

Welcome to the 2020s. In reality, the start of a new decade is simply the next year on a calendar. Yet society aggregates years into ten year increments; and so it seems as if we are crossing a hypothetical barrier into a period of new possibilities and beginnings. The 2020s will bring us 3 US Presidential elections, the 2026 US World Cup, and the 2028 LA Summer Olympics. The 2010s gave us the 'selfie,' a Triple Crown horse, a World Series for the Chicago Cubs, healthcare reform (ACA), some tax cuts, and now it's perfectly acceptable to get in a car with a stranger (thanks Uber). Will the past be a prologue to the future?

Technology and innovation exploded over the past few decades and the 2010s were no exception. *Does this continue at the same pace?* Millennials entered the workforce and changed city centers. Baby boomers became empty nesters. *How do demographics evolve through the next 10 years?* Unemployment in the US has gone in a straight line down from 9.8% at the beginning of 2010 to 3.5% today.ⁱ Short term interest rates around the globe have been near 0% or below. *How do these conditions change?*

It's rare that the next ten years replicates the last ten years. **Markets will go up in the 2020s. They'll go down too.** While this appears obvious – it is important to remember that this decade will have twists and turns, successes and pitfalls. Our goal is to stay focused on the longer term narrative around the direction we are headed. Markets don't care about what the calendar says or what fits your financial needs, and **that's why we plan.** Plans don't care if markets are up or down next quarter, **that's why we focus on the destination, not the next turn.** The portfolio should match the plan. The plan should match your needs.

The 2020s: Where is the World Headed?

"People overestimate what they can do in one year, but underestimate what they can do in ten."

- Bill Gates

Executive Summary

We define the **2010s as a decade of installation and concentration** fueled by globalization, digitization, and cheap capital. Corporate margins thrived. Technology dominated.

We see the **2020s as a decade of deployment and distribution** fueled by political capital, demographic changes, and technological deployment. Individuals thrive. All industries are tech.

In the near term, we are locked in a battle between **consumer optimism vs. capital spending.**

Headwinds: trade policy, 2020 election, foreign capital, corporate margins.

Tailwinds: lower margins = higher wages, monetary policy.

What we like: *housing, Europe, emerging markets, pricing power.*

What we don't: *consensus earnings expectations, corporate debt, market multiples.*

2019 Lookback¹

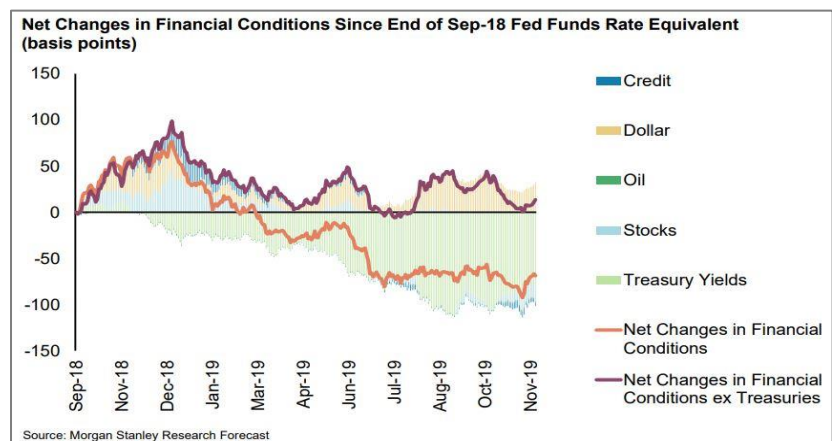
What we got right-

- ✓ **“...margins falling from peak, whereas current consensus estimates see margin expansion continuing. We feel very confident consensus estimates will come down...”**
 - **As Expected? Absolutely.** Operating margins declined across the board and EPS numbers will come in around \$162. Our initial forecast was \$165, while consensus pegged \$177.²
- ✓ **“...this bear looks more like the one from 2001-2002 than others. This means a difficult market environment but a fairly nonchalant economic one.”**
 - **As Expected? Absolutely.** GDP for 2019 will come in the low 2s. Unemployment is very low. The manufacturing economy is pretty weak, services is mediocre. Spending is positive but decelerating. And a difficult market? From mid-2018 to now, the technology sector (*growth profile*) is leading in gains, but the utility, staples, and real estate sectors (*defensive profile*) are all 2nd | 3rd | 4th, respectively. Growth stocks up, defensive stocks up, bonds up, gold up, real estate up. Historic correlations between asset classes are broken – that’s a difficult market.

What we got wrong-

- **“...investors’ sensitivity to fundamentals will be much greater than in prior years as general sentiment shifts lower. Valuation matters.”**
 - **As Expected? Not at all.** What if we told you: profit growth will be 0%, operating margins will contract, GDP will be in the low 2s, and global manufacturing activity will substantially slow down? Not the greatest outlook and valuations should be low, right? However, these metrics describe 2019 and market participants haven’t cared, but rather have focused on continued global monetary stimulus and empty trade deals (*see: chart below*).
- **Retail isn’t dead. Retail and consumption are very much alive. Apparel is just very hard.** Yeah well, lesson learned.

This chart from Morgan Stanley illustrates the net change in financial conditions. Easier conditions tend to support financial assets – absolutely the case in 2019.



¹ Last year’s outlook can be found [here](#).

² Using operating earnings, adjusted, from Factset. 4Q19 is still an estimation.

Near Term Outlook: Consumer Optimism vs. Capital Spending

The 'back of the napkin' 2019 overview:

- 1) Global manufacturing activity had a rough time and was very weak.
- 2) Manufacturing weakness paired with trade policy uncertainty prompted businesses to cut capital investment. Slower investment = slower GDP = slower future growth.
- 3) However, cuts weren't deep enough to materially affect the labor markets which remained tight. Remember though: higher wages = lower margins = lower profits. Especially in small/medium businesses.
- 4) The strong labor market drove good consumption growth which carried GDP. Easing financial conditions (right)ⁱⁱ helped housing and boosted asset prices, despite no corporate profit growth.

In 2020 (*bull case*):

- 1) Global manufacturing recovers.
- 2) Business investment picks up.
- 3) Consumption stays strong/labor market stays strong.
- 4) Housing continues to do well & financial conditions will remain easy.

This is undoubtedly a good scenario, quantified in the chart below. **But most of the market gains³ for the past two years (the start of 2018!) has occurred in the past few months**, as investors are assuming this 'best case' scenario is very likely to come true next year. We aren't jumping on the wagon just yet. Two exogenous variables give us caution in assuming global activity and business investment will recover like they have in the past: **trade policy & Chinese demand**. At this point, tariffs & trade itself hasn't made a material blip⁴, but the uncertainty created breeds caution. Uncertainty can drive businesses to wait/scrap new investment plans which makes us believe that a benign US recovery may be in store for 2020. Lagging Chinese demand is also a prime factor in the 2019 slowdown⁵ and a tepid recovery there would mean a tepid recovery across many markets. These two factors could rapidly change, **which is why we**

Scenario	Probability	2019 EPS	2020e EPS	2021e EPS	Fwd. P/E	Y. E. 2020 Target
Bull	40%	\$162	\$172	\$185	18.0x	3,350
Growth			6.2%	7.6%		
Base	40%	\$162	\$166	\$175	17.0x	3,000
Growth			2.5%	5.4%		
Bear	20%	\$162	\$158	\$165	17.0x	2,800
Growth			-2.5%	4.4%		
Consensus		\$162	\$179	\$198	17.0x	3,350
Growth			10.5%	10.6%		

All numbers adjusted for comparison to consensus Source: Doxa Research, Bloomberg

³ Using the broadest measure, 'VTI', total stock market ETF. It was the same price Oct 2019 as it was Jan 2018. The same is true for the S&P 500. 'VT', total world stock market, has just eclipsed that Jan 2018 high this month.

⁴ Tariffs themselves are too small to make a difference + exemptions and supply chains quickly negated most of the immediate negative effect.

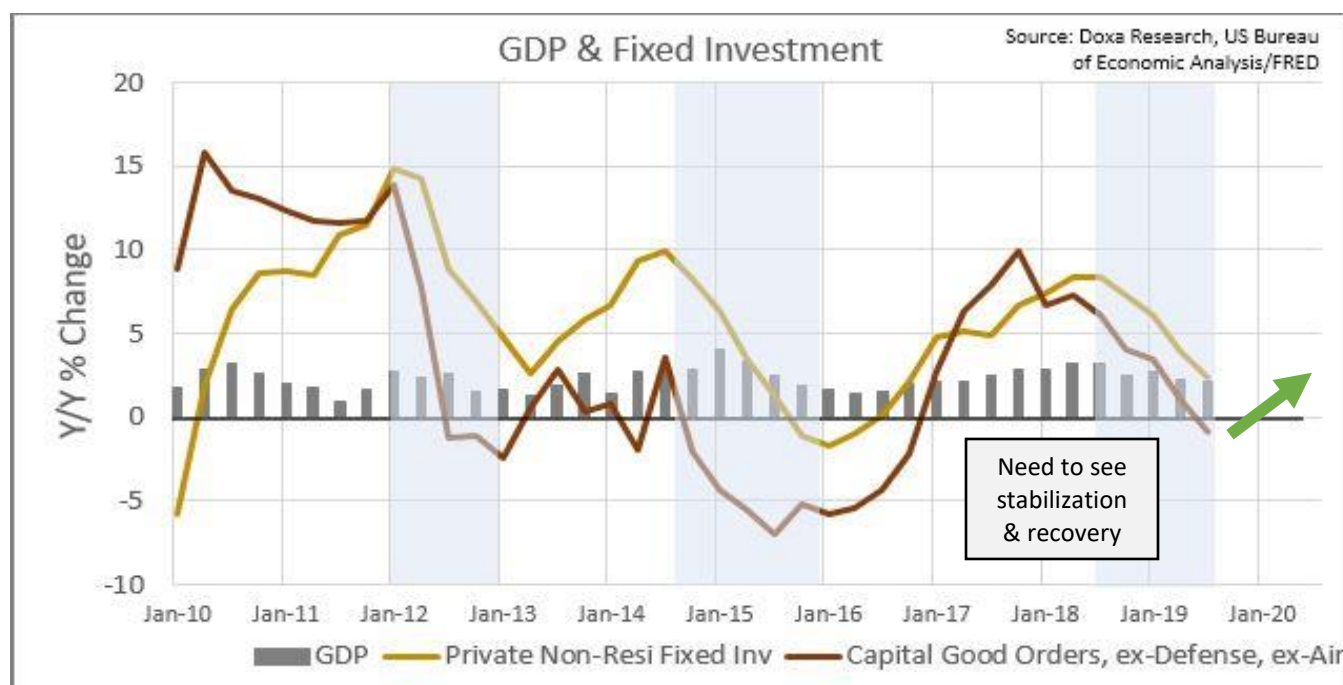
⁵ A massive factor in the global slowdown is China's debt deleveraging campaign. Chinese demand is the driver for nearly a third of global GDP growth. A deleveraging economy will certainly continue to be a drag.

equally weighted our bull and base cases this year.⁶ Our last note from October outlines the near term in more detail, [here](#).

One final point focused around the two charts below. We've highlighted in blue the three 'mini-cycles' seen over the past decade. We fully expect a cyclical upturn in business investment this time as well – but how big will it be? The most notable difference between our current mini-cycle and the prior ones is the amount of slack we have in our economy (not much).⁷ Labor markets are very tight and wages are increasing (hence growing consumption), but that is hitting corporate profit margins, especially small and medium enterprises.⁸ Companies have already cut back investments, if uncertainties continue or even grow – could layoffs be next? This outlines our bear case.

Two indicators to watch in 2020:

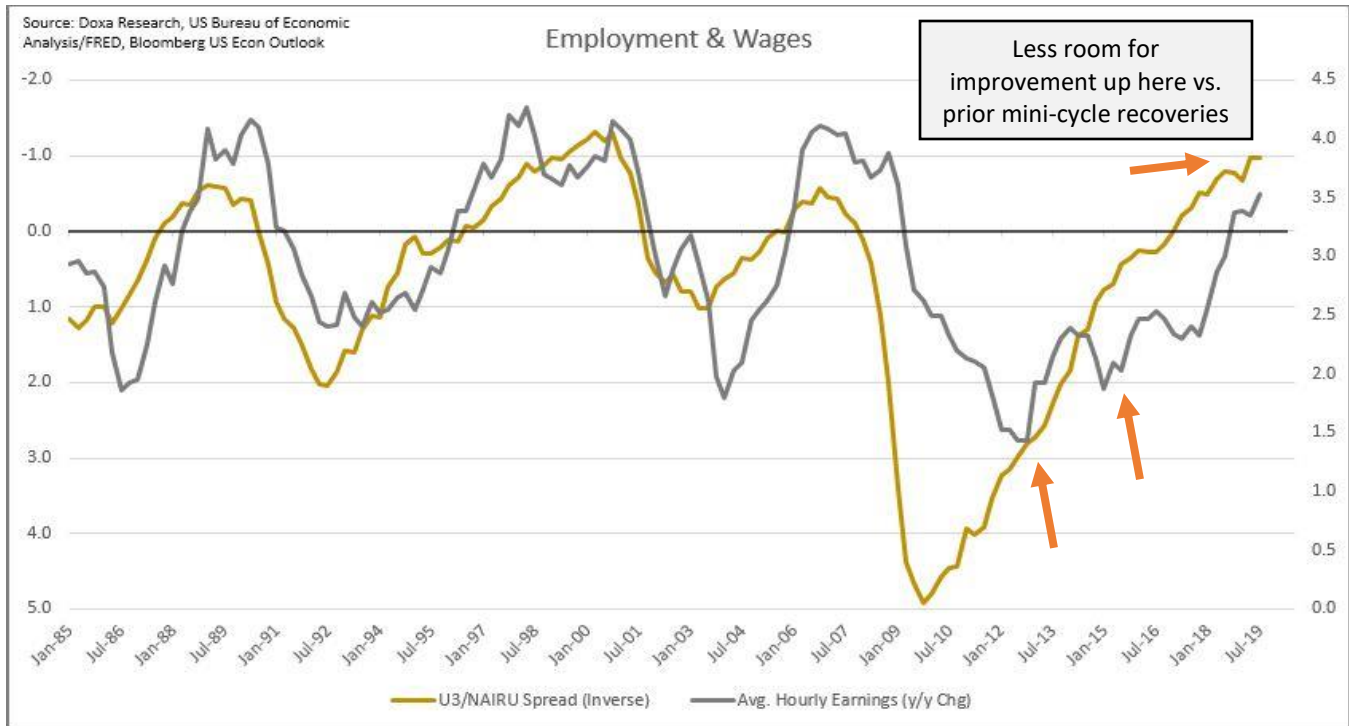
New capital goods orders, ex-defense, ex-air
Jobless claims, continuing claims, payrolls



⁶ *Note: Consensus earnings expectations embed a full on acceleration out of 2019, mirroring prior mini cycle recoveries. We find this very unlikely.

⁷ Economic slack is resources readily available to produce that are currently idle.

⁸ In some prior cycles, higher wages would equate to enough extra consumption to offset the cost of the extra wages. At this point, we aren't seeing enough incremental consumption to offset the higher costs, therefore = lower margins.

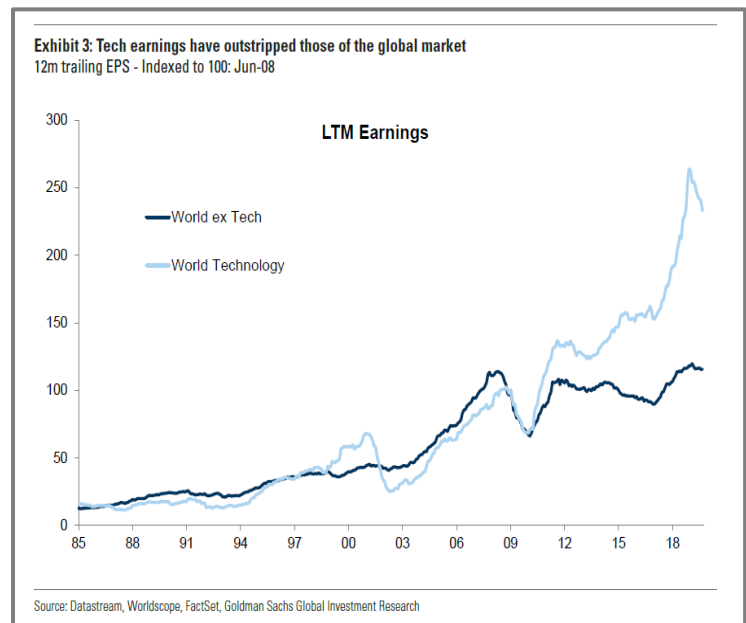


A tale of two decades: Will the future look like the past?

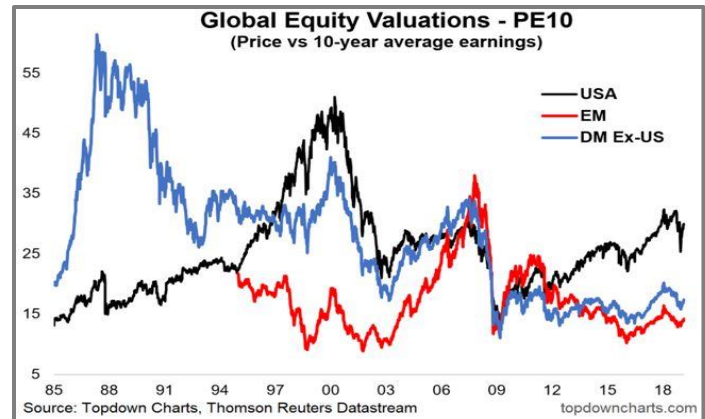
We see the **2010's as a decade of installation and concentration** fueled by globalization, digitization, and cheap capital. Corporate margins thrived. Technology dominated. We see the **2020's as a decade of deployment and distribution** fueled by political capital, demographic changes, and technological deployment. Individuals thrive. All industries are tech. *Yeah, there is a ton to unpack here.* Let's start with the biggest theme:

Installation v. Deployment

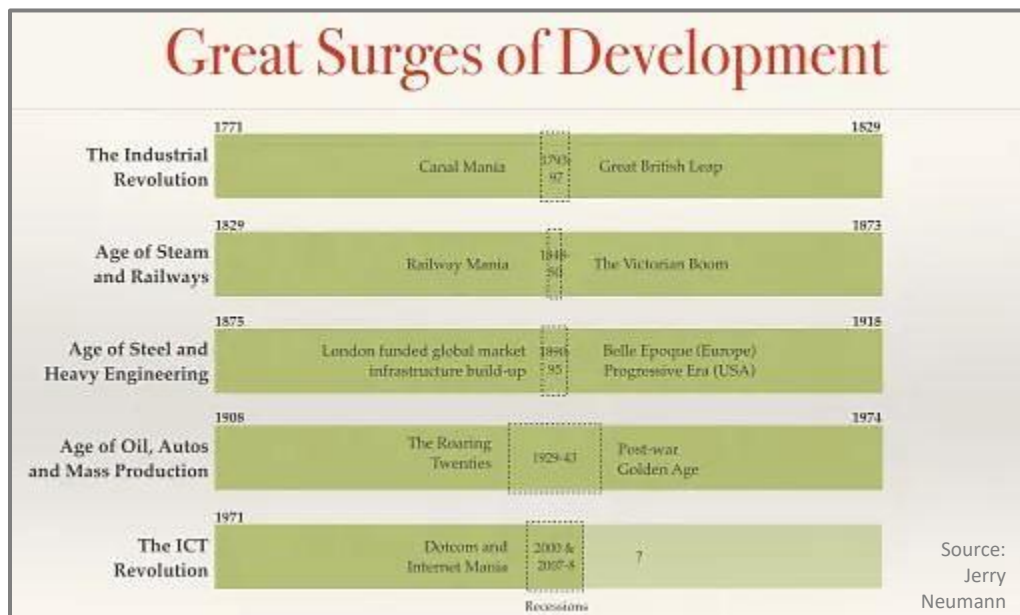
The single biggest outlier in markets over the past 10 years: US markets have dominated everyone else. Earnings, margins, valuations – all of it has been head and shoulders above the rest of the world (RoW). Are we just better at running companies than everyone else? No, not really – **but we have done ONE thing the best: software.** Below the surface, any market is the sum of its parts. Saying *'Australia is doing well'* is saying that mining and housing are doing well. *'Germany is doing well'* really means that autos are doing well. In the US, it is tech, software specifically (Korea & Japan do



hardware). The S&P 500 is 35% tech companies. That's substantially higher than any other country in the world – and this explains nearly all of the divergence between the US and others over the past decade. The United States has been the innovator of software and technology; in turn giving the US & tech companies all the spoils. To understand if this tech dominance will continue, we need to understand the context around it. **That's the 5th Industrial Revolution.**



We're all familiar with industrial revolutions in the historical context, beginning with the mechanization of textile mills and the spread of water power and canals. This was followed by the growth of railways and steam power, then the age of steel, and most recently the age of oil, autos, and mass production. The wave that we are currently in, the Information and Communications Technology Revolution, started in the '70s.



Each of these cycles have similarities, characterized by:ⁱⁱⁱ

- 1) *some critical factor of production suddenly becoming very cheap,*
- 2) *some new infrastructure being built,*
- 3) *a laissez-faire period of wrenching innovation followed by a bubble,*
- 4) *a post-bubble recession,*
- 5) *a re-assertion of institutional authority, and*
- 6) *then a period of consolidation and wide spread gains in productivity from using the new technology.*

This framework^{iv v}, first theorized by economist [Carlota Perez](#), provides a really great overview on the waves of technological progress. Importantly, she outlines the **two distinct phases of progress: innovation and deployment**. Venture investor Jerry Neumann sums up the two phases well: ([original post here](#))

“In the installation period, investor capital goes to building the infrastructure that the revolution needs. A bubble (rush to invest, euphoria) causes it to be overbuilt, so when the deployment period begins there is excess infrastructure and low cost to use it. This happened with canals, railways, and most recently with the telecom infrastructure. The deployment period gets to take advantage of the low cost glut of infrastructure.

In the installation stage, much of the new technology needs to be ‘pushed’ to market: customers don’t necessarily understand the benefits and need to be sold on each new thing. In the deployment period, technology is ‘pulled’: customers demand the new technology and are often ahead of the technology companies on what they need and how they will use it. **The sources of innovation shift from exploratory companies to forward-thinking customers.”**

“Also, in the deployment period, companies move from creating entirely new markets – as they must with entirely new technologies – to expanding and consolidating their existing markets. To appeal to more customers in a given market they must make their products both cheaper and easier to use.

Lastly, during the deployment period the technology becomes familiar, easier to implement and repair. **This means the economic benefits of tech knowledge that in the installation period accrued to a small, well-educated elite start to spread out across the population, lessening economic inequality.”**

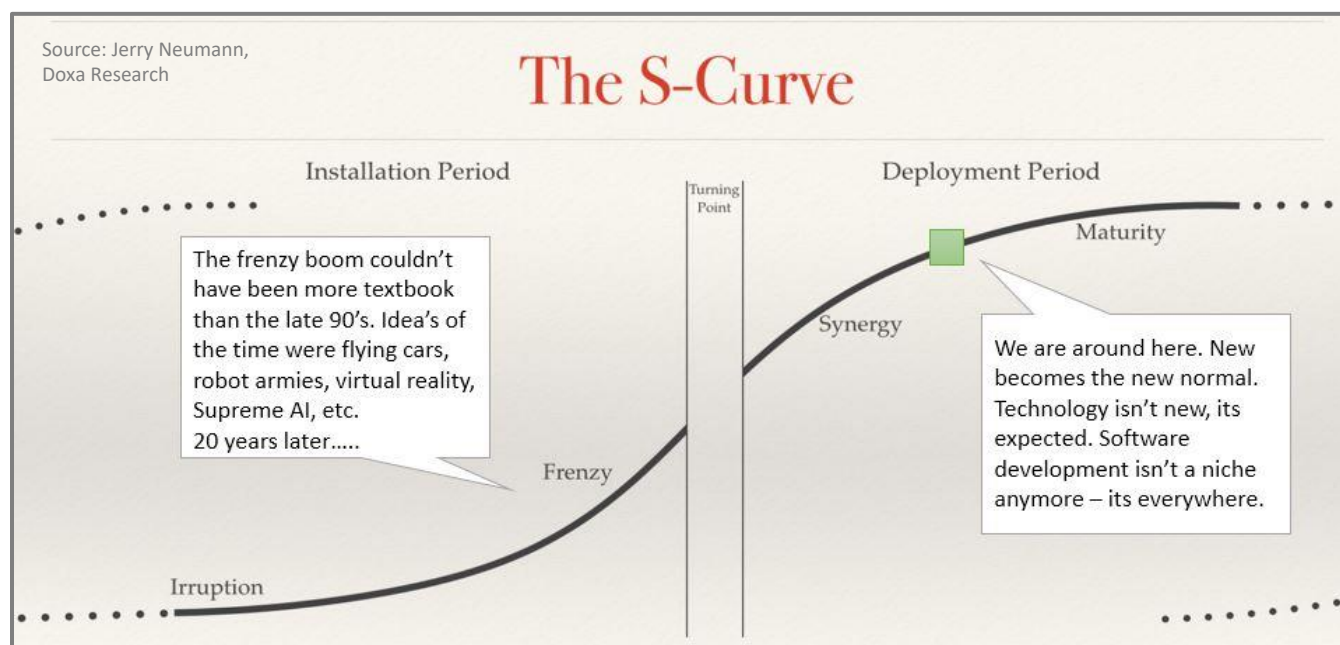
Installation Age	Deployment Age
Creative Destruction	Creative Construction
Exploration of New Markets	Expansion of Existing Markets
Battle between 'New ways' & 'Old ways'	Full acceptance and application of the 'New ways'
Supply push	Demand pull
Venture Capital	Legacy Capital
Immense growth in few sectors	Slower growth but in all sectors

Note there are no hard gates in these cycles, they can overlap, and differing opinions on era starts/stops are valid. In our view, the mobile revolution was the last ‘Installation Age’ innovation – which was completely dependent on the build out of telecom infrastructure and tech hardware in the ‘90s & early ‘00s. Going forward: [Software Eats the World](#).

That famous phrase, penned by VC legend Marc Andreessen^{vi} in 2011, was incredibly prophetic at the time. Today we see how this has played out. Innovation hasn’t been in hardware for years. It just continues to get cheaper. Think about the TVs over the last 10 years: is it fundamentally different? No, it’s still a big rectangle you hang on a wall. But it’s better, right? The picture is gorgeous; it connects to the internet; you can talk to it; and its only \$500 bucks. Hardware got cheaper, while software got better. Uber? Software. Bitcoin? Software. Cloud storage? Software. Amazon? Software. **The installation phase created tech hardware and**

made it cheap. The deployment phase is about the software that makes the hardware useful. This is what has concentrated a decade's worth of gains into tech companies.

Where are we in 2019? To be new is the new normal. Information and communication are ubiquitous and invisible. Consumers and businesses now have an expectation of ICT,⁹ not just seeing it as a feature. UI/UX is paramount.¹⁰ Understanding is vast. **These are deployment characteristics.** Said another way, we are no longer mesmerized by a new use case. E.g. "Wait, I can turn on the lights with my phone?!" No, instead we think "What do you mean the car doesn't beep when I get to close to the trash can?" We are in a 'demand pull' environment rather than a 'supply push' one. *Another example: Alexa.* Telling a computer to do simple tasks like set an alarm or play music wasn't innovative – iPhones had that capability in 2011. Yet, four years later Alexa was made and became a hit. Why? It's easy, looks fine, cheap, and convenient. Amazon wasn't on the forefront of technology here, they just listened to what consumers wanted and made it.



How does the deployment period relate to the next decade?

Innovation isn't just done by the software companies or tech giants anymore. Innovation is done by everyone. Innovation is driven by the needs and wants of customers, and spread across every sector and marketplace. Existing markets are expanded and optimized, while exploration of new markets dwindle.

Think about a normal grocery store, the most boring low margin business. However, grocery has evolved thanks to tech. Customers wanted food delivered. Ok, they provided that. Then customers decided it would be better to pick up. Ok, they made that happen, too. Order online, pick it up when you want. *Boom, existing market expanded.* Grocers use all the data from their loyalty programs to optimize shelving, coupons, sale days, etc. They see customers buying

⁹ E.g. shopping 'online' is now synonymous with just 'shopping.' There is no more differentiation, rather it is an expectation.

¹⁰ UI/UX is referring to user interfaces. Ease of use is extremely important and arguably a differentiator in software. (see: Apple)

more & more fresh and prepared foods in real time – *ok, let's start to remodel the stores and focus on fresh next week*. They are developing warehouses that are built just for food delivery and are reinventing check out lines. This type of innovation and productivity is not just coming from new startups - *companies creating something we don't know we want yet* – instead **it is the incumbents funded by legacy operations, innovating themselves to serve what customers know they want.**

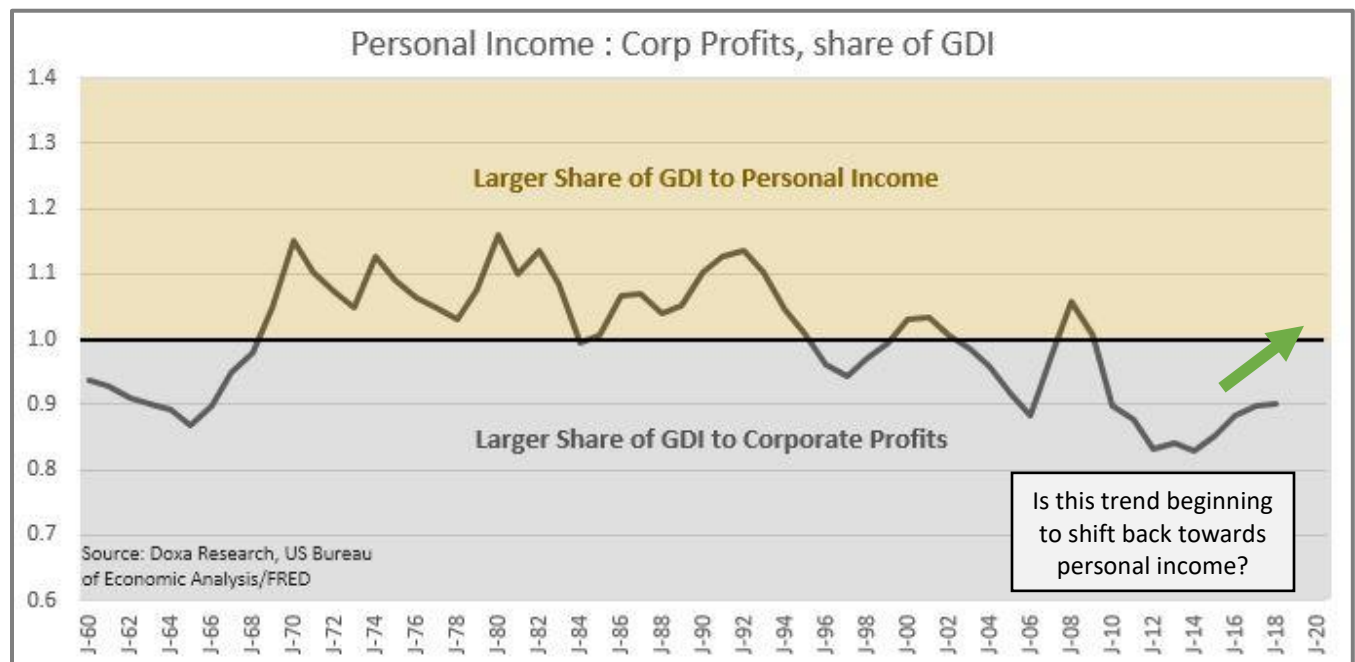
How do we invest in the age of deployment? Is it in the big tech giants and the software disrupters? We aren't convinced. They have had their gains and many are priced for the incredible uptake. The age of deployment is about implementing systems and technology in a usable fashion, integrating it everywhere to create productivity. **The next decade isn't about who makes the tech. It's about who deploys the tech.**¹¹

Concentration v. Distribution

Two companies own 90% of all retail drug stores in the US. Four companies control the entire US market for beef. The top 8 individuals control more wealth than the bottom 50%. The 25 biggest metros generate more than 50% of US GDP. The top 1% of all US counties generate nearly a third of GDP. US technology companies combined are worth more than every single company in Europe. \$8 trillion of net foreign capital has been concentrated in the US since 2011. In the 2010's we undoubtedly saw a wave of concentration and the current zeitgeist sure sets up for the 2020's to break that trend and be a decade of distribution. *The massive demographic shift reinforces this idea as well.*

At a high level, after the 2008 recession the ingredients for a big concentration wave existed:

1. **Globalization push** – frugal consumers needed cheap options. Companies wanted to protect profits after getting wrecked in 2008. Emerging economies, not terribly



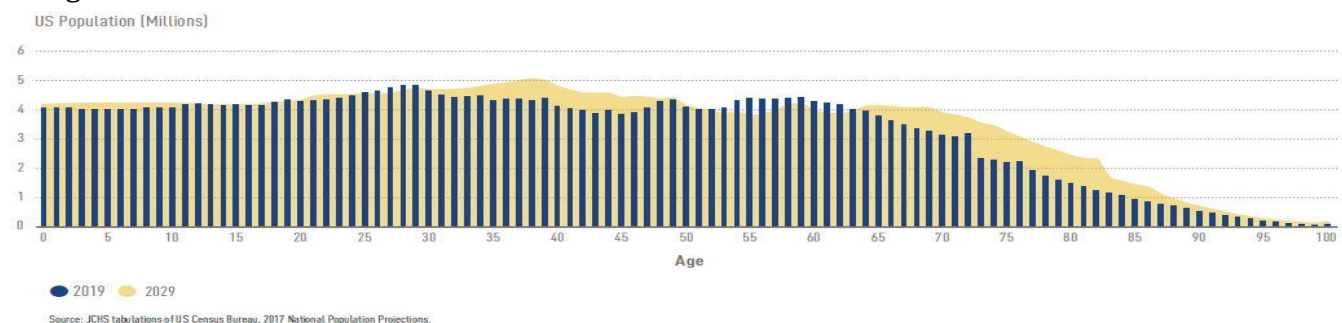
¹¹ By no means are we saying tech companies do not benefit in the deployment age, we just see the software landscape getting harder as winners and losers become more separated and valuations assume large term values.

effected in 2008, increasingly opened their borders to business. This set up for a big push from multi-nationals. Cut costs & make it cheap, then sell it everywhere. Consumers got cheap products, profit margins got fat. Everyone won...at the time. The chart on the previous page shows **how a bigger share of income¹² went to corporate profits than to worker wages from 2008 until 2014**. While this trend wasn't new¹³ – it has extended sharply post-'08. Current rhetoric around companies (lack of) paying taxes, executive pay, outsourcing, minimum wage, unionization & strikes, etc. are functions of this portentous relationship and seem to be pushing share back toward workers.

2. **Digitization** – this is a complete overlap with the latter stages of the installation phase, described above. A product of the installation phase is how the innovation 'winners' accumulate a lot of power. Facebook, Apple, Amazon, Google – the global regulatory scrutiny is just beginning. The concentration created by the installation phase will begin to unwind as the deployment phase ramps. As innovation permeates through different industries and different markets, the efficiency gains will also spread out. The tide here is turning.
3. **Cheap money** – global monetary policy has kept interest rates very low for more than 10 years. Without getting too much in the weeds here, these policies boost all asset prices, encourage leverage, encourage consolidation, and generally increase inequality over long stretches.^{vii} However, this variable isn't changing for the foreseeable future.¹⁴

How does the distribution period relate to the next decade?

Two of the three variables above are unwinding because of increasing political will and cultural changes (demographics, more below). There's a lot of overlap between the two as political changes lag cultural ones – but this change can be seen in any given day. Literally today, December 13, the WSJ headlines: *"US, China Agree to Limited Trade Deal," "Johnson Sees Victory as Mandate for Swift Brexit."* And the top opinion piece? *"Seattle's Wage mandate kills Restaurants."*^{viii} This changing rhetoric is all around us. **Going global is dead – business is now about going local.** 2010's = peak globalization = peak profit margins. 2020's = peak localization = lower profit margins.



¹² Measured by Gross Domestic Income.

¹³ Corporate profits have been taking more share of income since the late-'90s. This is largely due to the WTO, the rise of China, and technology, in our view.

¹⁴ Global central bankers around the world have commented on multiple occasions about how the bar to tighten monetary policy is very high. Barring a complete 180 in this thinking, we doubt much changes.

The driver of these cultural changes is demographics (*chart above*). By 2029 there will be around 1 billion more people on the planet. Yet for the first time ever, the number of grandparents will outnumber the number of children. This generates significant consequences.

Baby boomers are retiring causing their spending patterns to shift.^{ix} Millennials are aging into their family forming years and filling the prominent roles across business left by their predecessors. **These shifts matter, a lot.** *Disposable spending, housing, healthcare, advertising, interest rates* – all of these are products of the market they serve and the market's preferences are shifting from boomers to millennials. We think about the demographic change like this:

Generation Y + Z (minus) Baby Boomers (equals) surplus / deficit.

Apply this equation to any specific sector to get a feel for how it shakes out; although the inputs are much more qualitative than quantitative. Morgan Stanley tried to quantify this effect using past data (top chart on the left).^x This at least provides a good baseline into the possible spending shifts on the horizon.

How do we invest in the age of distribution? It's common to see distribution vilified – “it's socialism,” or “taking from some and giving to others.” Distribution is none of these things, in fact it is just a part of the cycle of a capitalistic society. **There are winners and losers in the distribution phase, just as there are in the concentration phase – the winners and losers are just different.** That's the beauty of a cycle, when one concept swings too far, a counter concept gains steam to swing it back. We invest in the distribution phase by simply recognizing it.¹⁵ **The next decade isn't about what is accumulating capital. It's about where the capital is going.**

Chase Lee

Director of Research

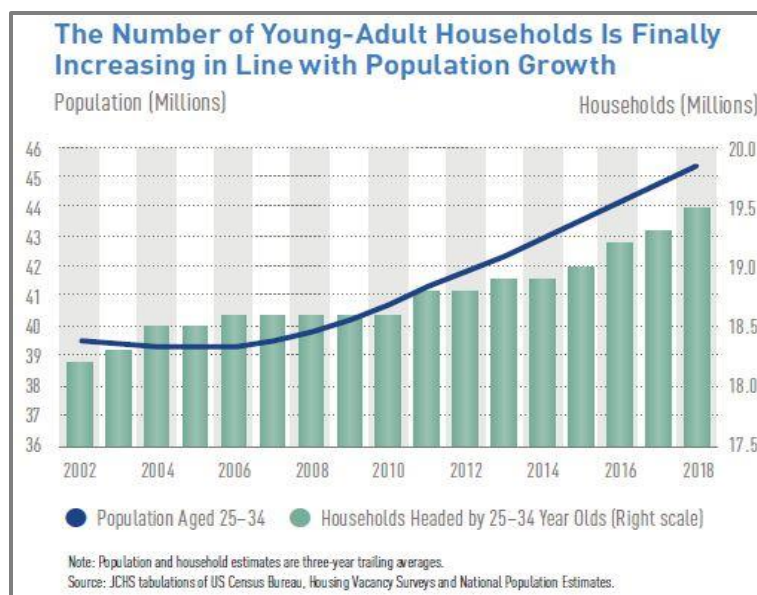
David Mucciari

Director of Financial Planning

Interested in how we are specifically positioned to capitalize on the next decade through our DEED framework? As you have come to expect – we have it all in presentation form. Please reach out if you are interested!

Home Improvement	2.39%
Lodging	-0.08%
Auto Maintenance	-0.28%
Food At Home	-0.34%
Total Spending	-0.49%
Home Furnishings	-0.59%
Food Away from Home	-1.08%
Apparel	-1.64%

Source: BLS, Morgan Stanley Research



¹⁵ We see fiscal policy as being a big part of this next deployment/distribution phase in the form of infrastructure. Energy efficiency, energy sources, power grids, transportation, & climate solutions & changes.

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- ⁱ Bureau of Labor Statistics, Dec 2019, <https://www.bls.gov/news.release/pdf/empst.pdf>
- ⁱⁱ Wilson, Mike, *Back to the Fundamentals*, November 2019
- ⁱⁱⁱ Neumann, Jerry, *The Deployment Age*, October 2015, <http://reactionwheel.net/2015/10/the-deployment-age.html>
- ^{iv} Perez, Carlota, *Technological Revolutions and Financial Capital: The Dynamics of Bubbles and Golden Ages*, 2002, Edward Elgar, Cheltenham, UK, 198 pages, ISBN 1 84064 922 4.
- ^v Harvard Business Review Podcast, *Bubbles, Golden Ages, and Tech Revolutions*, October 2019, <https://hbr.org/podcast/2019/10/bubbles-golden-ages-and-tech-revolutions>
- ^{vi} Andreessen, Marc, <https://a16z.com/> *Software Eats the World*, 2011, New York Times.
- ^{vii} European Central Bank, *Monetary Policy and Household Inequality, Working Paper Series*, July 2018, <https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2170.en.pdf>
- ^{viii} Wall Street Journal, December 13, 2019
- ^{ix} Hurst, Erik, *The Retirement Consumption Puzzle*, Feb 2008, <https://www.nber.org/papers/w13789>
- ^x Morgan Stanley, *How the Gen Y+Z Boom Rolls Through the US Economy*, June 2019

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