USED TO MAINTAIN STANDARD OF LIVING



Source: Real Investment Advice

HOURS OF WORK TO BUY THE S&P500

Source: BofAML Global Investment Strategy, Bloomberg

WEALTH EFFECT : WHERE IT FAILED, WHAT'S NEXT

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THE VIRTUOUS CIRCLE OF WEALTH EFFECT POLICIES FAILED TO MATERIALIZE, BUT HAD UNINTENDED CONSEQUENCES

Higher stock prices → *Consumer wealth* → *Increase confidence* → *Spur spending* → *Higher incomes and profits* → *Support economic expansion*

FAILED

COLLATERAL EFFECTS OF EASY MONEY

Excess Debt

- *Financial leverage*
- *Debt in the economy (government & private sector)*
- *CBs bloated balance sheets*
- *EM leverage / Capex cycle*
- *Oversupply*

Twin Bubbles

- *Bubble in Equities, especially US*
- *Bubble in Bonds, especially Europe*
- *Complacent markets*

Passive Investments Mania

- *Buy-the-dip mentality*
- *Metamarkets*
- *Hidden bear traps*

1. ***No inflation, except in financial assets***
2. ***No boost in real wages***
3. ***Exacerbated income inequality***

TIPPING POINT

POLITICAL REGIME CHANGE → **ECONOMIC POLICY SHIFT**

- ***End of Pax QE***
- ***Fiscal Expansion***
- ***Rates Rising***

TRY AGAIN

TRANSFORMATIONAL TIMES: STRUCTURAL SHIFT

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4 KEY STRUCTURAL TRENDS CURRENTLY AT PLAY

TRANSFORMATIONAL TIMES

1. **PROTECTIONISM, DE-GLOBALIZATION & DE-DOLLARIZATION.** *In Pursuit of Inclusive Growth*
2. **END OF 'PAX AMERICANA'.** *The ascension of China. Geopolitical risks on the rise*
3. **END OF 'PAX QE'.** *Markets without steroids, but still delusional*
4. **4th INDUSTRIAL REVOLUTION.** *Labour participation rate falling from 63% to 40% in 10 years?*

THE MARKET ECONOMY IN 2020

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A VISUALIZATION EXERCISE

PERMANENT QE

NOT ENOUGH

NEGATIVE RATES ON DEPOSITS

NOT ENOUGH

NOT ENOUGH

NOT ENOUGH

FISCAL EXPANSION

CASHLESS ECONOMY

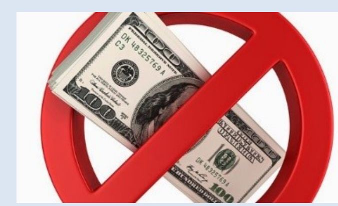
NOT ENOUGH

NOT ENOUGH

NOT ENOUGH

HELICOPTER MONEY

SDR RESERVE CURRENCY



Please refer to our note: [The Market Economy in 2020: a visualization exercise]

REDIRECTING MONETARY PRINTING

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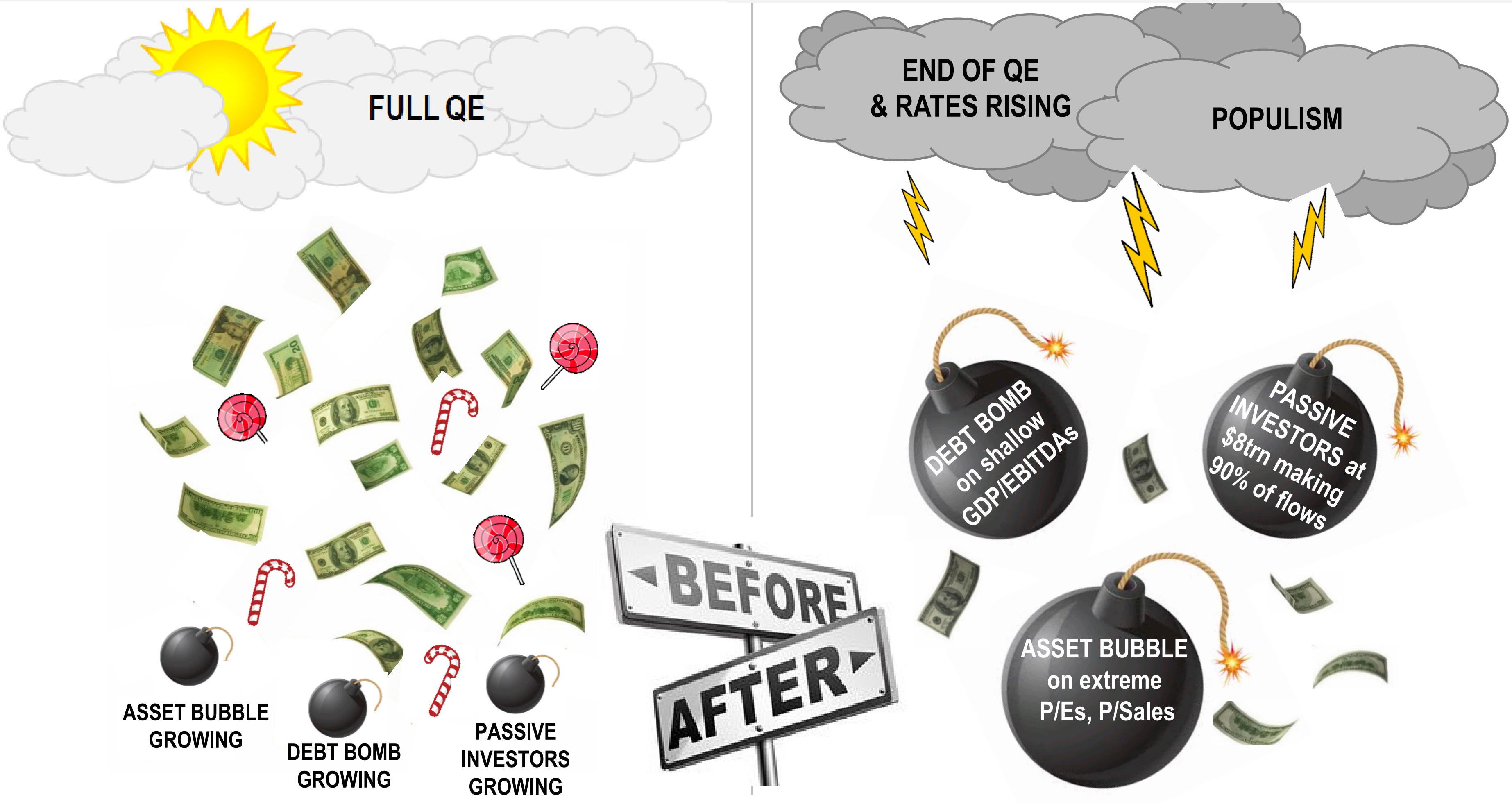
CENTRAL BANKS

RESOURCE ALLOCATORS	MEANS	FORMS	OBJECTIVES
1 Banks	Lending	▪ Increasing money supply ▪ Boost growth via new lending	▪ Money supply
NOT ENOUGH			
2 Governments	Public spending	▪ Fiscal Expansion ▪ Infrastructures ▪ Clean Energy Programs	▪ Velocity ▪ Redistribution ▪ Debasement
NOT ENOUGH			
3 Households	Consumer spending	▪ Spending Coupons ▪ Universal Basic Salary ▪ Youth New Deal	▪ Redistribution ▪ Debasement ▪ Velocity

Please refer to our note: The Market Economy in 2020: a visualization exercise

TRANSITIONING FROM 'FULL QE' TO 'SOME FISCAL STIMULUS'

POSITION FOR QE BUBBLE UNWIND, POPULISM/EU DISORDER



Please refer to our [January 2017 Investment Outlook]

LIQUIDITY WITHDRAWAL: HOW MUCH TO EXPECT?

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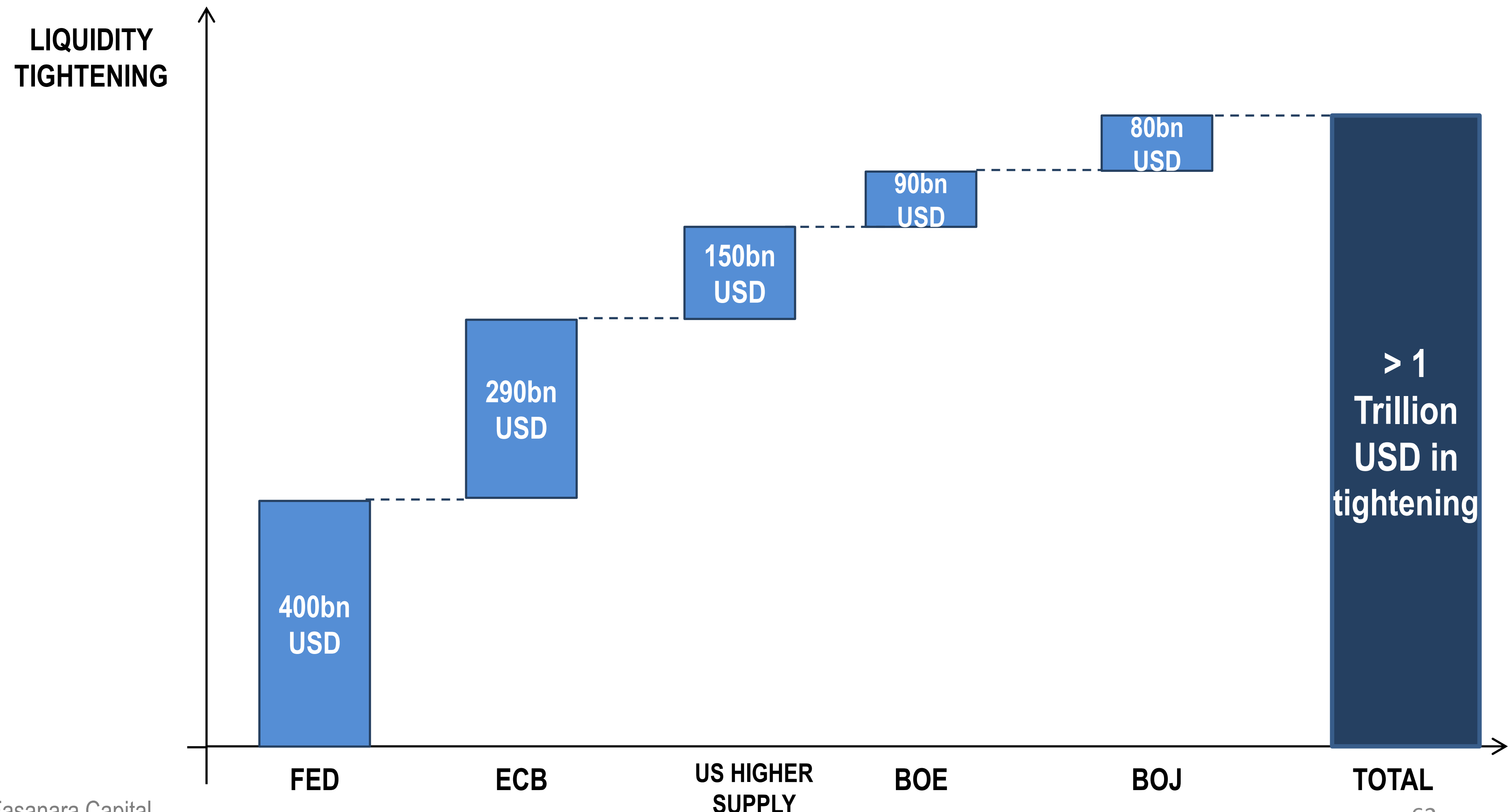
HOW BIG A LIQUIDITY TIDE IN 2018

	EXPECTED LIQUIDITY WITHDRAWAL IN 2018	Notes
FED	400bn USD	*FOMC has committed to start cutting its balance sheet from Oct. 2017 at a pace of $400bn per year.**
US FISCAL EXPANSION / BOND SUPPLY	150bn USD	*Market estimates that the ramp-up in fiscal stimulus will expand the supply of bonds by $150bn or more per year*
ECB	290bn USD	*Consensus estimates that the ECB will start tapering in 2018. Analysts expect a reduction from EUR 60bn to 40 bn in monthly purchases until April 2018 and to EUR 20bn after that. This would amount to a annual reduction of at least EUR 260bn, or 300bn USD*
BoE	90bn USD	*BoE may hike interest rates as soon as Dec 2017. In its path to normalization, we assume BoE will reverse the precautionary measures taken soon after Brexit vote: £60bn in additional govies purchases and £10bn in corporate bonds. This is equal to $90bn liquidity withdrawal*
BoJ	80bn USD	*Goldman Sachs noted that Bank of Japan is already gradually reducing its JGB purchases. If we estimate they keep the "retreat pace" of 2017, next year purchases will be cut by roughly 1tn JPY, which is equivalent to 80bn USD.*
TOTAL 2018	**> 1 trillion USD**	It is reasonable to expect more than $1tn in liquidity to be withdrawn from the global financial system in 2018 only

*The Fed said the balance-sheet runoff would follow the framework released in June: $6 billion in Treasuries and $4 billion in mortgage-backed securities per month, rising every three months until the amounts reach $30 billion and $20 billion per month, respectively. This is equivalent to ~420bn USD in 2018 and 600bn USD in 2019

FLOWS IN REVERSE

THE LIQUIDITY TIDE GOES OUT.. LET'S SEE WHO HAS BEEN SWIMMING NAKED



HOW TO POSITION FOR TWIN BUBBLES BUST

ONLY WHEN THE TIDE GOES OUT DO YOU DISCOVER WHO'S BEEN SWIMMING NAKED

Warren Buffett

WHY FASANARA MAGO?

FASANARA CAPITAL

1 **FASANARA MAGO AIMS TO HELP THOSE INVESTORS WHO SEEK PORTFOLIO INSURANCE AND PROTECTION AGAINST A DEEP MARKET SELL-OFF.**

Today's markets are overly-expensive in both Equity and Bond. Global liquidity from Central Banks is fading, and the ensuing Quantitative Tightening will go down hard on expensive valuations for both asset classes.

We believe that a world overburdened with debt, facing rising interest rates on bubble valuations in both bonds and equities, within an environment dominated by economic policy shifts, political gridlock and passive investors, offers **GREAT RISK-REWARD FOR BEING SHORT**.

2 In an environment dominated by long-only investors or investors with a predominant long-bias, **FASANARA MAGO OFFERS A VIABLE ALTERNATIVE IN POSITIONING FOR DISORDER** and heavy gap downside in markets.

3 Fasanara MAGO is **THE ONE ELEMENT TO ADD TO LONG PORTFOLIOS** so to make them more resilient to a period of potential disorder

4 The **SCENARIOS** that the fund is banking on are the following: equity and bonds unravelling on Quantitative Tightening, country risks / geopolitics (North Korea crisis, Brexit), monetary chaos & dollar shortage, China credit bubble deflating, volatility spiking, illiquidity hitting, rates rising.

FASANARA MAGO: *At a glance*

FASANARA CAPITAL

1. **DOWNSIDE PROTECTION FUND**

   One of the very last standing fund with a bearish view on the market

2. **POSITIONED FOR TWIN BUBBLES BUST**

   We believe we live through a Twin Bubble in both equity and bonds, and there is no shortage of catalysts to see why it might pop soon

3. **CONVEX-RICH PORTFOLIO**

   Our book is full gamma/convexity which can grow fast if markets move lower (starting with movements of more than -5%).

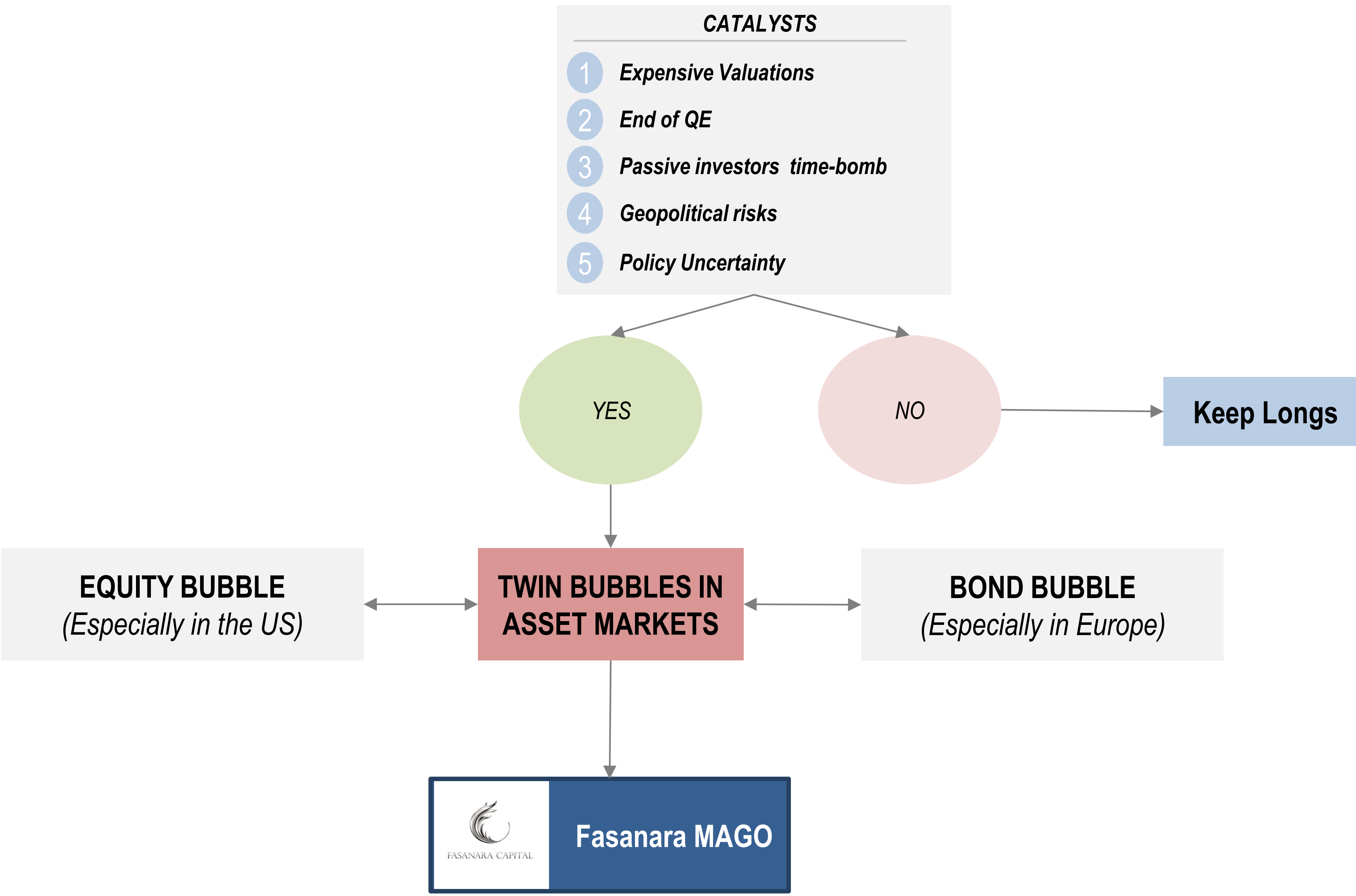
4. **MULTI-STRATEGY, LOW VOLATILITY**

   Thanks to its multi-strategy, diversified approach, the Fund manages to keep a very low volatility profile, with an average monthly VaR below 3%

5. **DAILY LIQUIDITY, UCITS FUND**

   The Fund is a Luxembourg based, daily liquidity UCITS Fund, regulated by the CSSF

FASANARA MAGO: *Attractive Opportunities?*



INVESTMENT PHILOSOPHY

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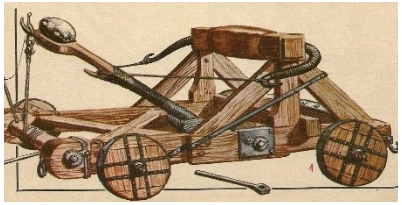
FASANARA MANIFESTO

DEFINING ELEMENTS OF TODAY' S MARKETS

LOW VOLATILITY	HIGH CROSS-ASSET CORRELATION	SEISMIC ACTIVITY
Owing to Central Banks' Activism	*Especially to the downside*	*Calm above the storm*
ASYMMETRIC PROFILES AVAILABLE	***OPPORTUNISTIC BEHAVIOUR A MUST***	***ASYMMETRIC PROFILES NEEDED***
Markets offer access to non-linear payoffs	*Roaming across asset classes in pursuing cheapest way to implement the view*	*Monetary Policy Experimentation means uncharted territory, need for convexity / long gamma*

WHERE DOES IT LEAD TO IN TERMS OF PORTFOLIO CONSTRUCTION

VALUE BOOK Long-Term holdings *Infantry*	HEDGING BOOK Treasury of optionality *Catapult*	TACTICAL BOOK Intra-day trading *Cavalry*



DYNAMIC PORTFOLIO CONSTRUCTION

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PORTFOLIO BOOKS

	VALUE	HEDGING & CHEAP OPTIONALITY	TACTICAL TRADING
INVESTMENT APPROACH	*Core Global Asset Allocation*	*(i) Hedge Value Sleeve's long positions when required;* *(ii) Macro hedges against pre-identified scenarios.*	*Intra-day tactical trading, on up to 20 different underlying securities, across asset classes*
SECURITIES EMPLOYED	*Fixed Income* *Equity*	*Listed Options / OTCs* *Futures & Forwards*	*Futures & Forwards*
HOLDING PERIOD	*12 – 24 months*	*1 – 9 months*	*Intra-day*
TYPICAL RISK ALLOCATION[1]	*80%*	*10%*	*10%*

[1] The target allocations are subject to change at any time, and may not be representative of the portfolios' past or future exposure. It should not be considered a recommendation or investment advice.

PORTFOLIO EXPOSURES

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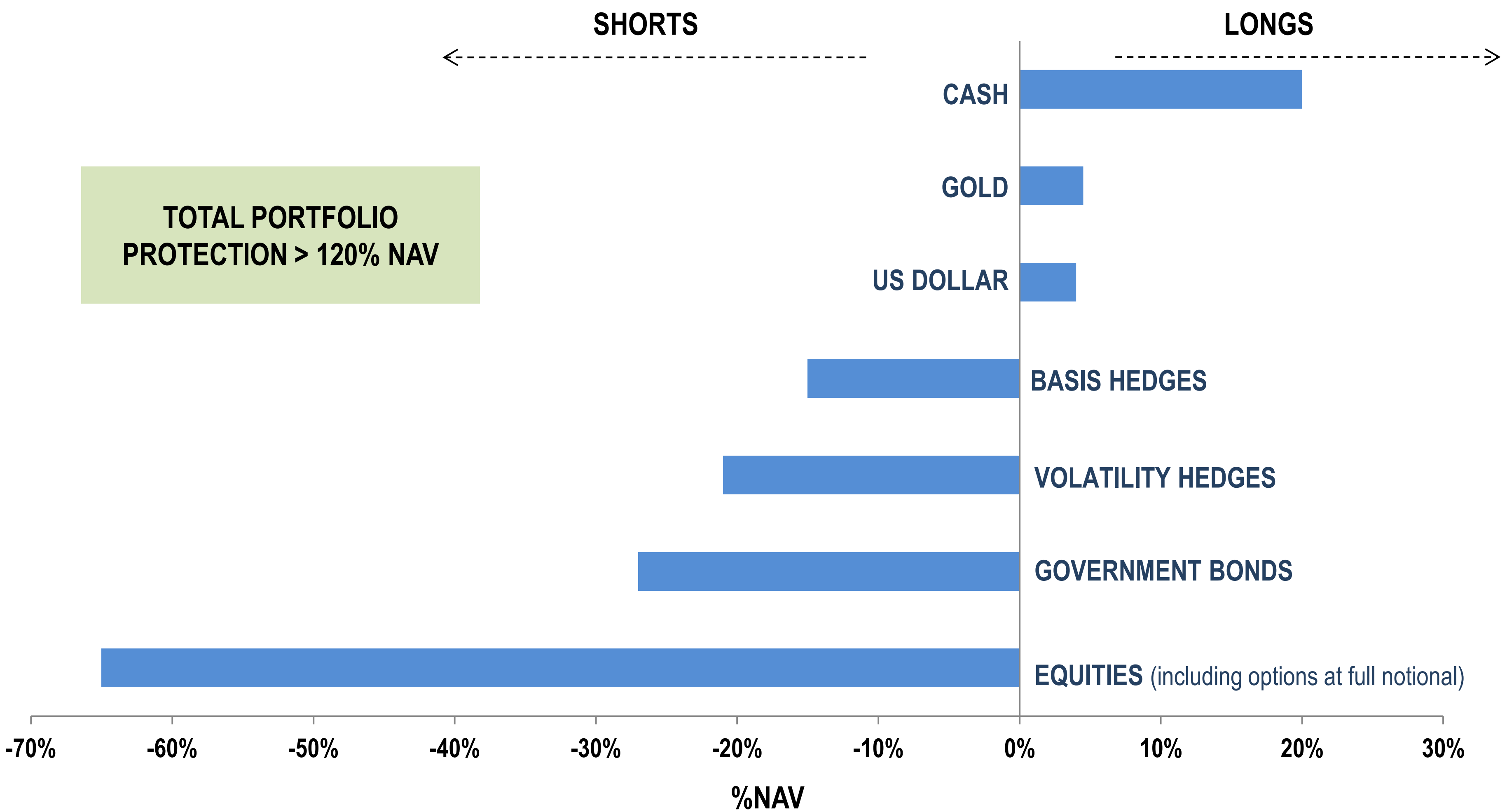
COMPOSITION OF THE PORTFOLIO AS OF OCTOBER 2017



TOTAL PORTFOLIO PROTECTION > 120% NAV

OUR THESIS

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TWIN BUBBLES MEET QUANTITATIVE TIGHTENING

Our stance remains that we live through **TWIN BUBBLES IN FINANCIAL ASSETS, AND A DANGEROUS MARKET STRUCTURE** dominated by passive investors ready to flee markets if the regime of low volatility shifts, in **EPHEMERAL LIQUIDITY** ready to evaporate when most needed. All the while, the **LIQUIDITY TIDE FROM CENTRAL BANKS IS RUNNING OUT OF STEAM**, exposing those stratospheric valuations to their **FIRST REAL CRASH TEST IN A DECADE.**

Interesting times lie ahead, **ON THE INEVITABLE ADJUSTMENT IN RISK ASSETS THAT ENSUES.** It is **FLOWS** that induced the rally in Equity and Bond markets, and it is flows that may take that away, **ORDERLY OR DISORDERLY**.

Our thesis is presented in our latest Investment Outlook and Fasanara Cookie and recently discussed at CNBC in this video and this video.

SHORT EQUITY, SHORT BONDS, LONG VOLATILITY, HIGH CONVEXITY

FASANARA CAPITAL

In this weak macro scenario, we are positioned for reality to sink in, at some point over the next months. We do not believe for the current state of affairs to be sustainable. The low volatility environment is enticing into risk assets vast categories of investors typically risk averse. The suppression of volatility is not a suppression of risk. The unconventional macro environment should command higher risk premia, not lower.

The steepest risk resides in balanced portfolios, the largest living generations of portfolios globally, as they are long both equities and bonds, expecting bonds to save the day when equities sell-off. Critically though, bonds are close enough to the zero-bound (and oftentimes in negative territory) to make such hedge ineffective, when the time comes. Indeed, in financial history, bonds are more often than not positively correlated to bonds, meaning that equities may decline together with bonds next time around, badly damaging most investors in the process. **This is the time to look for alternative ways to position the portfolio, in acknowledgement of (i) how full valuations are, (ii) how unsustainable the present times are, (iii) how deep correlation risks run.**

To us, the answer is an **UNCONVENTIONAL PORTFOLIO**, suited for the current unconventional times. **SHORT BONDS, SHORT EQUITIES**, patiently waiting for the unstable equilibrium to snap off position. A portfolio **LONG IN VOLATILITY, RICH IN CONVEXITY**. Constantly screening the markets for asymmetric profiles and pockets of hidden optionality. **long Gold, long US Dollar. Long geopolitical risk, long monetary policy shift risk, long populism, short illiquidity, short duration, short negative rates, long protection.**

RELATED READINGS

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- Possible new FED chairman after Yellen, Kevin Warsh, speaks of the dangers of a FED who became slave to the S&P Video
- The Liquidation of Government Debt, Carmen M. Reinhart and M. Belen Sbrancia, IMF Read
- How was the Quantitative Easing Program of the 1930s Unwound? Jaremski / Mathy Read
- "Ultra-low or negative interest rates: what they mean for financial stability and growth", Bank for International Settlements Read
- "Negative Real Interest Rates: The Conundrum for Investment and Spending Policies", CFA Institute Read
- "Negative interest rate policies : sources and implications", World Bank Group Read
- "Why negative interest rate policy (NIRP) is ineffective and dangerous", WordPress Read
- ETFs Create Stock Markets That Are Both Mindless and Too Expensive, Study Says, Bloomberg Read
- JPMorgan Explains What Causes The Market's 3:30pm Ramp | Zero Hedge Read
- "VIX ETFs contributed to August turmoil", The Financial Times Read
- "Does a 263% Profit Mean Markets Are Efficient?", The Wall Street Journal Read
- Possible ''Termination Events'' on Volatility-Linked Notes, Six Figure Investing Read
- Possible ''Liquidity Gates'' on Volatility-Linked Notes, ETFSTRATEGY Read and Read

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Insights from the team

Our Outlooks, Cookies and Scenarios on the market

Outlooks

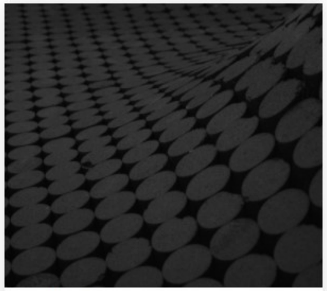
July 2017:
Twin Bubble meets
Quantitative Tightening

Cookies

Measuring the Bond Bubble:
The 'Real Rate to Growth' Ratio

Scenarios

The Market Economy in 2020.
The Emergence of a New
Monetary Orthodoxy



Outlooks

May 2017:
Fake Markets

Cookies

Measuring the Equity Bubble:
The 'Peak PEG' ratio

Cookies

How to play EU outperformance
vs the US: between equity,
rates and currencies

For most recent research, videos, interviews and market commentaries:

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Fixed income securities may be subject to interest rate and credit/default risk. Interest rate risk involves the risk that prices of securities will rise and fall in response to interest rate changes. Credit/default risk involves the risk that the credit rating of a security may be lowered or the possibility that the issuer of the security will not be able to make principal and interest payments when due.

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