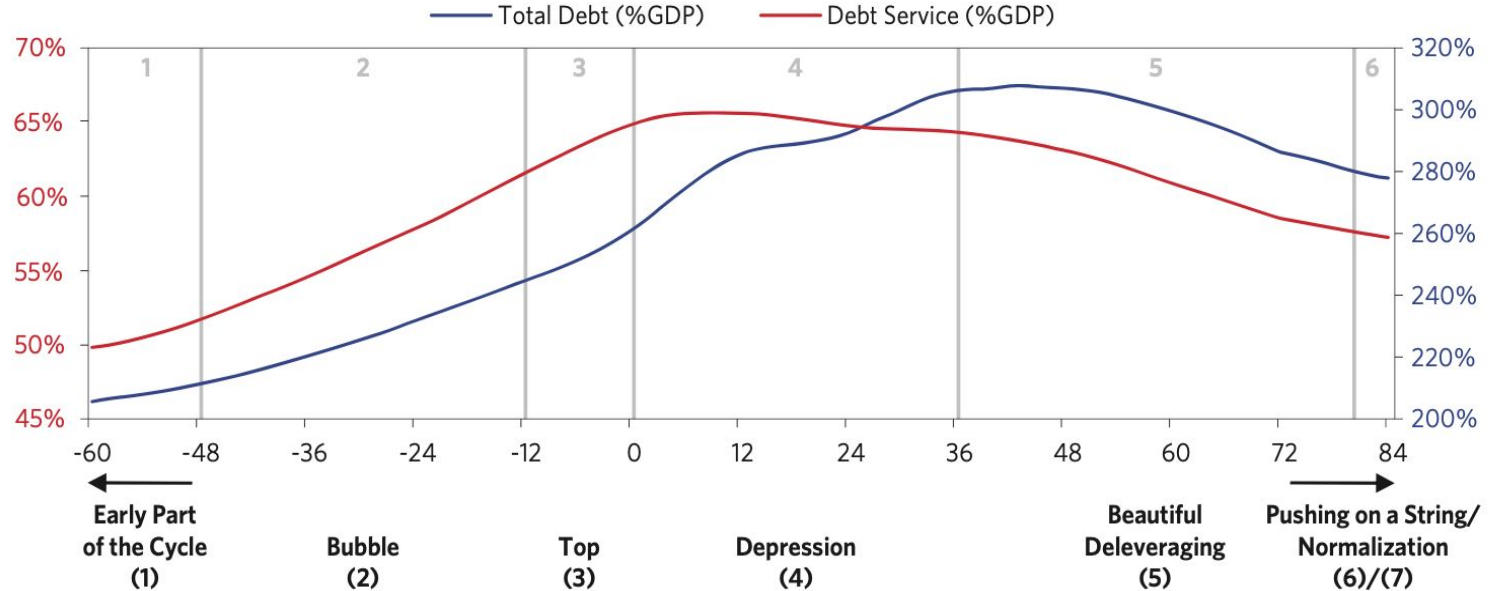


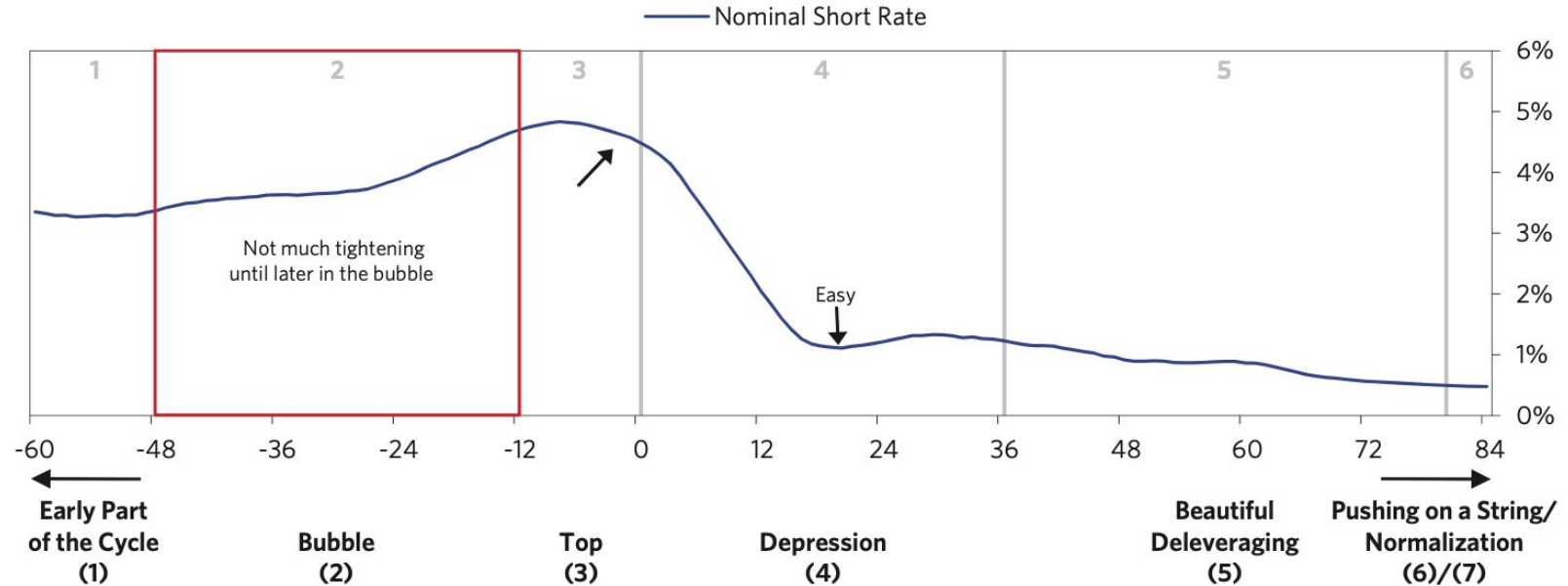
The Classic Phases of a Deflationary Debt Cycle

Debt as a Percentage of GDP



(Dalio, 2018)

Short Interest Rate Behavior over the Cycle



(Dalio, 2018)

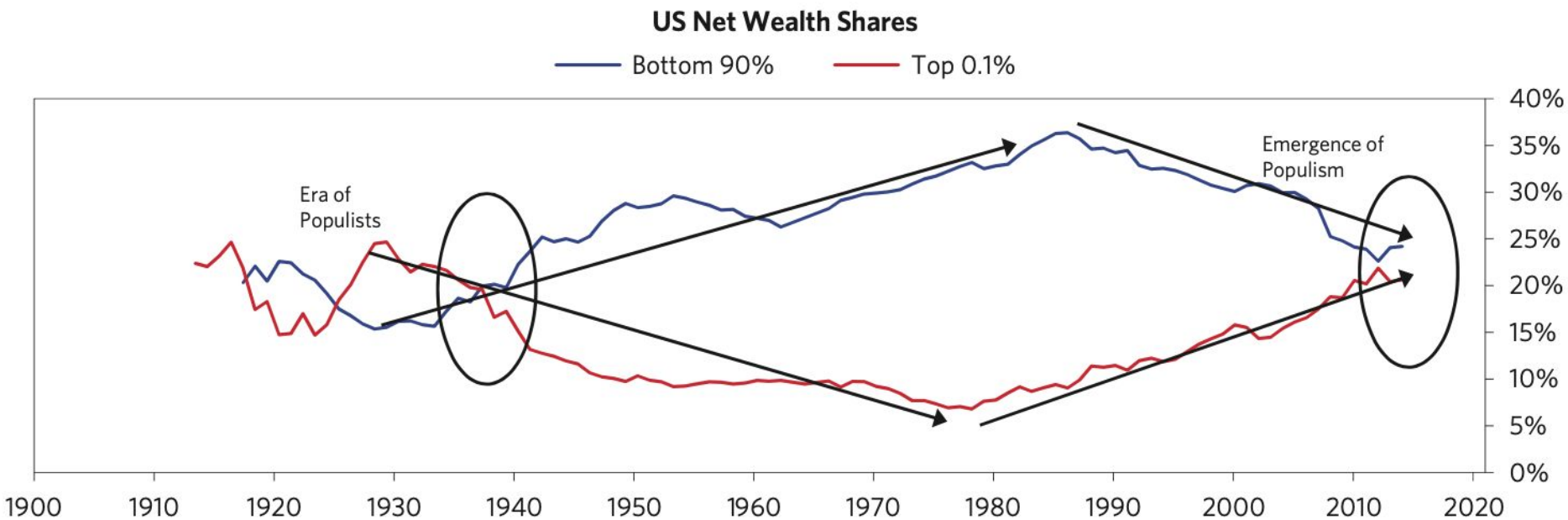
Let's Compare Where We Are Relative to History

Short Interest Rates Relative to History



(Dalio, 2018)

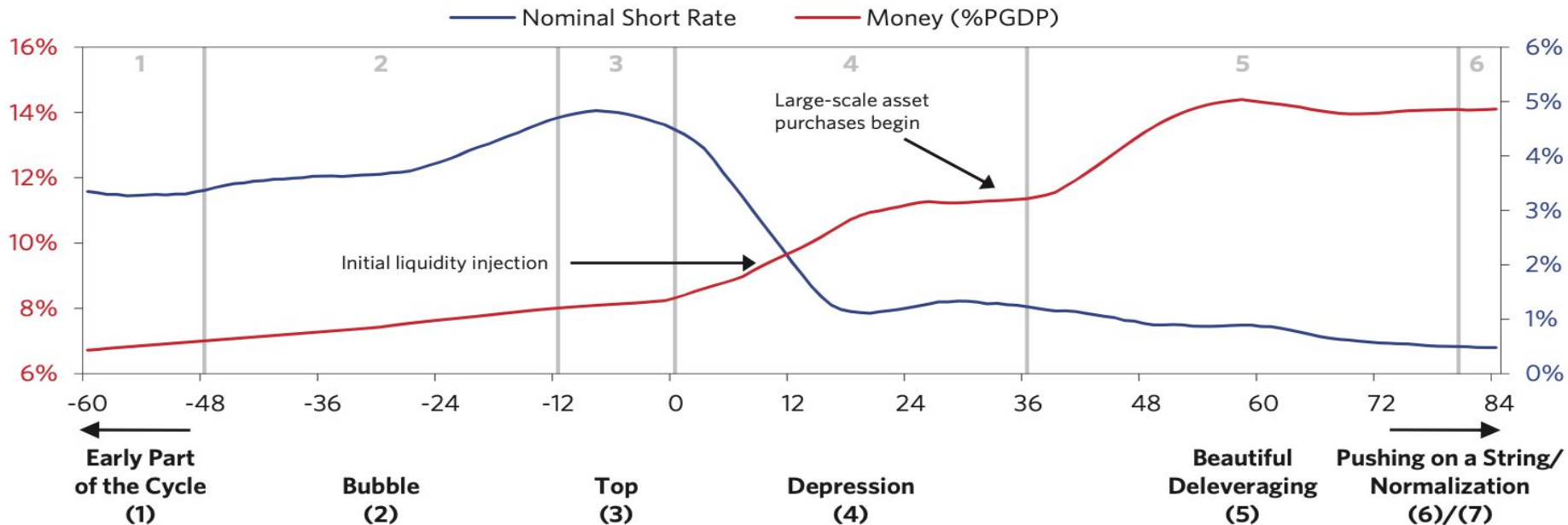
Wealth Gap Relative to History



(Dalio, 2018)

Which Stage Are We In?

Looking at the Federal Reserve Actions



(Dalio, 2018)

Pushing On A String

- ❖ We are presently on the “**Pushing On A String**” phase
 - Meaning, Central Bank finds itself unable to spur economic growth and inflation despite substantially easier monetary conditions
 - Typically, complemented by a fiscal stimulus as well (Republican Tax Cuts of 2017)
- ❖ Central Bank Ammunitions:
 - Lowering of Interest Rates - reached zero during the recession
 - Quantitative Easing(QE) - large-scale buying of financial assets to push liquidity into the system and increase worth of financial assets. Typically accompanied by the widening of wealth gap between haves and have nots
- ❖ Currently either out or about to be out of ammunitions
 - Negative Interest Rates in the US? Already in Europe and Japan.
 - If the US economy is doing so well, then how come the Fed has to keep cutting?
- ❖ Projected growth in 2019 a little over 2% in 2019, and the World Bank estimated growth rates of 1.8% in 2020 & 1.7% in 2021 (Tankersley & Smialek, 2020)
 - Worst since the depths of the Great Recession in ‘09

So What Can the Fed Do?

- ❖ Risk Premium is lowered for investors
 - Not too much to gain relative to the risk taken
- ❖ Trade uncertainties and manufacturing slowdown in Europe (Germany) and China leading the Fed to cut rates this late in the cycle
 - Keeping assets inflated by lowering rates
 - Still inflation is below the 2% objective and growth expected to be below 3% in 2019
- ❖ Debt-financed fiscal spending + Debt monetization
- ❖ **“Helicopter Money”** a topic of serious consideration, especially in Europe
 - In the US, left wing politicians are indirectly in favor of this via wealth tax
- ❖ Possibly negative interest rates
 - Still would be counter-productive
 - Japan and Europe’s stagnant economies an obvious guide

Rising Ineffectiveness of Monetary Policy

“It’s clear that more was, and still is, going on. Although monetary policy has a meaningful role to play in addressing future downturns, it is unlikely to be sufficient in years ahead for several reasons.”

- Janet L. Yellen, Fed Chair 2014-18, January 2020

(Tankersley & Smialek, 2020)

Looking at History, Our Present Is Most Likely
Similar To...

The Great Depression (1937-42 period)

- ❖ Rise in populism
 - Increase in political extremism all over the world including the US
 - Irresponsible government spending and no accountability for massive debt pile ons
 - More and more government debts to appeal to the “**have nots**”, made worse by post-crisis divide in wealth gap as a result of QE
- ❖ An emergent power threatening an existing power
 - US vs. China
 - Trade war will most likely be followed by capital/currency war
- ❖ Paradigm shift in international geopolitics
 - Bipolar world - US or China
 - American reserve currency status possibly threatened
- ❖ It will only get worse from now on
 - A speculator’s dream so long as they bet on instability

Succinctly, The Macro and Political Worlds Will
Shift Due to the Following...

Technology Shift

- ❖ Rise in Artificial Intelligence and Automation
 - The 4th Industrial Revolution
 - Will lead to a lot of middle class jobs being lost
- ❖ Productivity increase but inflation low
 - Technology keeping prices from rising up - a good thing
 - Possibly the reason Central Banks in developed economies (Japan, Eurozone, US) unable to meet their inflation targets
 - Negative interest rates largely a consequence of this phenomenon, since $\text{Real Yield} = \text{Nominal Yield} - \text{Inflation Rate}$ (If Inflation Rate is negative meaning deflation, then Nominal Yield could be negative)
- ❖ But technology is not helping everyone equally
 - Rise in wealth disparity and economic anxiety
- ❖ Will most be one of the “**battlelines**” of superpower conflicts between US and China
 - Just like nuclear technology was during the Cold War

Rise In Political Extremism

- ❖ Extremes on both ends of the political spectrum
 - Seen all over the world
 - Brexit in the UK, rise of socialist tendencies in the US, far-right conservatives within this administration
 - Largely a consequence of the wealth disparity
- ❖ Automation and Artificial Intelligence only going to exacerbate the wealth gap
 - Further fueling the wealth gap
 - Talks of breaking down big tech companies in the US by left wing politicians, while right wing politicians blame technology for dislocation of workers
- ❖ Selling of wrong ideas and wrong policies
 - Irresponsible government - fiscal stimulus for the wealthy vs. spending in free government programs - both exacerbating the national debt
 - Increase in national debt which could be weaponized by unfriendly sovereigns (Russia, China)
- ❖ Pension and healthcare obligations coming due in an aging society
 - Demographic problem in Japan, approaching in the US, another reason for government debt

Lack of Effectiveness of Monetary Policy

- ❖ “Pushing on a String” phenomenon
 - Lowering rates and Quantitative Easing already tried
 - Not moving the needle anymore
- ❖ Macroprudential policies most likely to be useful
 - Targeted allocation of moneys to populations
 - “*Helicopter money*”
- ❖ Would require coordination between fiscal and monetary stimulus to be effective
 - Rise in polarity makes this process highly unlikely
 - In absence of right policies, debt-financed spending most likely outcome
 - Increase in national debt buying by the Federal Reserve
- ❖ A lot of corporate debt during periods of QE and low interest rates led to excesses
 - Rollover debts, decrease in debt service payments due to negative rates, for instance
 - *This process will phase out and there will be a “sag in the economy” - Ray Dalio, October ‘19*

Rise of a Challenging Power to a Superpower

- ❖ For one power to rise, another pre-existing power has to fall
- ❖ Leads to Conflicts
 - 12 out of 16 times it has happened in the past 500 years resolved militarily
- ❖ The last time it happened
 - Late 1930s - Nazism and Communism was the challenging power to the dominant power
 - Led to bipolar geopolitical system: USA vs Soviet Union
- ❖ US vs. China engulfed in a similar phenomenon
 - China poised to overtake the US soon as the world's most productive nation by 2025

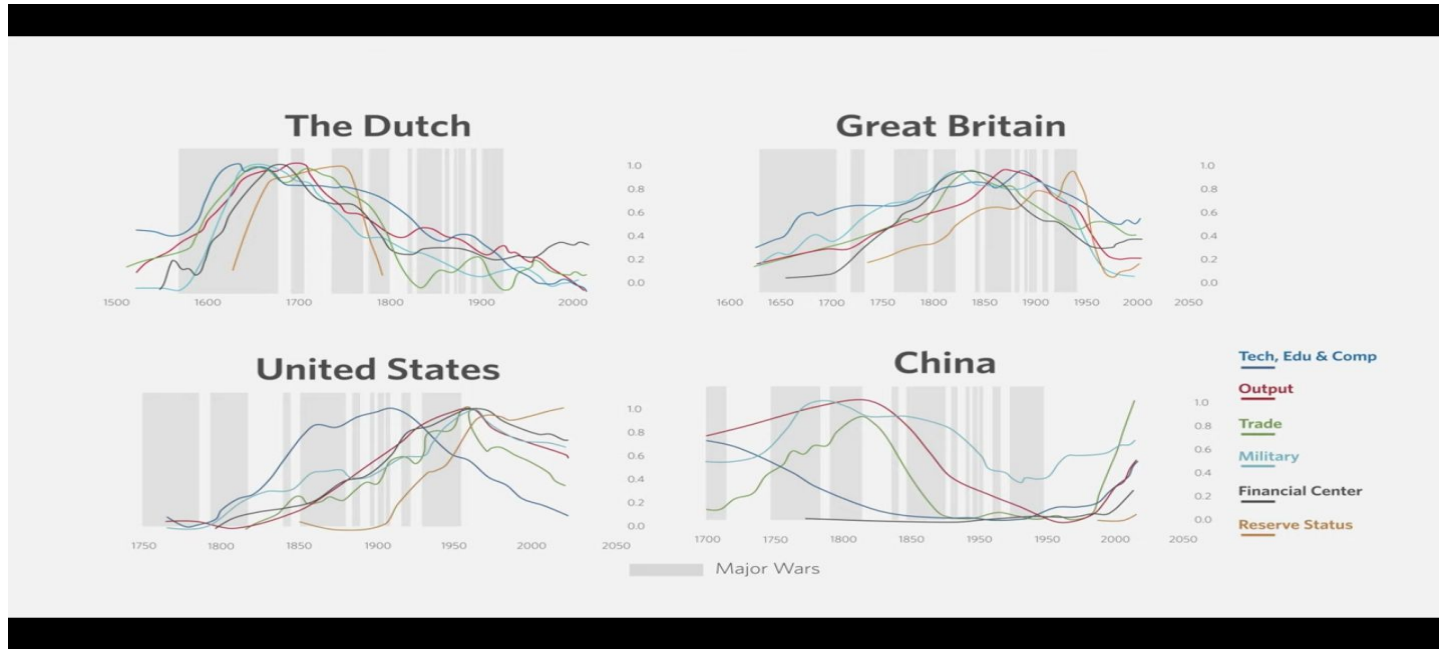
Rise of a Challenging Power to a Superpower

- ❖ Conflicts between the 2 superpowers fought via:
 - **Trade Wars:** The first kind. Already are in one.
 - **Technological Wars:** IP wars, Huawei situation, AI dominance.
 - **Geopolitical Wars:** Not yet a palpable factor, but Hong Kong, South China Sea, N. Korea, Japan and Taiwan all potential geopolitical battlelines.
 - **Currency/Capital Wars:**
 - On November 2019, Trump administration addressed plans to force US companies & public pension funds from investing in China
 - Reserve currency status of US threatened (debt denominated in one's currency essential to exercise political power over indebted nations, a big reason for America's geopolitical supremacy)

How Geopolitical Shifts Occur Throughout History

And how it's playing out today...

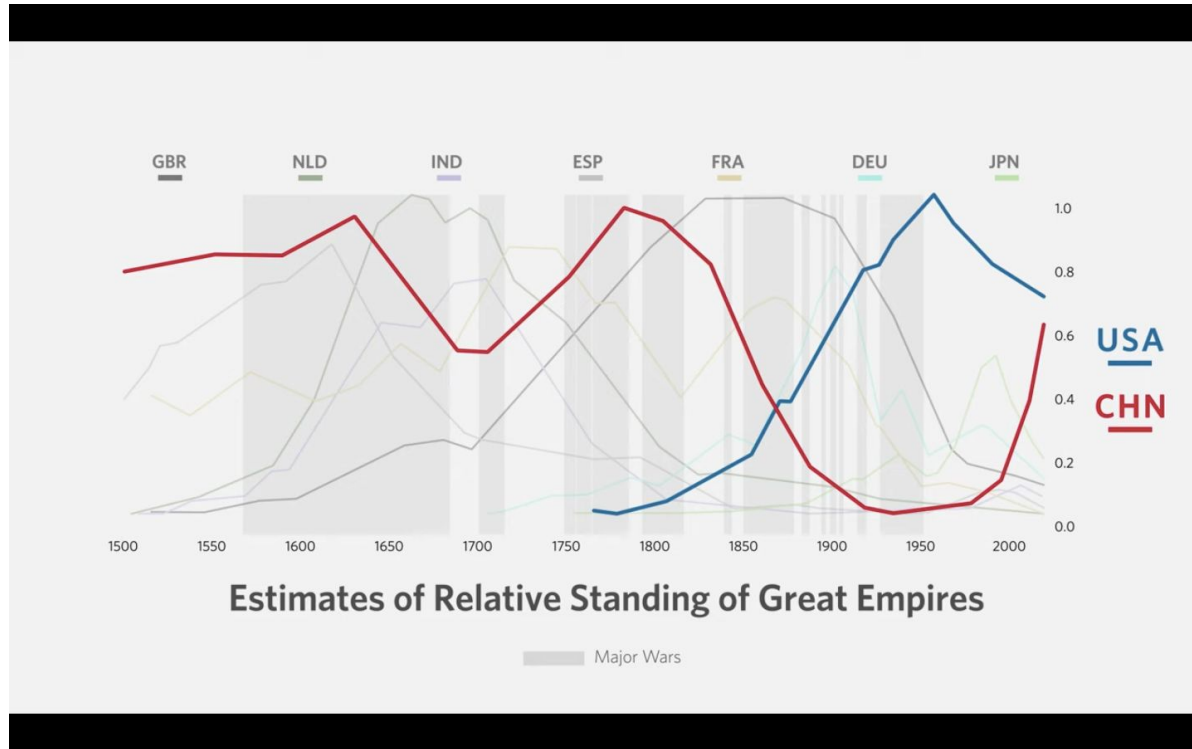
How Empires Rise and Fall



(Bridgewater Associates, 2019)

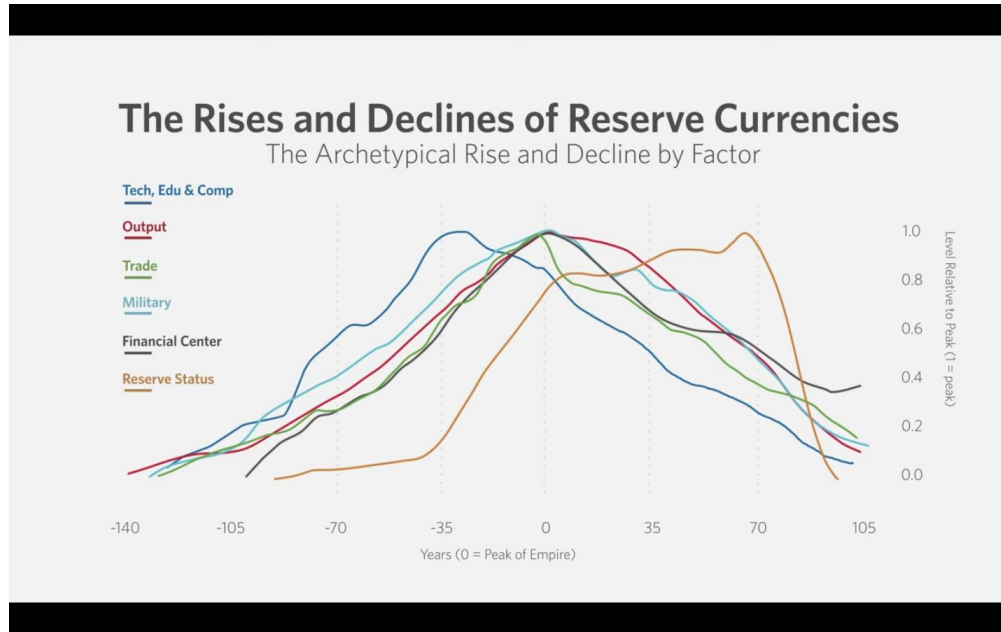
- ❖ Every time someone falls, someone else rises
- ❖ US is on a decline, China on its way up

Relative Standings of Past Great Empires



(Bridgewater Associates, 2019)

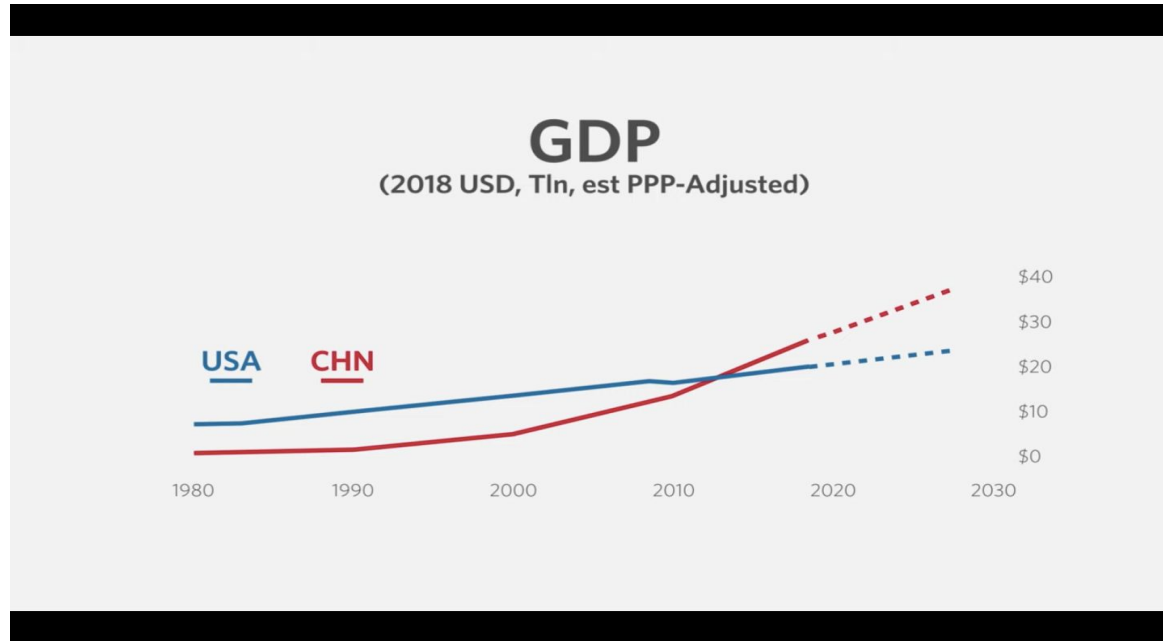
Reserve Currency Cycle - The Template



(Bridgewater Associates, 2019)

- ❖ Notice that the ascension of reserve status kicks in relatively later after technological and output dominance, thereby China is not expected to be a reserve currency in the immediate future

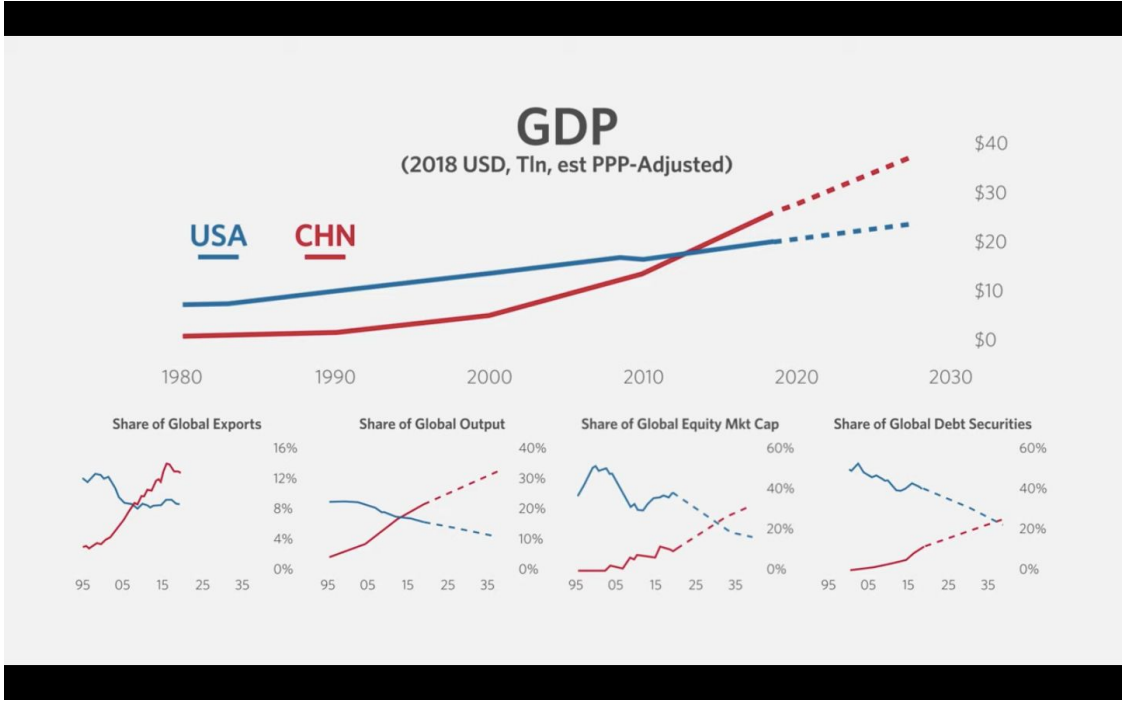
GDP - US vs. China



(Bridgewater Associates, 2019)

GDP - Purchasing Power Parity Adjusted

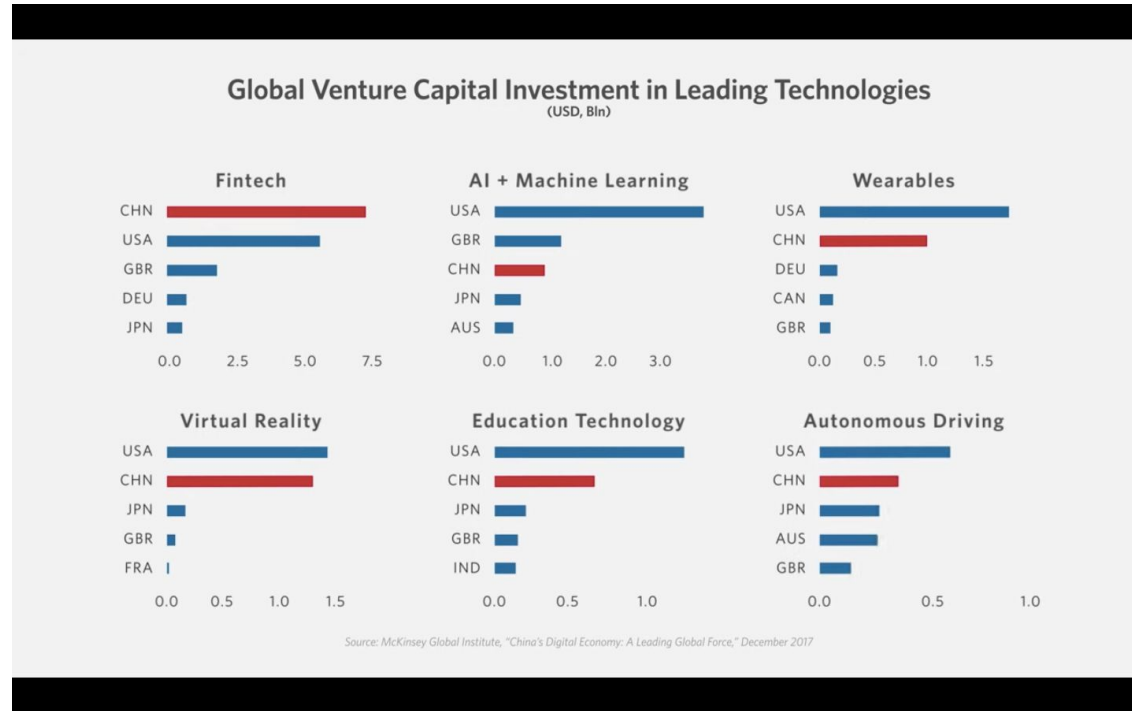
Global Capital Markets - US vs. China



(Bridgewater Associates, 2019)

GDP - Purchasing Power Parity Adjusted

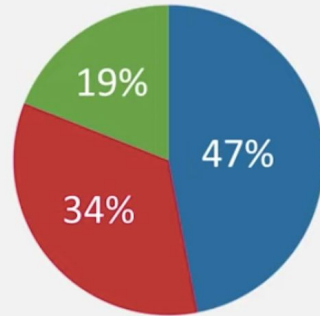
Futuristic Technology Investments - US vs. China



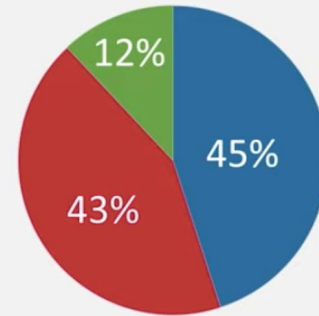
(Bridgewater Associates, 2019)

Share of Unicorns - US vs. China

Share of Global Unicorns* by Count



Share of Global Unicorn Value



■ USA ■ CHN ■ Other

*Unicorn = a startup company valued at over \$1 billion

Source: McKinsey Global Institute, "China's Digital Economy: A Leading Global Force," December 2017

(Bridgewater Associates, 2019)

References

- Bridgewater Associates. (2019).
- Dalio, R. (2018). *A Template for Understanding Big Debt Crises*.