



Learn to Invest, Like a Legend
Behavioral Finance, Mean Reversions and the red pill

Don't have debt rise faster than income ...

... because your debt burdens will eventually crush you.”

“Don't have income rise faster than productivity ...

... because you'll eventually become uncompetitive.”

“Do all that you can to raise your productivity ...

... because in the long run, that's what matters most.”

Warming up....

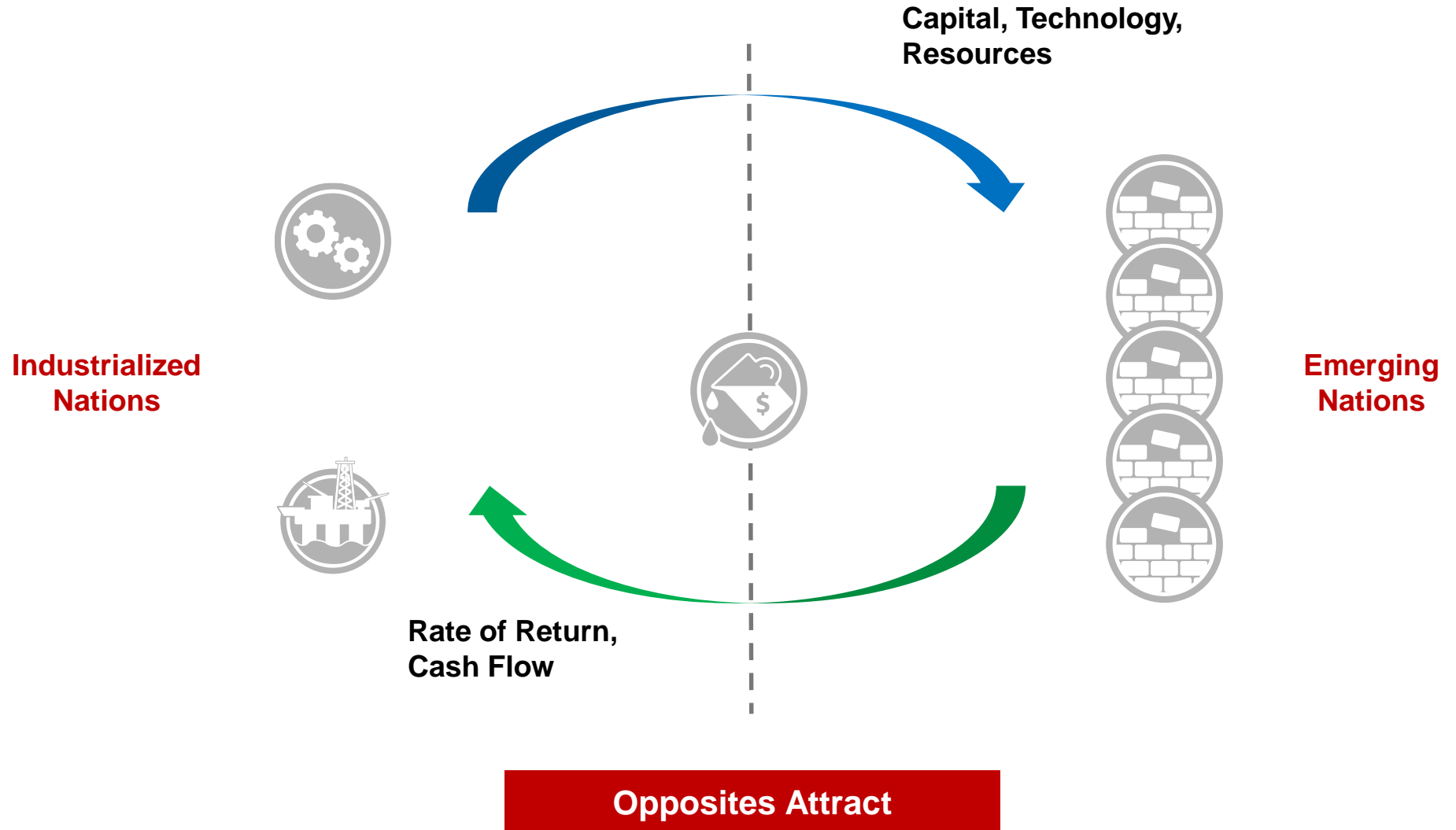
A currency union in Europe was formed 6 times in history and each time it broke up...

A wild fire in Russia that destroyed an entire wheat crop in 2010 was the cause of the Arab Spring in 2011...

The Sheikh of Dubai made personal appearances in the Media 5 times in one month before defaulting on its debt in Nov 2009...

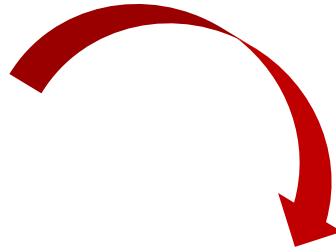
A national election immediately following a period of prolonged and high inflation has led to the rise of Nationalists...

Simple View of the Investing World



Theatre & Actors

**Means of
Production**



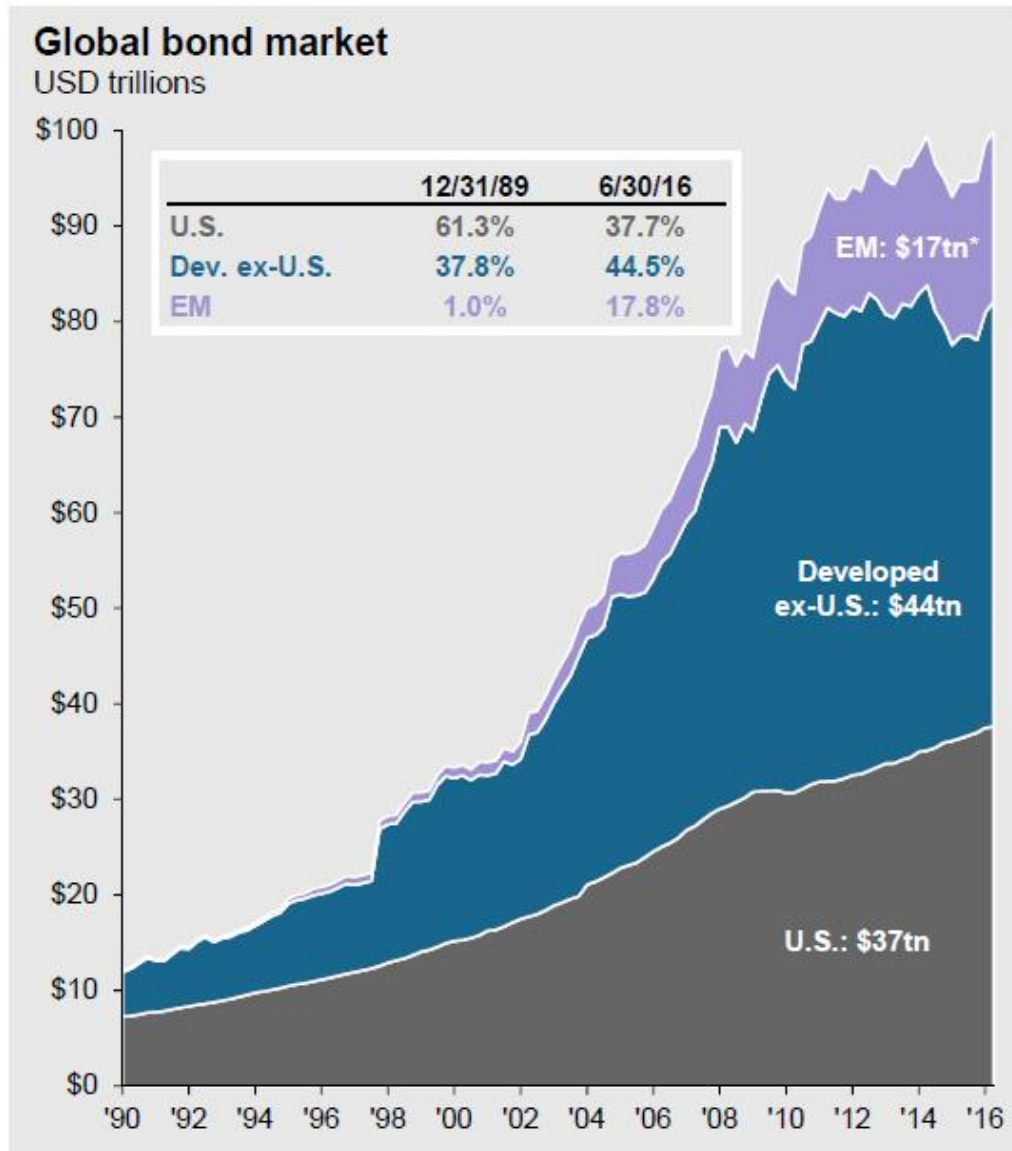
**Wealth of
Nations**

**Potent
Directors**

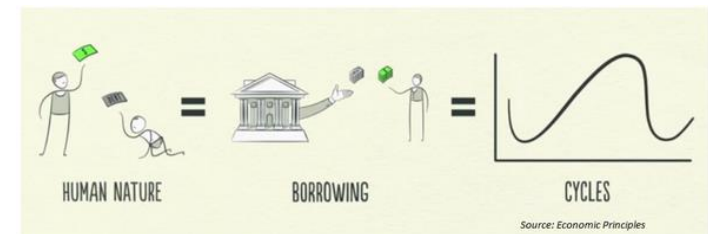


It's a Zero Sum Game

Understanding debt is key to investing success



Debt Cycles



Debt drives growth

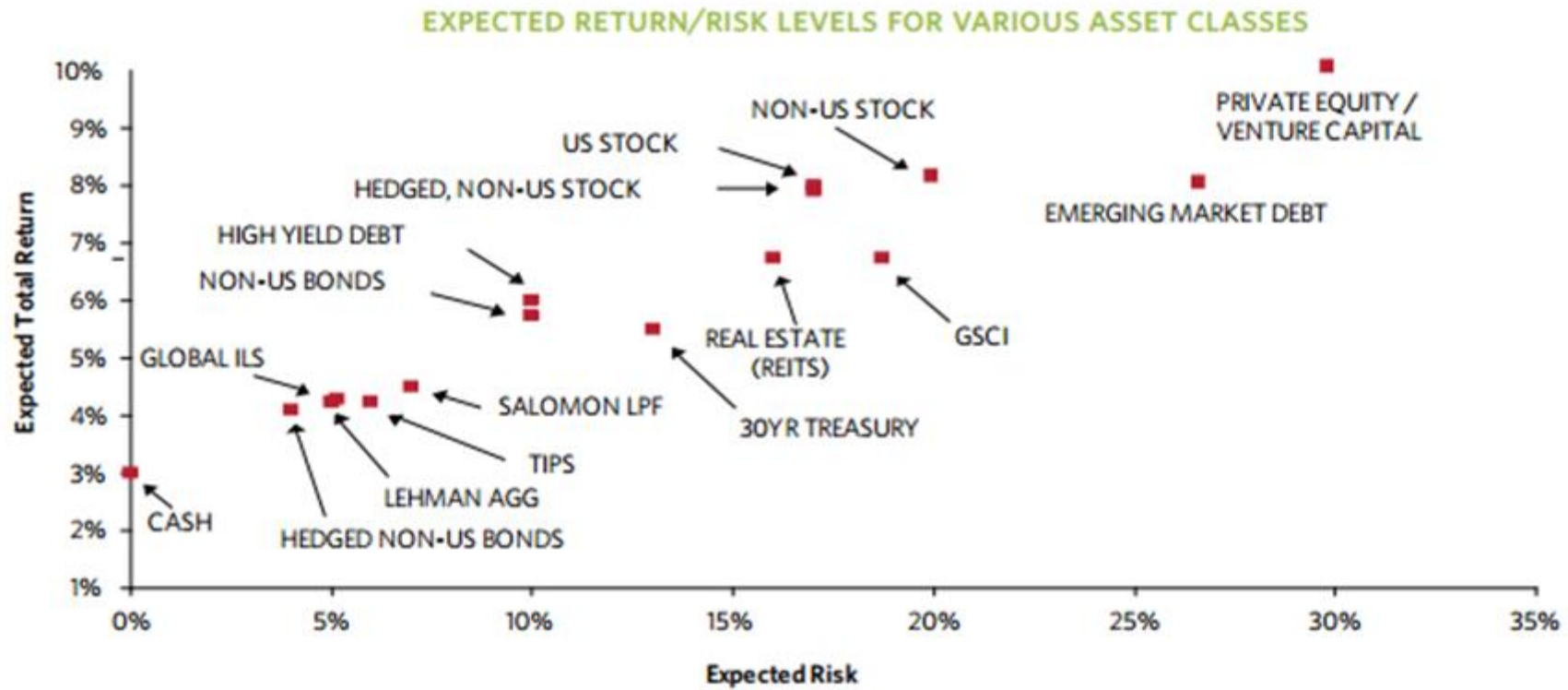
Two types

- Self-fulfilling, Productivity enhancing
- Non Self-fulfilling

Managing debt

- **Requires strong institutions**
- **Reforms and Capitalism**
- **Synchronization of**
 - Money printing
 - Fiscal stimulus
 - Debt restructuring and
 - Bankruptcy

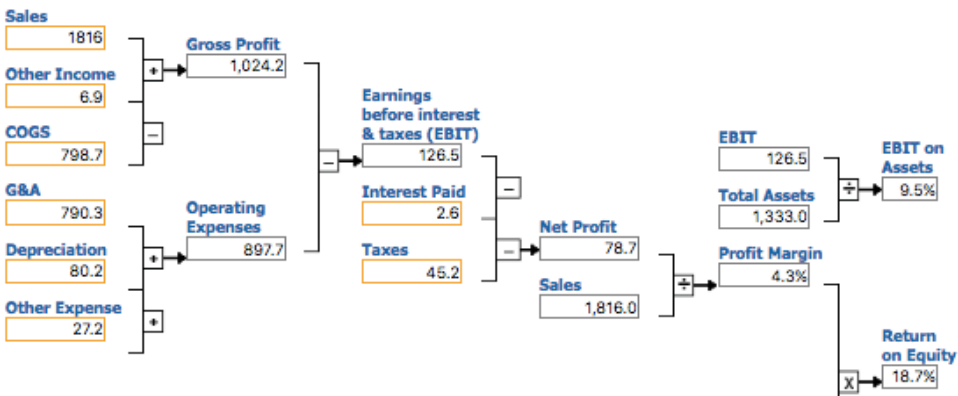
Risk/Return profiles of Asset Classes



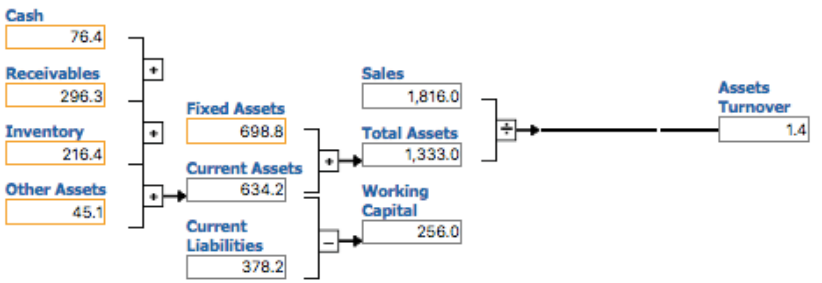
$$E(R_i) = R_f + \beta * [E(R_m) - R_f]$$

Dupont Analysis

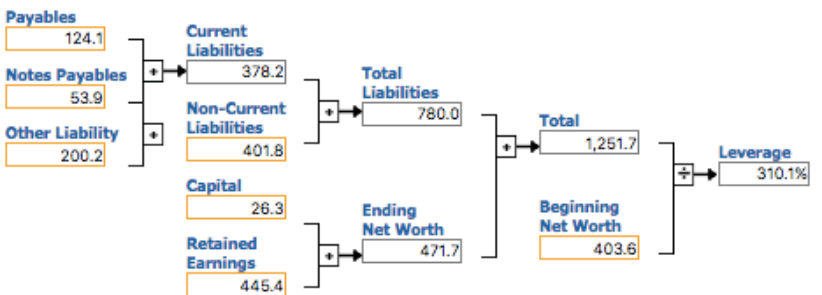
Income Statement



Assets



Liabilities & Equity



$$RoE = Net\ Income / Shareholders\ Equity$$

$$RoE = [NI / Sales]$$

$$* [Sales/Assets]$$

$$* [Assets/SE]$$

Margins

Turnover

Leverage

The Altman Z Score Model

$$\text{Z-Score} = 1.2 * X_1 + 1.4 * X_2 + 3.3 * X_3 + 0.6 * X_4 + 1.0 * X_5$$

$$X_1 = \frac{\text{Working Capital}}{\text{Total Assets}}$$

$$X_2 = \frac{\text{Retained Earnings}}{\text{Total Assets}}$$

$$X_3 = \frac{\text{EBIT}}{\text{Total Assets}}$$

$$X_4 = \frac{\text{Mkt Value of Equity}}{\text{Total Liabilities}}$$

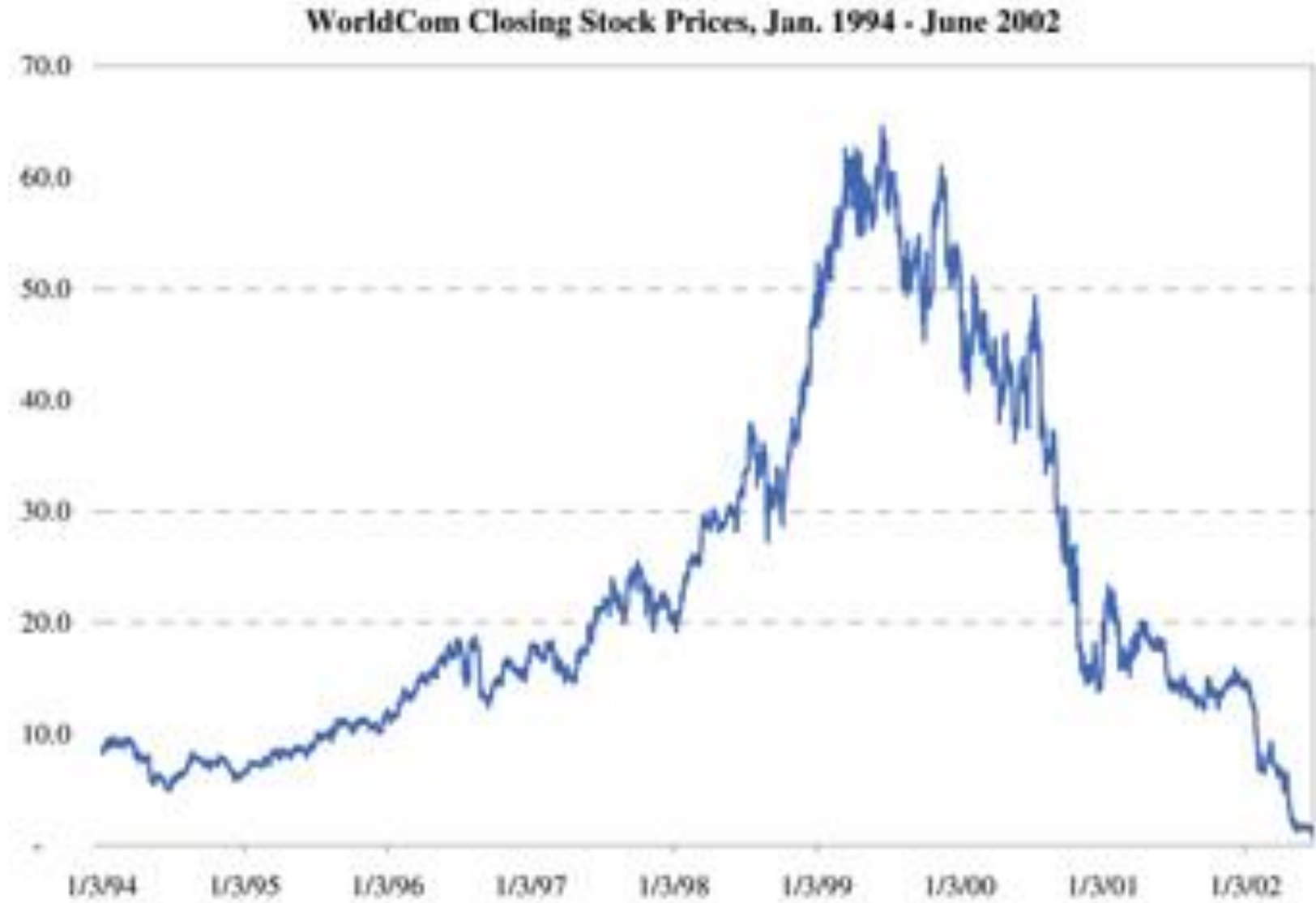
$$X_5 = \frac{\text{Sales}}{\text{Total Assets}}$$

Healthy Company = Z-Score > 2.6

Companies in grey zone = $1.1 < \text{Z-Score} < 2.6$

Failing Company = Z-Score < 1.1

Worldcom Saga



Z-Score

2.5

1.4

0.85

Building Scenarios is key to investing success



Short downturn in 2013, fast recovery

- Recession in 2013
- Fast recovery in 2014

Future perspective

Return to old growth rates

- Strong electoral verdict
- Policy visibility & certainty
- Liquid global markets

Supporting events

If the current trend continues and grows stronger

- Equity and asset prices rally
- Improvement in economic indicators, currency, BoP



Recovery by the end of 2014, early 2015 – followed by second downturn; permanent recovery delayed further

- Short-term recovery can indicate companies and politicians refrain from adjusting to new realities
- Second downturn potentially deeper, stronger and broader

Only low growth rates likely

- Minority Govt. leading to delayed but still effective policies
- Recovery after 2014/2015 potentially U- or L-shaped

Current recovery is brought down by hidden problems

- Positive trends are counter-balanced by negative effects (e.g. public debt, tax receipts)
- Select sectors show growth
- Uneven deleveraging
- Risk of stagflation



Long downturn until 2015, weak recovery in 2016

- Sub-par growth in 2013-15
- Gradually recovery in 2016

Structurally low growth rates

- Hung political verdict
- Lack of demand; Capex cycle disrupted
- Country no longer able to attract capital
- Currency crisis; Downgrade

Current trends worsen

- New structure of trade paralyzes growth
- Increase in unemployment and social spending
- Rise in direct/indirect taxes
- Capital controls

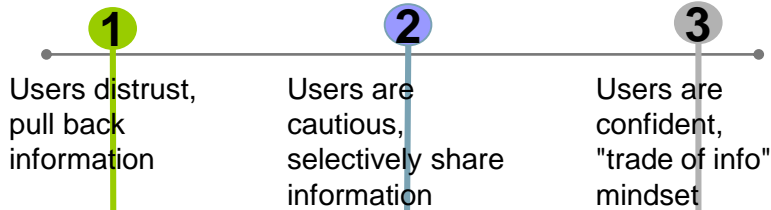
Building Scenarios is key to investing success

Trend

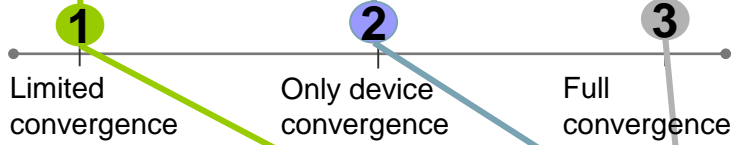
Potential outcomes

Trend "Act"

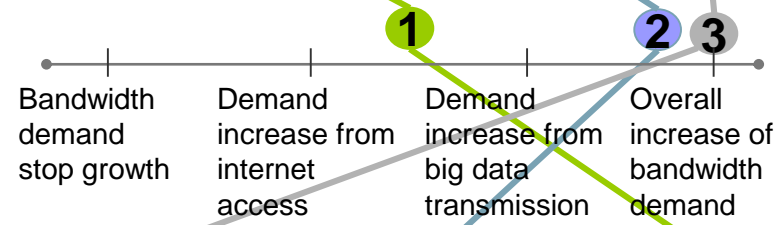
Rising data privacy / security concerns



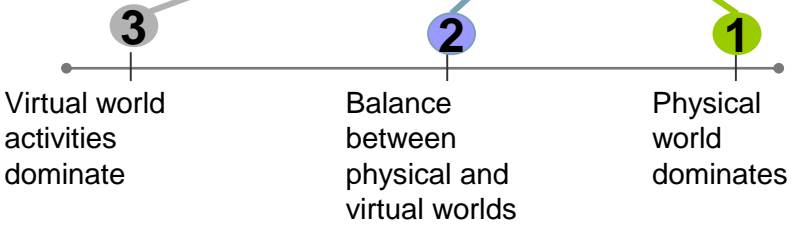
Convergence



Sustained increase of bandwidth demand



New online communities



Act 1

Things are detached

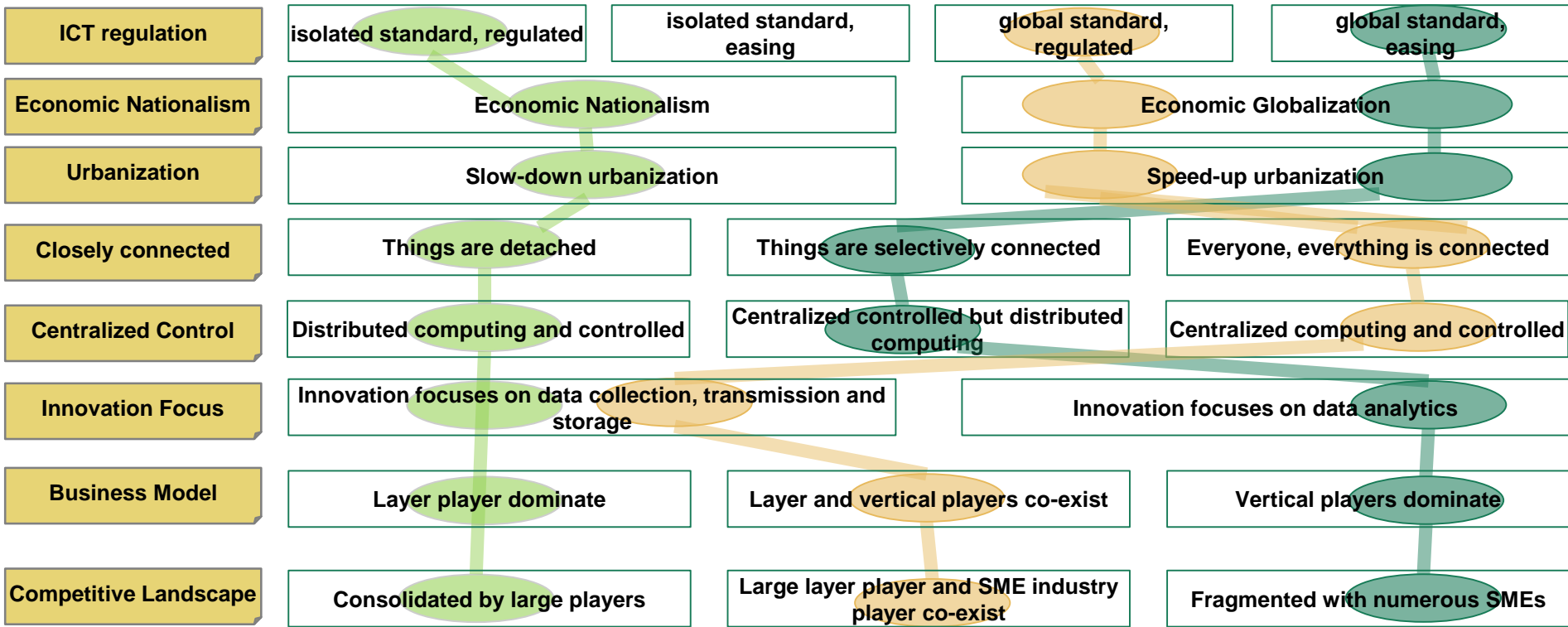
Act 2

Things are selectively connected

Act 3

Everyone, everything is connected

Building Scenarios is key to investing success

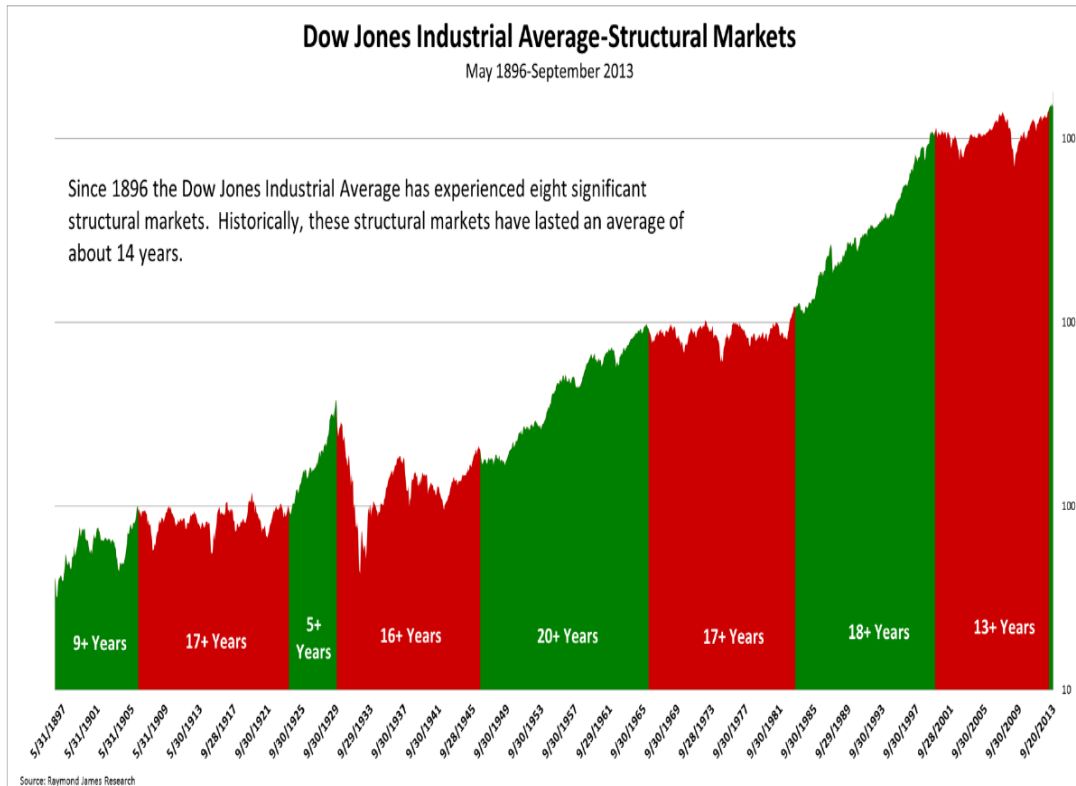


1 "A Cautious, Detached World"

2 "A Horizontal Connected World"

3 "A Vertical Connected World"

Understand market cycles



Everything is a cycle

Presidential cycles

- 8 year cycle (US)
- 12 year cycle (China)
- 17 year cycle (India)

Commodity cycles

- 50% margin rule
- 30 year cycles

Asset cycles

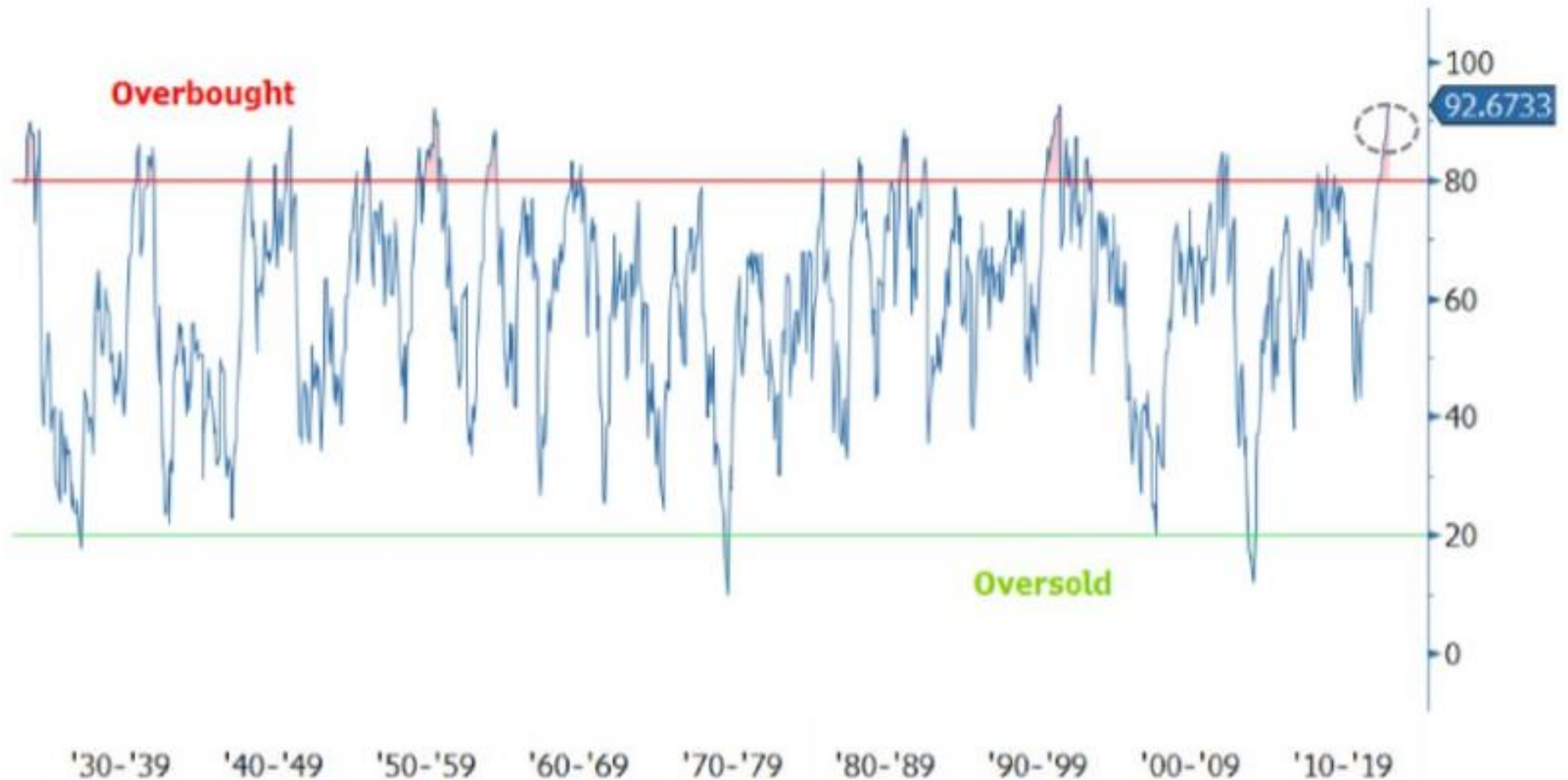
- Infrastructure – 25 years
- Real Estate – 12 years

Catch-all Cycles

- Kutchin – 3 to 5 years
- Juglar – 7 to 11 years
- Kuznets – 15 to 25 years
- Kondratief – 40 to 60 years

Confluence and Liquidity Events

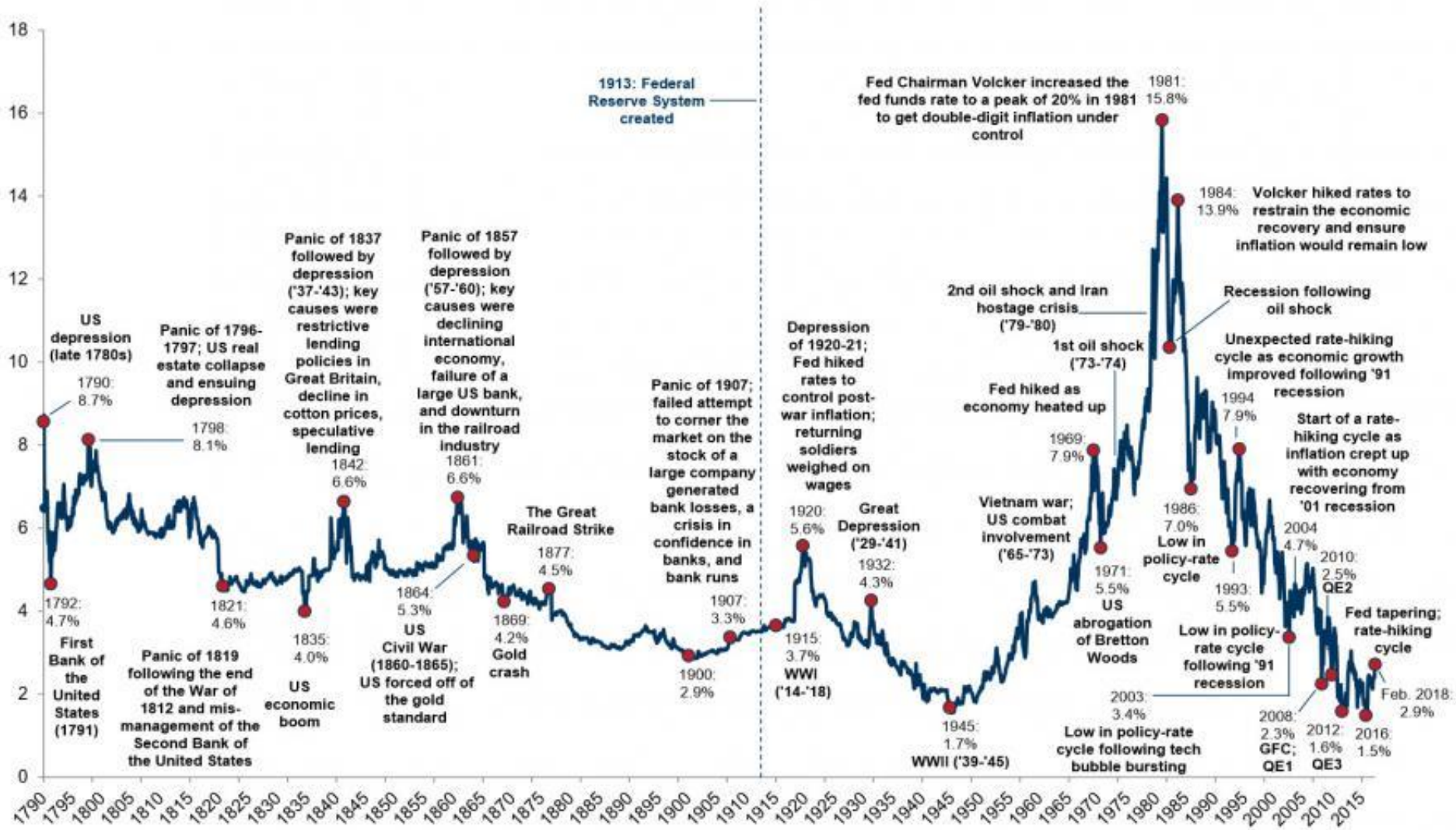
S&P 500 - Mean Reversion



Source: Bloomberg, Morgan Stanley Research. As of Jan. 4, 2017. Period = 9.

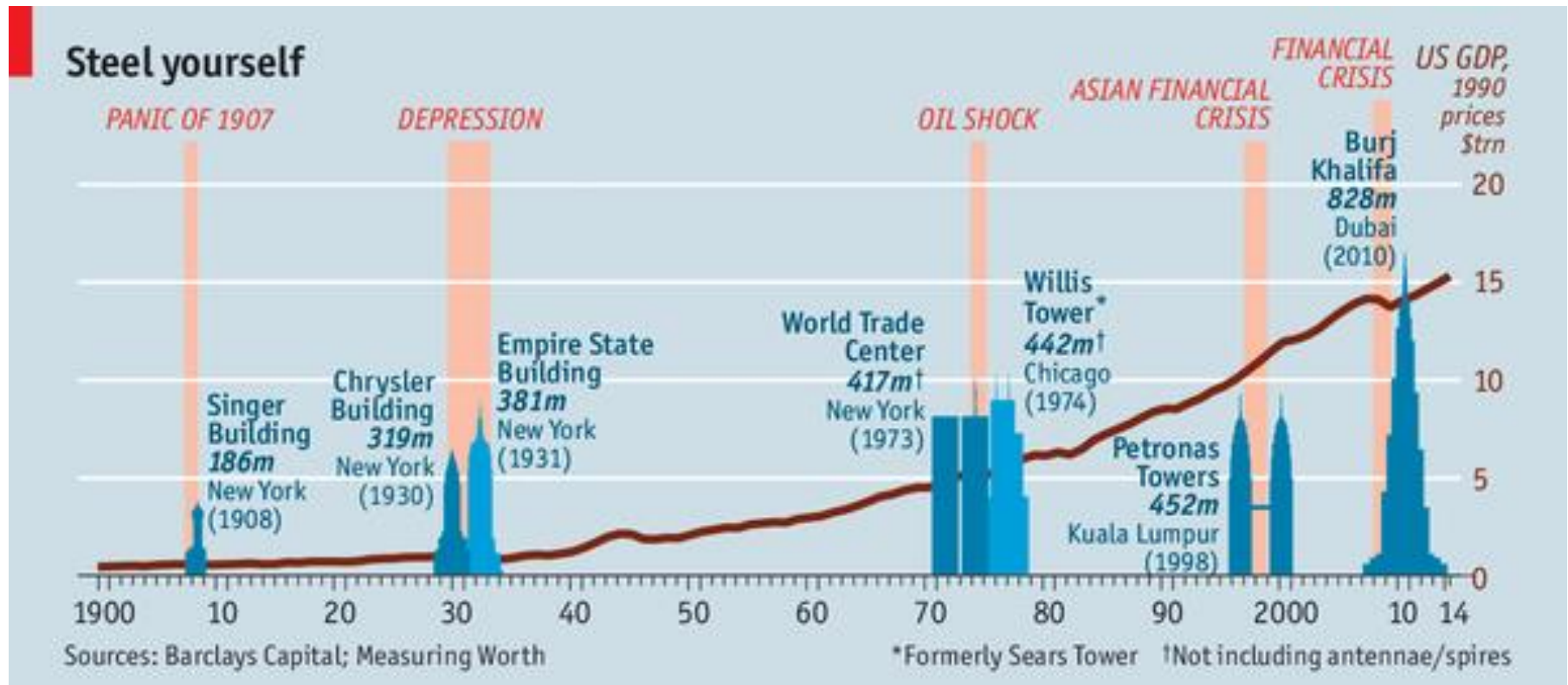
Fodder for thought - Thus Spoke Zarathustra

10-Year US Treasury Yield, %

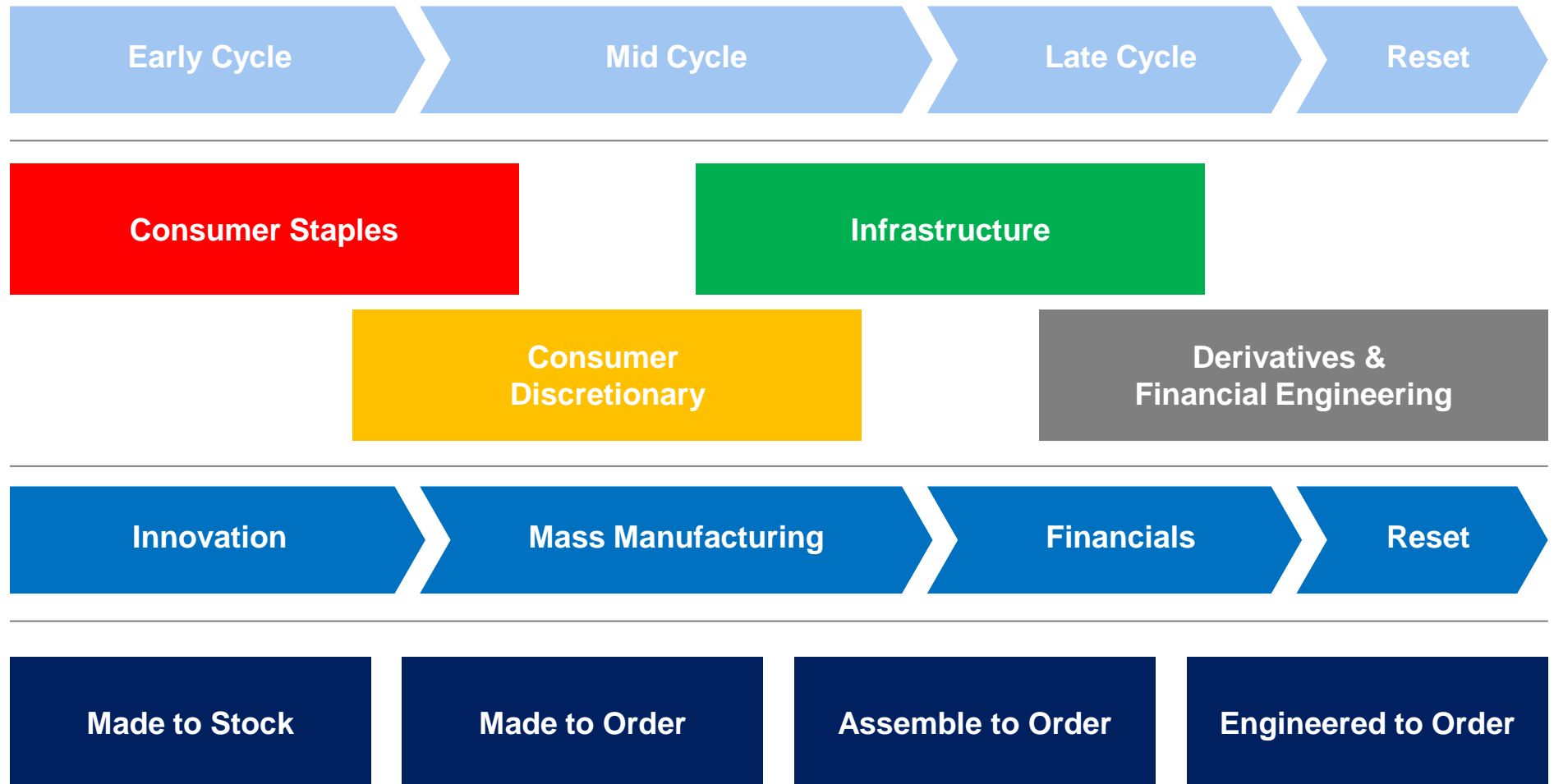


Source: Global Financial Data, Inc., Federal Reserve Board, Haver Analytics, Goldman Sachs Global Investment Research.

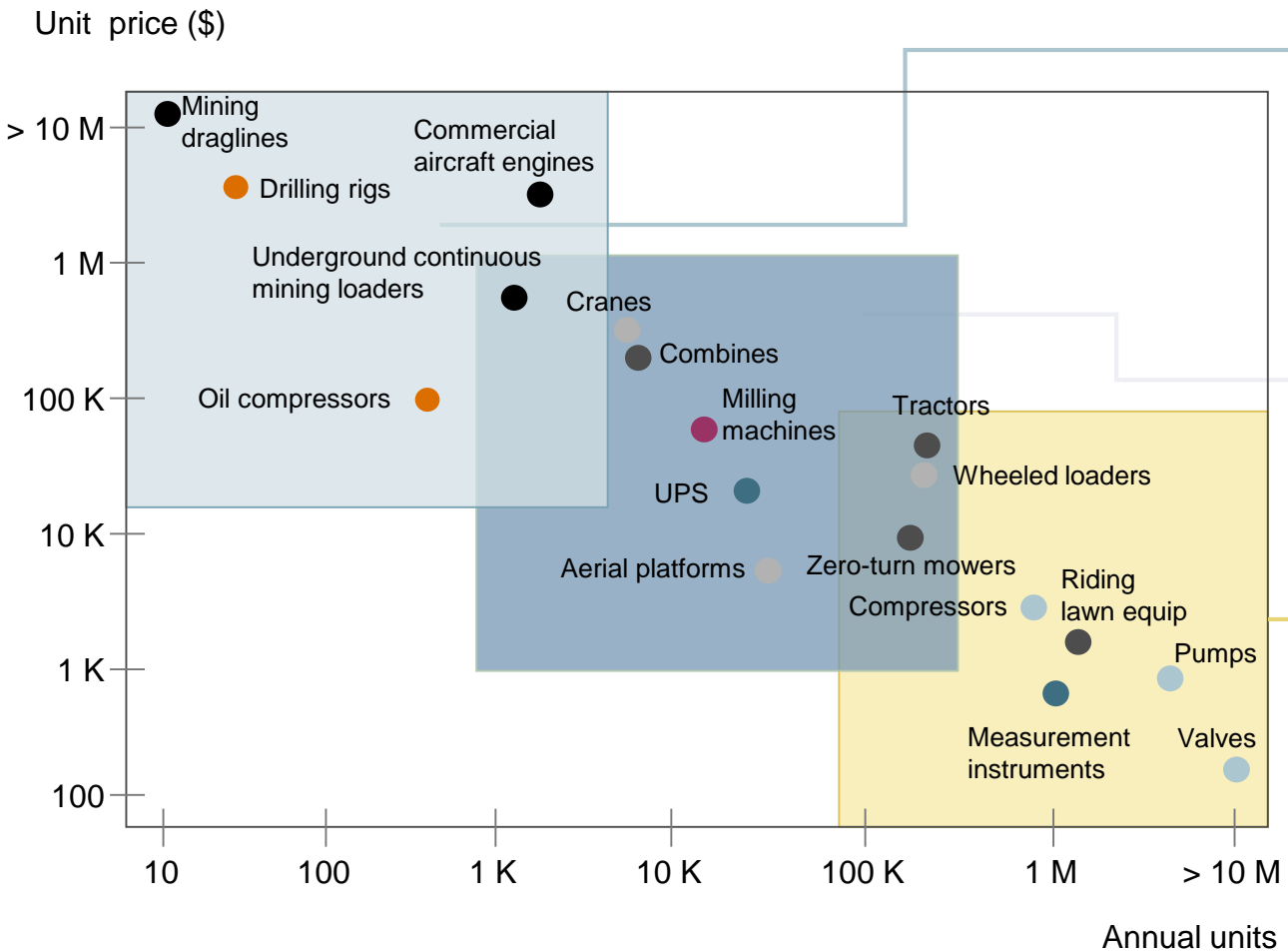
Measuring Social Mood



Understanding Cycles & Sectors



Understanding Cycles & Sectors - Another view of companies



Nature of competition

High price, low volume

- Global scale, global markets, few big global players
- Large multi-decade engineering projects
- Highly customized/specialized products
- Project financing
- Service intensive, often 50% of revenue
- Winning position #1, #2 globally

Medium price and volume

- Factory-scale business
- Dealer financing
- Homogenous, integrated dealer system critical to success
- Service sensitive; service through dealers
- Winning position – #1 or #2 player often within region

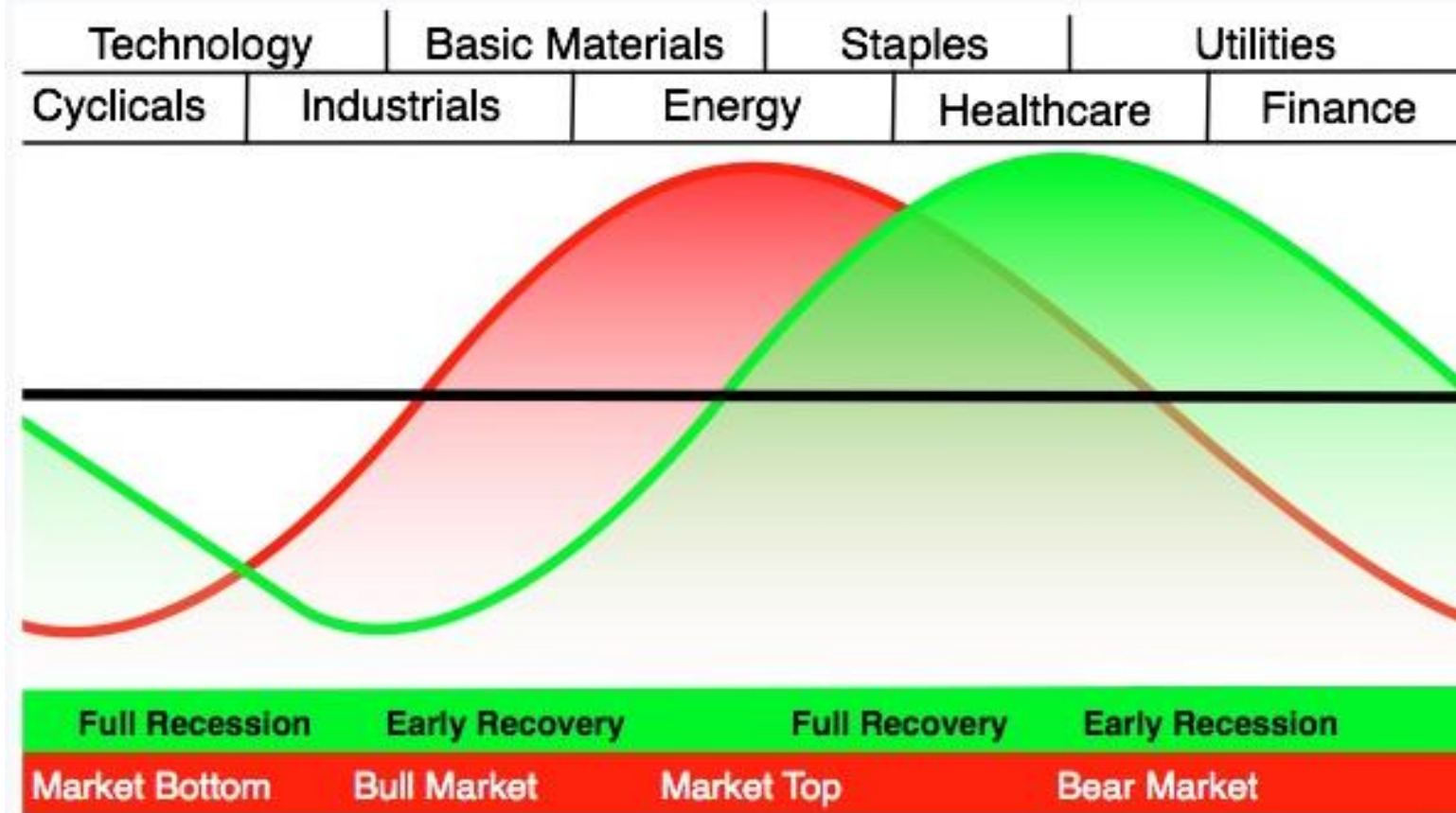
Low price, high volume

- Fragmented applications and end markets
- No financing
- Importance of independent dealers / retailers
- Market share by application critical
- Multiple winning positions

Note: units based on N. America sales
 Source: Website searches, Company analysis, Wachovia "NA Ag equipment demand" June 2008, World Oil (Oct 2005) newly manufactured US rig counts, Freedonia: "World turbines" (Jun 2008) and "Motors and generators" (Mar 2008), AEM, company 10K reports

Understanding Cycles & Sectors

Sector Rotation Model:



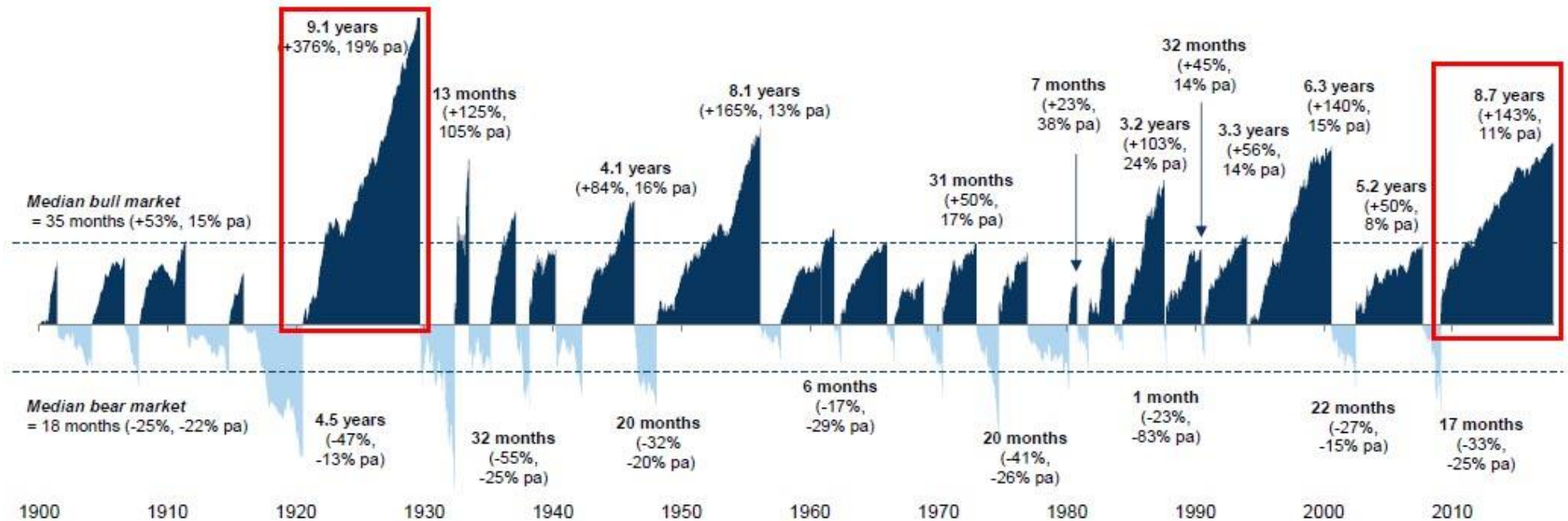
Legend: Market Cycle | Economic Cycle

Copyright (c), StockCharts.com

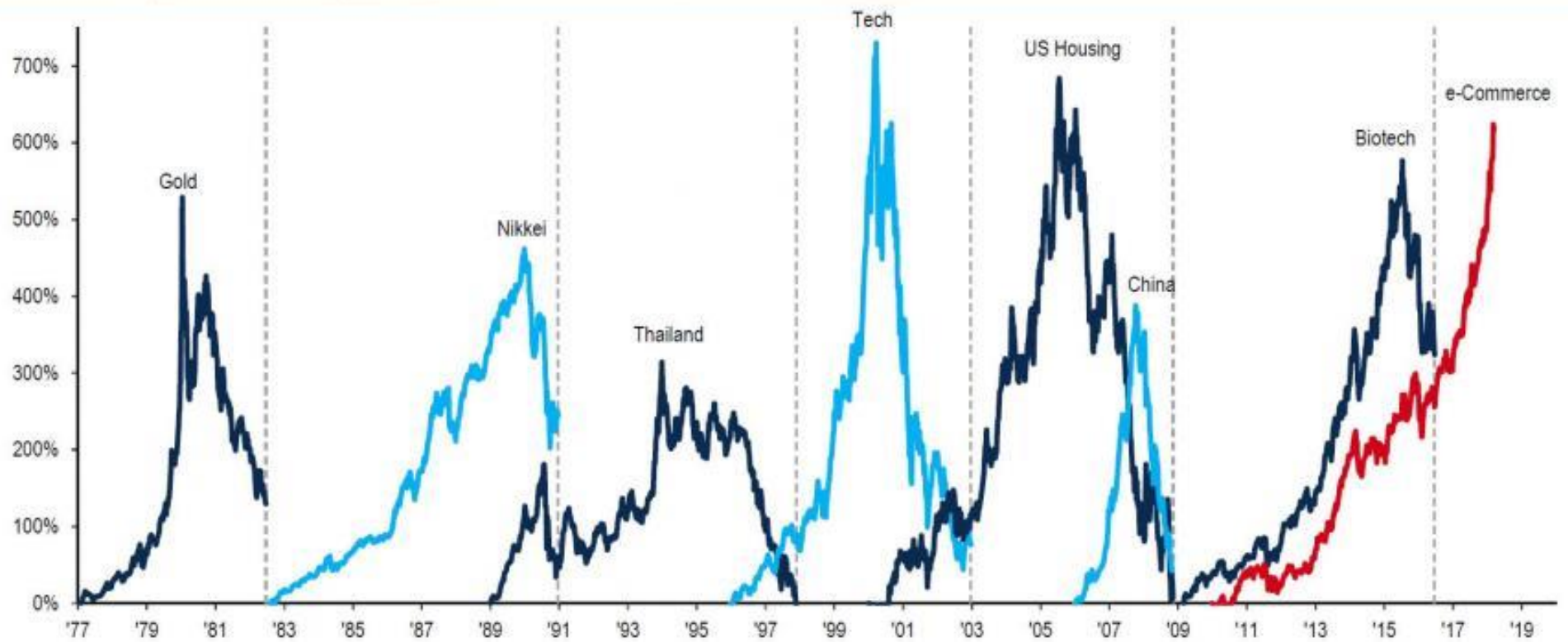
Winter is Coming and so is the opportunity...

We are nearing the longest 60/40 bull market without a 10% total return drawdown

60/40 bull and bear markets (real total return drawdown of more than 10%)



Bubble Trouble

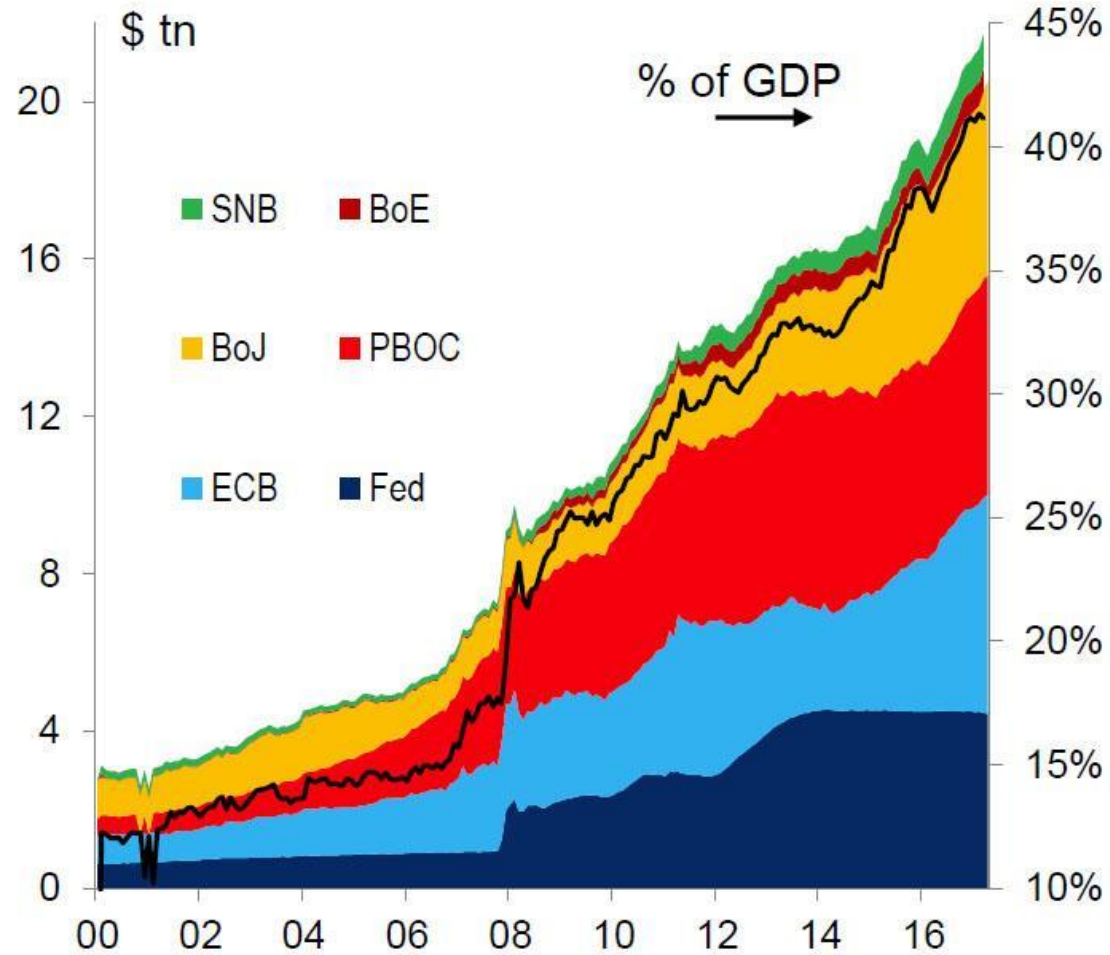


Source: BofA Merrill Lynch Global Investment Strategy, Bloomberg; Note: Gold (XAU Currency), Japanese Equities (NKY Index), Thai Equities (SET Index), Tech (NDX Index), US Housing (SSHOME Index), Commodities (SHCOMP Index), Biotech (NBI Index), e-Commerce (DJECOM Index)

Who is the largest investor in the market today?

A \$20tn stockpile

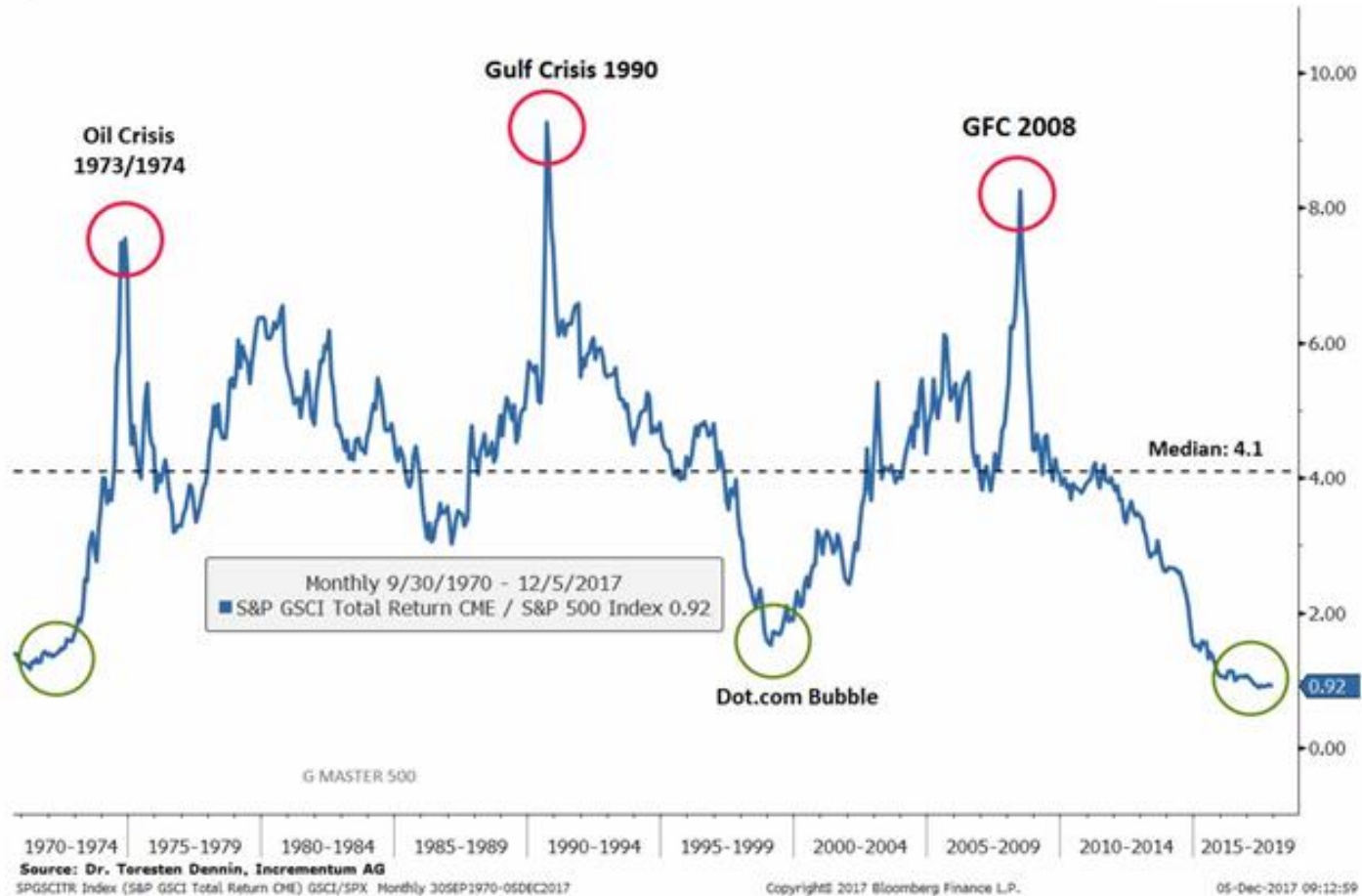
Global CB balance sheet assets



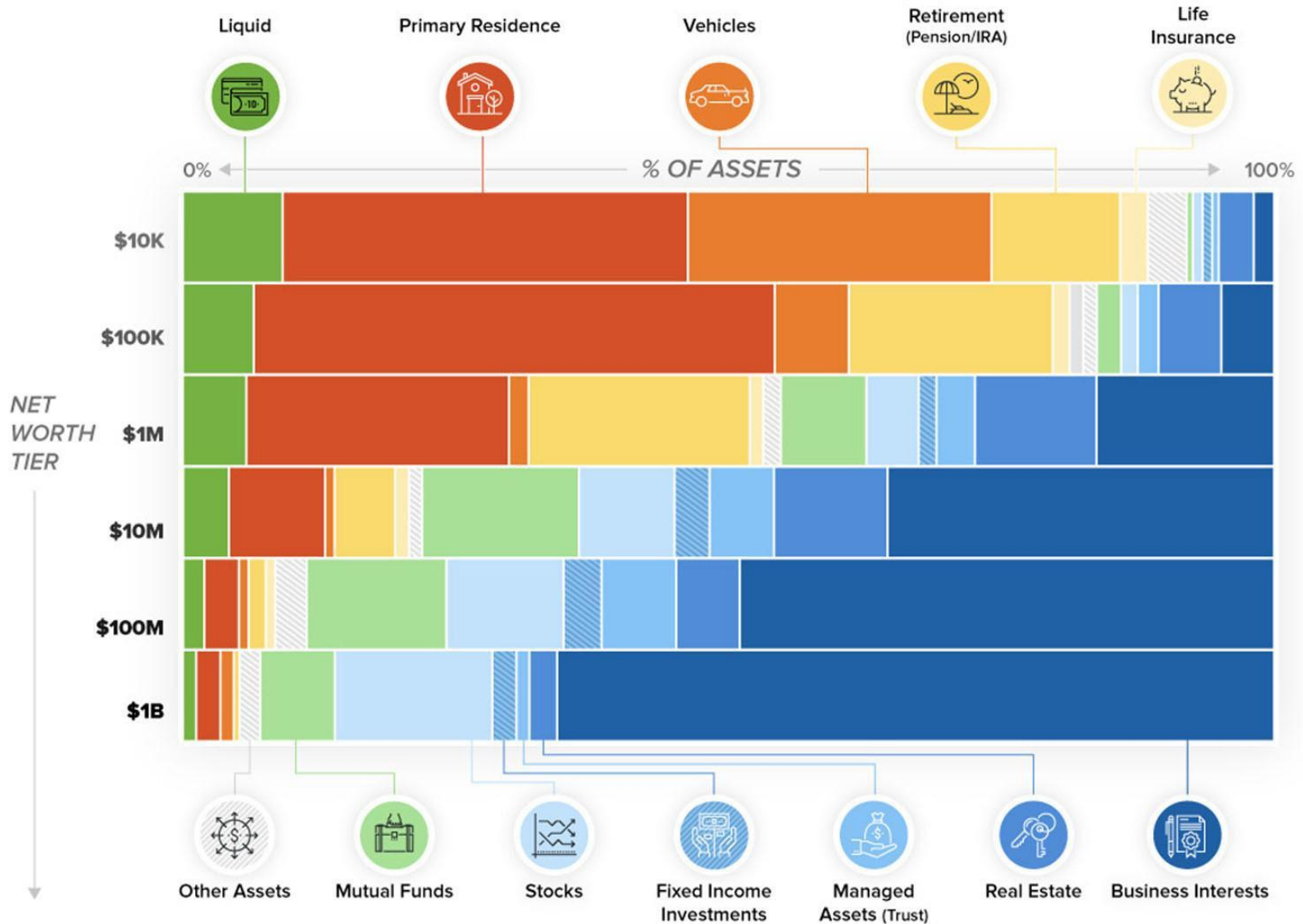
Source: National central banks.

Where are the opportunities next?

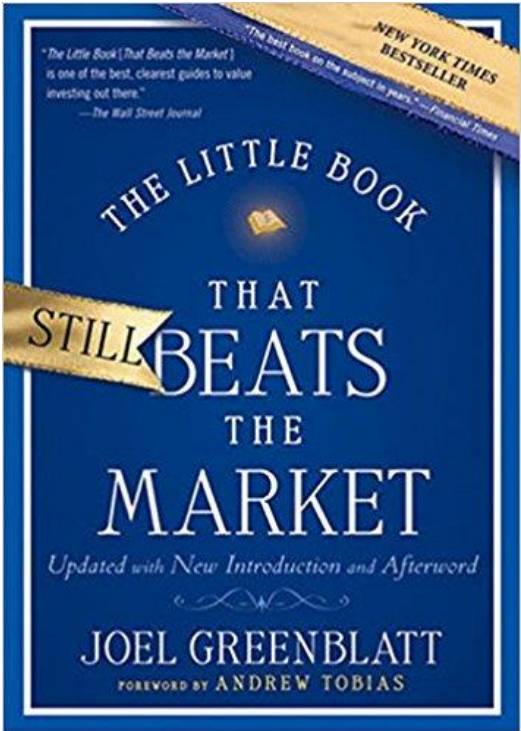
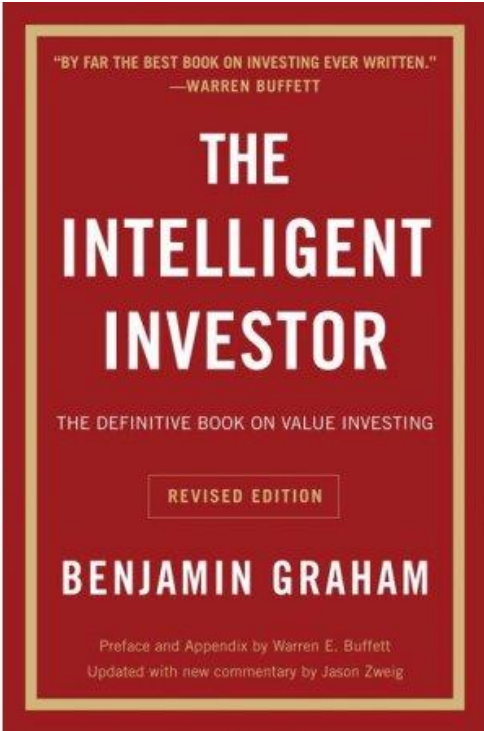
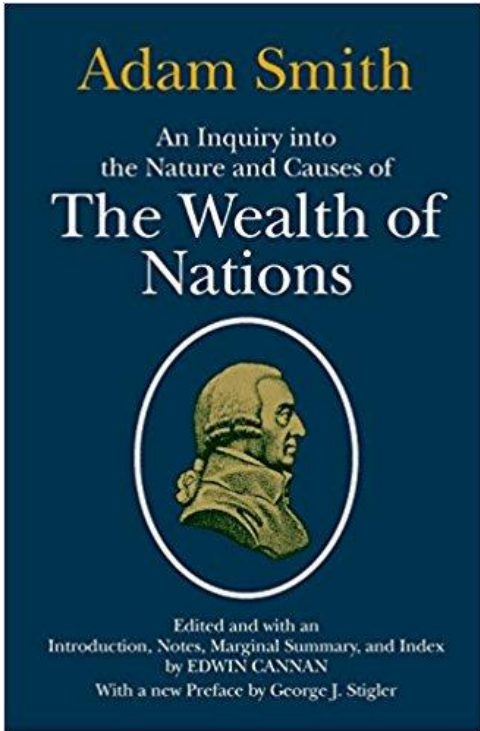
Equities vs. Commodities



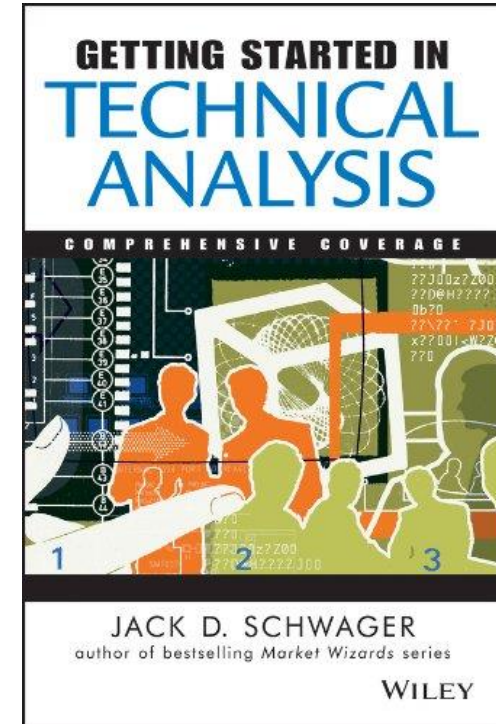
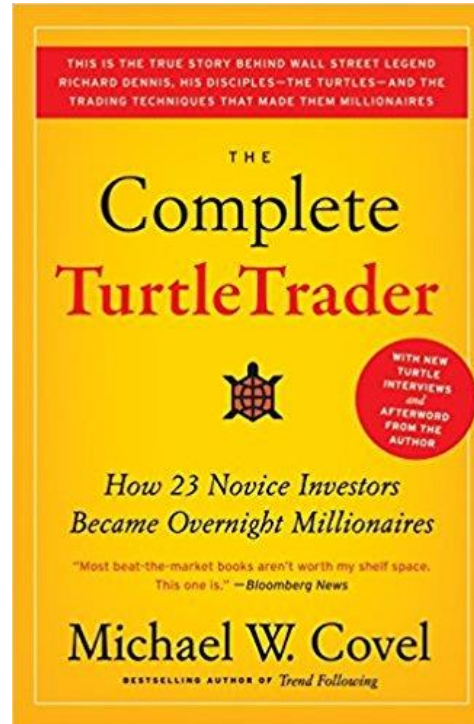
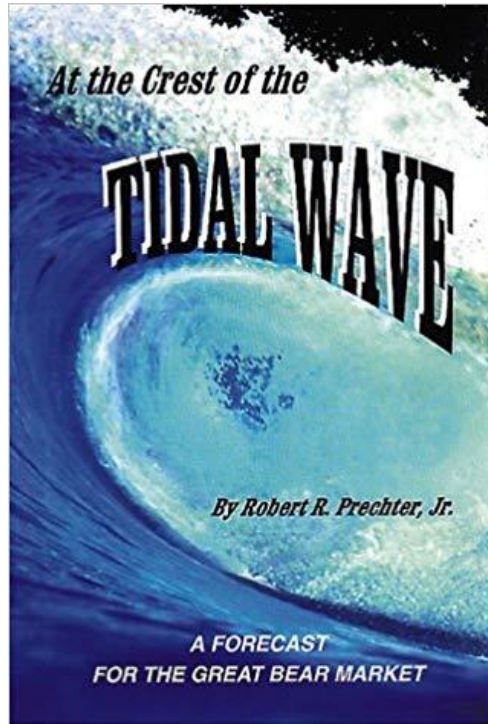
How do the rich and successful invest



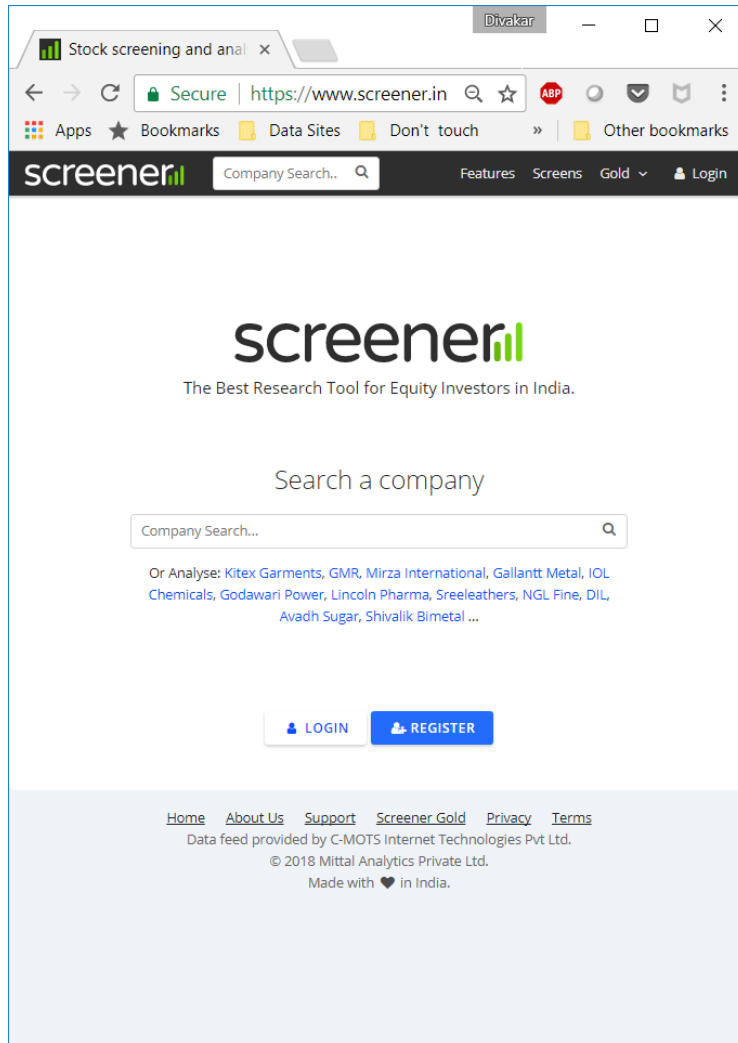
Books to read



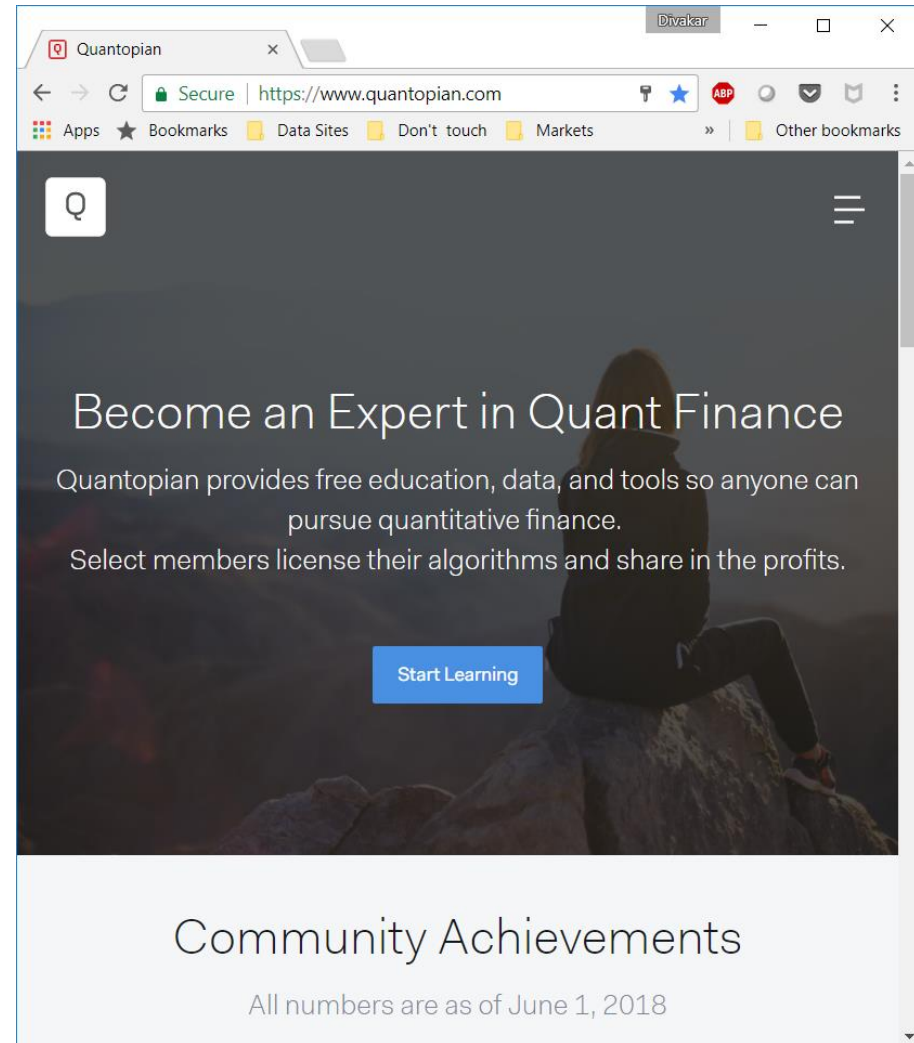
Books to read



Sites to Visit



The screenshot shows the homepage of Screener.in, a stock screening tool. The browser address bar displays "https://www.screener.in". The page features the Screener.in logo and the tagline "The Best Research Tool for Equity Investors in India." Below this is a search bar labeled "Search a company" with a "Company Search..." input field. A list of companies is provided as examples for analysis, including Kitex Garments, GMR, Mirza International, Gallantt Metal, IOL Chemicals, Godawari Power, Lincoln Pharma, Sreeleathers, NGL Fine, DIL, Avadh Sugar, and Shivalik Bimetal. At the bottom, there are "LOGIN" and "REGISTER" buttons. The footer contains links for Home, About Us, Support, Screener Gold, Privacy, and Terms, along with copyright information for Mittal Analytics Private Ltd. and a note that the site is made in India.



The screenshot shows the homepage of Quantopian, a platform for quantitative finance. The browser address bar displays "https://www.quantopian.com". The page features a large hero section with the headline "Become an Expert in Quant Finance" and the text "Quantopian provides free education, data, and tools so anyone can pursue quantitative finance. Select members license their algorithms and share in the profits." A prominent blue "Start Learning" button is visible. Below the hero section, there is a section titled "Community Achievements" with the subtitle "All numbers are as of June 1, 2018". The background of the hero section shows a person sitting on a rock, looking out over a landscape.

Sites to Visit

Markets: Overview - TeleTrader

Secure | https://www.teletrader.com

ABP

Apps Bookmarks Data Sites Don't touch Markets Temp Reading Productivity Tools Employers Other bookmarks

Search for ISIN / WKN / Name

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TeleTrader Public WebStation

0% HangS 0.72% Dax -0.08% Dow 0.49%

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WANT MORE? TeleTrader WebStation Real-time Terminal for institutional users

CHARTS

Dow Jones ... +0.49% Nasdaq 100 -0.34% EUR/USD +0.08%

LATEST NEWS

Bitcoin drops to lowest level since October 2017 (6m ago)

Bradley: No time for different Brexit deal (8m ago)

20m ago Euro area construction output up 2% in September

22m ago Nissan's board to vote on removing Ghosn - reports

28m ago Netanyahu avoids govt collapse as Bennett stays on

47m ago Apple cuts orders for new iPhone models - report

1h ago Russia not to blame for US leaving INF Treaty - Ryabkov

ECONOMIC CALENDAR

	Cons.	Prev.
3:30 PM !!! German Buba Month		
8:30 PM !!! NAHB Housing Marke	67.00	68.00
9:15 PM !!! FOMC Member Willia		
10:00 PM !!! 3-Month Bill Auction		2.34%
10:00 PM !!! 6-Month Bill Auction		2.47%
11/20/2018 !!! BoJ Monetary Policy		

INDICES

Name	Last	Date / Time	Chg. (%)
Dow Jones Industrial	25,413.22	DL	+0.49%
Nasdaq 100	6,867.015	DL	-0.34%
US SPX 500 Index	2,739.62	RT	+0.03%
UK 100 Index	7,035.50	RT	+0.11%
DAX	11,332.21	DL	-0.07%
CAC 40	5,024.66	DL	-0.01%
IBEX	9,056.80	EP	-
DB Italy 40 Index	18,990.00	RT	+0.05%
AEX	524.26	DL	+0.35%
OMX Stockholm 30	1,497.056	DL	-0.15%
Athex Composite	625.69	EP	-0.78%
SMI	8,892.5800	DL	-0.16%
RTX RUB	4,481.02	DL	+0.53%
BIST	117,432.600	DL	+0.35%
Nikkei 225	21,821.16	EP	+0.65%
Hang Seng	26,372.00	DL	+0.72%
KOSPI Composite I...	2,100.56	RT	+0.39%
Nifty 50	10,763.40	DL	+0.76%
S&P/ASX	5,693.70	DL	-0.64%
SSE Composite Index	2,703.51	EP	+0.91%

COMMODITIES

Name	Last	Chg. (%)	
Au Gold	1,221.78	RT	-0.00%
Ag Silver	14.42	RT	+0.00%
Pl Platinum	847.22	RT	+0.21%
Pd Palladium	1,182.66	RT	+0.36%

Coming Soon...

Learn to Invest, Like a Legend
“Charting” your way to Glory