



The View from 2030

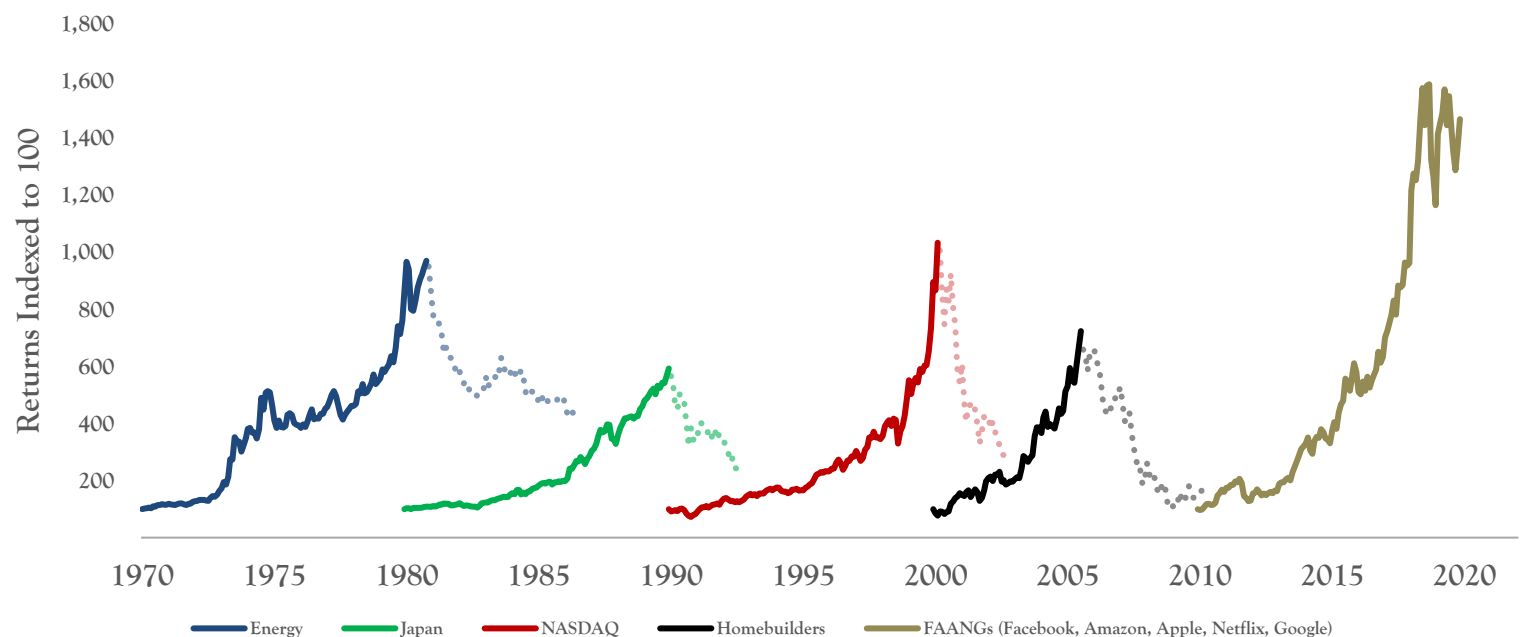
To mark the beginning of the new decade, we present something different in this quarter's report. We write from the hypothetical perspective of an investor in the year 2030, looking back on the market developments of the 2020's. The aim is to communicate our long-term expectations for investment markets in a thought-provoking way. On the final page is our strategy summary for 2020.

It wasn't the "Roaring 20's" all over again, but financial markets delivered solid returns for the decade ending in 2030. U.S. stocks performed well. Some foreign markets performed even better. Bonds delivered only modest returns, but offered investors pockets of opportunity along the way.

A decade ago, in 2020, some investors worried that stocks would disappoint in the 2020's following strong returns in the 2010's. However, they underestimated the strength and resilience of the U.S. economy, and especially American companies. The basic ingredients that have contributed to America's prosperity over the past 250 years remain in full effect: a culture of entrepreneurship and innovation, robust capital markets, the world's best research universities, extraordinarily well-run and adaptive companies, and a reputation as the Land of Opportunity that attracts the top business and scientific talent from around the world.

This report reviews the major investment themes of the 2020's. As in previous decades, certain mega-trends developed that dominated the investment landscape. Among them was the rise of China to rival the U.S. as the world's largest economy. Meanwhile, investors who anchored to the previous decade's winners were disappointed as market leadership rotated in a new direction.

Each Decade Has a Mega Trend. It Rarely Repeats.

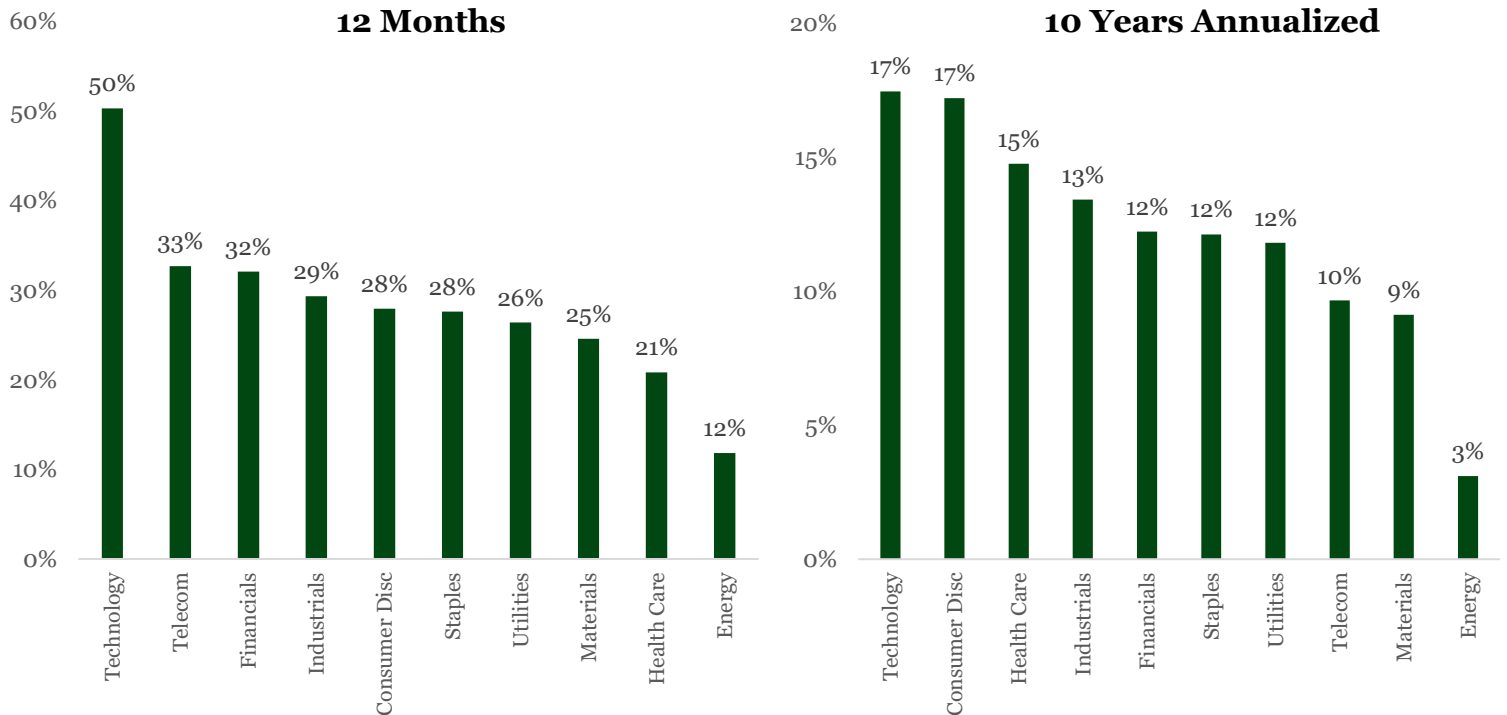


Asset Class Returns as of 12/31/2019

	Latest	Year-to-	Annualized Return			Current	P/E		
	Quarter	Date	1 Year	3 Year	5 Year	10 Year	Yield	Ratio	
Fixed Income	Domestic Taxable								
	Barclays Capital US Treasury Index	(4.1)	14.8	14.8	6.9	4.1	7.0	2.3	
	Barclays Capital US Aggregate	0.2	8.7	8.7	4.0	3.0	3.7	2.3	
	Barclays Capital Corporate	1.2	14.5	14.5	5.9	4.6	5.5	2.8	
	Barclays Capital High Yield	2.6	14.3	14.3	6.4	6.1	7.6	5.2	
	Domestic Tax Exempt								
	Barclays Municipal Bond Index	0.7	7.5	7.5	4.7	3.5	4.3	1.8	
	BarCap Muni High Yield	0.9	10.7	10.7	8.3	5.9	7.2	4.0	
	International/Global								
	Barclays Capital Global Aggregate	0.5	6.8	6.8	4.3	2.3	2.5	1.5	
Barclays Capital Emerging Market Bond	2.3	12.1	12.1	6.0	5.3	6.1	4.4		
Equity	Domestic Equities								
	S&P 500 Index	9.1	31.5	31.5	15.2	11.7	13.5	1.8	19.8
	Dow Jones Industrial Average	6.7	25.3	25.3	15.7	12.6	13.4	2.2	19.3
	S&P Mid Cap Index	7.0	26.2	26.2	9.2	9.0	12.7	1.7	19.9
	Russell 2000	9.9	25.5	25.5	8.6	8.2	11.8	1.4	33.7
	Investment Styles								
	S&P 500 Value	9.9	31.9	31.9	11.5	9.5	12.1	2.5	16.2
	S&P 500 Growth	8.3	31.1	31.1	18.6	13.5	14.8	1.2	24.6
	Foreign Equities								
	MSCI World	8.7	28.4	28.4	13.2	9.4	10.1	2.4	18.2
MSCI EAFE	8.2	22.8	22.8	10.2	6.3	6.1	3.4	15.7	
MSCI Emerging Markets	11.7	18.6	18.6	11.9	6.0	4.0	2.6	14.6	
Other	Other Assets								
	Bloomberg Commodity Index	4.0	5.4	5.4	(2.6)	(5.0)	(5.3)	0.0	
	Dow Jones Global Real Estate Index	1.5	22.3	22.3	7.8	5.9	9.8	4.0	26.4
	Gold	2.9	17.9	17.9	9.2	4.7	2.9	0.0	

Source: Hefren-Tillotson, Bloomberg

S&P 500 Sector Returns as of 12/31/2019



Source: Hefren-Tillotson, Bloomberg

The Rise of China: The View from 2030

The 2020's will be remembered as the decade that China emerged as a political, economic, and military superpower.

The watershed event was the 2019 trade war with the U.S., when China essentially stood its ground and made only modest concessions during negotiations. From that point on, China began to assert itself more boldly on the international stage.

The story doesn't begin there, however. China's rise can be traced back to the beginning of the century when it joined the World Trade Organization (WTO). Western nations believed that by accepting China into the WTO, China would become more integrated into the global economy and gradually adopt Western norms: democracy, civil rights, and free market economics. The hope was to create a win-win: China would benefit from exporting manufactured goods to the West, and Western companies would gain access to more than one billion Chinese consumers (who themselves would benefit from living in a more open society).

Not all went according to plan, however. China's economy indeed flourished. With its low-cost labor force, technological skill, and cheap currency, the country's manufacturing output soared. Soon, China became known as the "factory of the world."

But things changed following the 2008 global financial crisis, which affected China as much as it did the U.S. In the mind of Chinese leaders, the crisis revealed the pitfalls of a market-based approach. While free markets generate wealth, they also create too much instability for a country that seeks to maintain a high level of control over its citizens.

So, China reversed course. Government leaders consolidated power, reversed the trend of economic and social liberalization, and took back control over the economy. The goal was to create a more stable, self-reliant economy – and one that rivaled America in its size and influence.

Armed with trillions of dollars of savings it had accumulated by selling goods to the West, China went to work on transforming its economy. In 2013, China announced its "Belt and Road" initiative, a \$10 trillion plan to build infrastructure projects -- including roads, rails, and maritime ports -- across sixty countries, with the goal of securing China's access to natural resources and export markets. 2015 brought the "Made in China 2025" plan aimed at moving the country beyond being the "factory of the world" to become a leading producer of cutting-edge technologies and services.

This included industries like aerospace and defense, robotics, artificial intelligence, green energy, material science, and more. Much of the required technological know-how came from misappropriating intellectual property from Western companies that did business in China – a key point of contention in the trade war.

By the time the trade war flared in 2018, it was too late for the U.S. to restrain China. When China entered the WTO in 2001, its economy was 13% of the size of the U.S. economy. By 2020, it was nearly 70% as large as the U.S. – big enough to hold its own in negotiations. In retrospect, the U.S. should have sought to address its trade grievances much earlier.

China's growth strategy has paid off. Today, in 2030, the Chinese economy rivals the United States in size. China also has been successful in pulling much of Asia, Africa and parts of South America into its economic orbit. This can be seen today in the "Splinternet," or the splitting of the global internet into separate U.S. and Chinese-based spheres. Today, nations and multinational companies that want to deploy the latest technology are forced to choose between U.S. and Chinese equipment and standards. As a result, some economists worry that after decades of economic integration, the world is splitting into an economic East and West.

Despite presenting the U.S. with a rival on the global stage, the rise of China has benefited America by increasing the size of the overall global economy. This means new opportunities and end markets for U.S. businesses. On the whole, America -- and American investors -- are more prosperous today with a rich China than they would be with a poor one.

China's rise did bring one notable downside for the U.S. For nearly 60 years, the U.S. dollar has been the world's primary reserve currency – that is, the safe haven where nations across the world place their savings. This status -- which economists refer to as America's "exorbitant privilege" -- allowed the U.S. to run large fiscal deficits and finance them at low interest rates.

Today, in 2030, the dollar's place in the world's economy has begun to slip. The rising Chinese yuan provides nations and investors with an alternative. The U.S. can no longer count on borrowing from other countries at ultra-low interest rates, and for the first time in a generation, Washington must take its runaway deficits seriously.

Implications of China's Rise: The View from 2030

China's rise to superpower status has created opportunities for investors. Some of the major investment themes of the 2020's were different from the 2010's.

Emerging Market Equities were among the best performing investments of the 2020's. This followed a disappointing decade of the 2010's when stock prices were virtually flat.

This underperformance resulted in attractive valuations, and set the stage for last decade's strong returns (the MSCI Emerging Markets index began 2020 with a Price to Earnings Ratio of 14x). China's rise spawned growth across these regions, including natural resource-rich Latin America and technology-heavy Asia.

Within China, two key themes were the rise in middle class consumers and Silicon Valley-inspired internet start-ups. These companies have flourished in the "Splinternet" because they compete very little with America's powerhouse internet companies.

India emerged as another winner of the 2020's. The country recently surpassed China to become the world's most populous nation, and is now the third largest economy on earth (behind China and the U.S.).

At the turn of the century, many investors believed that India, not China, would emerge as the primary rival to the U.S. However, unlike China, India was slow to build the physical infrastructure -- roads, bridges, etc. -- necessary to connect the country's far-flung population and foster growth. As a result, the Indian economy failed to reach its potential during the 2010's.

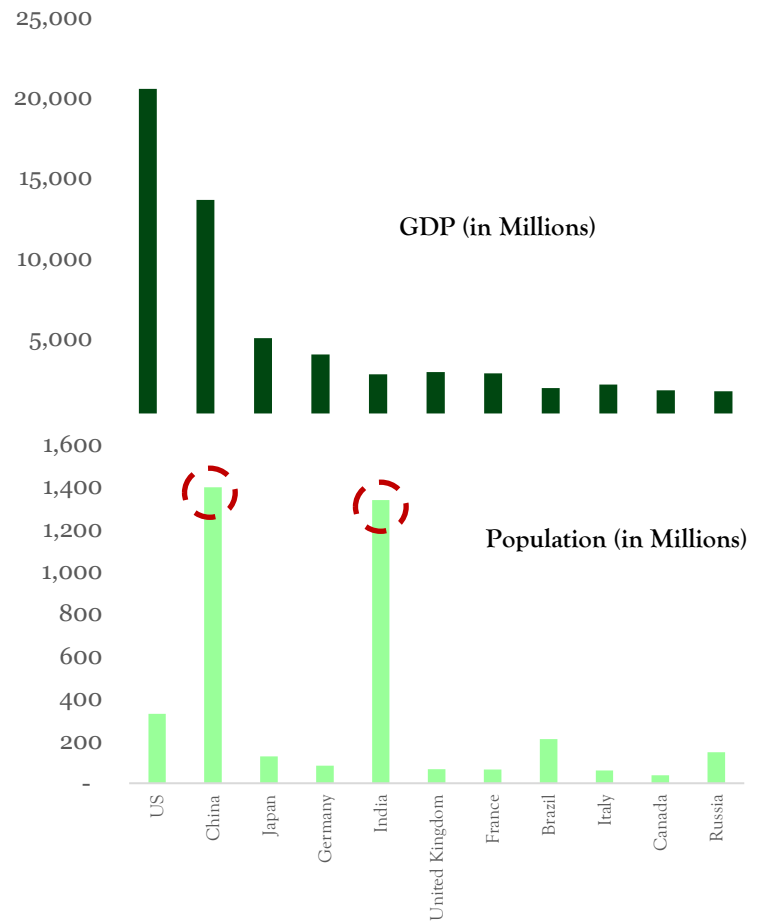
That changed, however, following reform of the banking system in the late 2010's. By the early 2020's, India was ready to finance large scale infrastructure projects. This, together with the proliferation of internet access and mobile phones, brought more Indians into the economic fold. Living standards rose, and today, in 2030, India's middle class is much larger than it was a decade ago, when it was just a sliver of the population.

The rise of the Indian consumer also has been an opportunity for multinational companies based in the U.S. and Europe -- particularly in the consumer goods, healthcare, media, and technology industries.

MSCI Emerging Markets Index



World Economies Ranked by Size (2018)



European Stocks surprised many investors by performing well in the 2020's. Like emerging markets, the region struggled in the 2010's, resulting in attractive valuations in 2020. Also like emerging markets, the region has benefited from riding China's coattails.

Europe benefited from the U.S.–China trade war because it caused China to look for trading partners outside the U.S. Trade between China and Europe rose significantly over the last decade. This helped to offset the negative effect of Europe's poor demographics.

The 2020's also saw improvement in the structural challenges that plagued the region in the 2010's. After years of fiscal belt-tightening, many countries were in better financial shape by 2020. This allowed them to enact more economic stimulus, including infrastructure and clean energy projects.

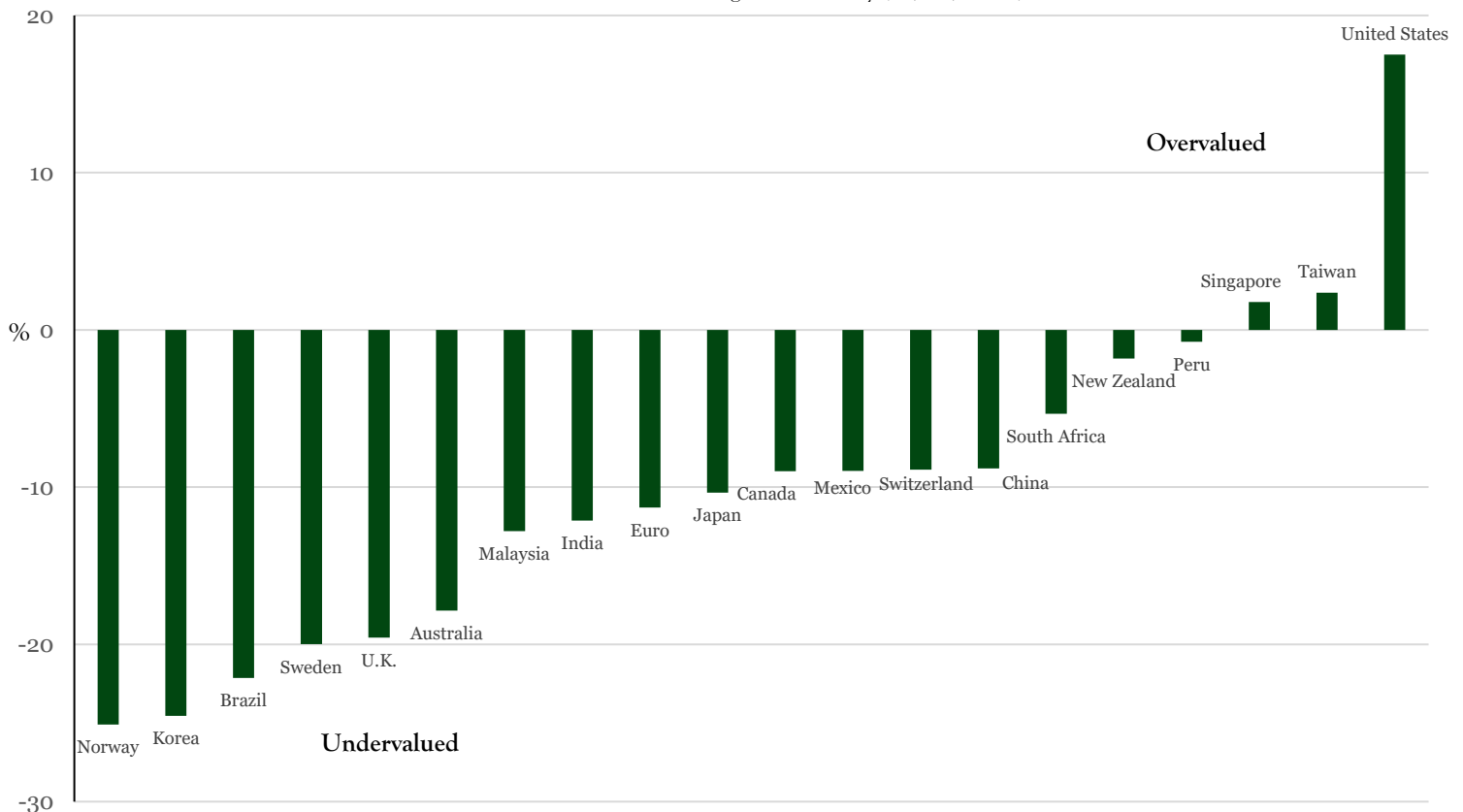
Younger Europeans are more committed to Europe as a whole than the previous generation. Today, in 2030, there is lower risk of national "exits" from the European Union like those that threatened to pull the Continent apart during the 2010's.

U.S. Dollar Weakness - The dollar fell in value during the 2020's. There were three main reasons. The first was the decline of the dollar's role as a reserve currency, as outlined on page 3. The second was that the dollar was overvalued coming into the decade after a big rise in the 2010's (in 2020, the Dollar traded at an 18% premium to fair value (bottom chart)). Third, improved economic growth outside the U.S. caused investment flows to move into non-dollar currencies.

For investors, there were three main implications. First, rising foreign currencies boosted the returns of investments in foreign stocks and bonds, especially emerging markets. Second, the weaker dollar boosted profits for U.S. multinational companies that export overseas (particularly the industrials and technology sectors). Third, with money flowing offshore, it became more difficult for the U.S. government to borrow at low yields. Unlike in the 2010's, the 10-year Treasury yield spent little time in the 2020's below 2%.

Valuation Comparison of World Currencies in 2019

Based on Purchasing Power Parity (11/30/2019)



Source: HT, Brandywine Investments

U.S. Sector Performance: The View from 2030

Back in the U.S., equity sector performance was influenced by a number of mega-trends, including technological developments and demographics.

Technology

Technology was again one the best performing areas of the market in the 2020's, as it has been for much of the past fifty years (since 1980).

Several emerging areas powered growth for the sector, including:

- Artificial intelligence and machine learning
- The Internet of Things
- Robotics and industrial automation
- Data storage and cloud computing
- 5G wireless networks
- Autonomous vehicles
- Virtual and augmented reality

It was difficult to predict a decade ago, given the pace of innovation, precisely which companies ultimately emerged as the winners. However, all of these industries are powered by semiconductors (a.k.a. computer chips). A basket of these stocks performed well in the 2020's.

FAANGs (Facebook, Amazon, Apple, Netflix, and Google) stocks did not repeat as market winners in the 2020s. These stocks benefited in the 2010s from the proliferation of mobile phones, which changed the way people communicate, shop, and seek entertainment.

However, several of these stocks had reached trillion-plus dollar market valuations by 2020, making it difficult to grow at an above-average rate.

These companies also wrestled with increased regulatory oversight. Big Tech's rapid growth in the 2010's came in a virtually regulatory-free environment as Washington's focus was on Wall Street. But the failure of Big Tech companies to ensure user privacy and to police political disinformation invited closer scrutiny. In fact, seemingly the only thing that Democrats and Republicans could agree on in 2020 was that Big Tech could not be trusted to monitor itself.

While these businesses have continued to grow, increased regulations have squeezed their profit margins. These stocks by no means went bust, but they never again combined to exceed 13% of the S&P 500, the level in 2020.

What a Difference a Decade Makes

The World's 10 Largest Companies, Ranked by Market Value

12/31/1979	12/31/1989	12/31/1999	12/31/2009	12/31/2019
IBM	NTT	Microsoft	Exxon	Microsoft
AT&T	Bank of Tokyo	GE	PetroChina	Apple
Exxon	Industrial Bank of Japan	NTT Docomo	Apple	Amazon
Standard Oil	Sumitomi Mitsui	Cisco	BHP Billiton	Alphabet
Schlumberger	Toyota	Walmart	Microsoft	Facebook
Shell Oil	Fuji Bank	Intel	ICBC	Alibaba
Mobil	Dai-Ichi Kangyo Bank	NTT Docomo	Petrobras	Tencent
Eastman Kodak	IBM	Exxon	China Construction Bank	JPMorgan
Atlantic Richfield	UFJ Bank	Lucent	Royal Dutch Shell	J&J
GE	Exxon	Deutsche Telecom	Nestle	Visa

Data as of 12/31/19

Source: HT, Strategas

U.S. Sector Performance: The View from 2030

Healthcare

There are not many things we can know about the future, but this we can: people grow older. As they do, their demand for healthcare rises; for senior citizens, it rises exponentially.

Thus, one of the least surprising developments of the last decade was that spending on healthcare soared as the baby boomer generation moved into its golden years. Today, in 2030, the last of the boomer generation (born in 1964) has reached retirement age.

Spending on pharmaceuticals, medical devices, and hospitalization increased dramatically over the decade, leading to tidy profits for healthcare companies and investors.

Perhaps the most important development was the rise of genomic medicine -- arguably the greatest breakthrough in healthcare since the discovery of penicillin one hundred years ago.

Doctors today use gene therapy to treat, and in some cases cure, diseases that are based on genetic disorders. This includes some hereditary diseases that until recently were untreatable. Thus, genetic medicine has gone beyond simply replacing older treatments and has opened up all-new markets for biopharmaceutical companies.

Predictive medicine is another breakthrough development. Doctors today can use DNA information to identify likely diseases before they develop in a patient. This will likely allow patients to live longer (and ultimately go on to consume more healthcare).

In retrospect, solid performance from healthcare stocks seems obvious given the predetermined trend in demographics. A decade ago, in 2020, however, it was not so evident. Investors at the time worried about the threat of increased regulation to healthcare profits. That regulation indeed came, but similar to the two major government interventions into healthcare over the past 70 years -- Medicare in the 1960's and the Affordable Care Act in the 2010's -- it did little to hurt overall healthcare profitability (most of the risk was to "middleman" type distribution companies).

If anything, new regulations boosted demand for healthcare products and services by expanding access for more patients.

Aerospace and Defense

Defense stocks performed well in the 2020's.

Not surprisingly, worldwide defense spending rose in the 2020's as nations responded to a larger and more assertive military presence in China. As post-World War II alliances such as NATO frayed, many countries were compelled to spend more on their military.

The big story, however, was that defense contractors were able to capitalize on their expertise in cybersecurity to provide protection to governments and companies against cyber espionage, hacking and theft.

A major concern today is that the next war will not be a traditional military conflict, but instead a "Cyberwar." The battle lines perhaps already have been drawn along the "Splinternet," with China, Iran and Russia forming a bloc to oppose the U.S. This has led to a veritable "arms race" among nations in computing power and IT security. A major theme in the 2030's will be the rise of quantum computing.

Energy

The energy sector never returned to its heyday of the 2000's when oil demand from China and concerns over limited supplies sent oil prices to nearly \$150/barrel.

Oil prices remained relatively low during the 2020's after the fracking boom of the 2010's created ample new supplies. Likewise, improved energy efficiency meant that demand for oil was muted, despite China's growth.

The increase in domestic oil production resulting from fracking greatly decreased America's reliance on oil from the Middle East. OPEC today is a shadow of its former self in terms of political sway and its ability to influence oil prices. The main source of geopolitical risk for investors is China-U.S. relations, not the Middle East.

By 2030, renewables and clean energy became more cost competitive and widespread in use. This was especially true for solar energy. The cost of producing solar electricity fell nearly 90% in the 2010's, and continued to plummet in the 2020's. Even so, solar power companies struggled to be profitable as the rapid pace of innovation meant old technologies quickly became uncompetitive.

U.S. Sector Performance: The View from 2030

One bright spot for energy investors in the 2020's was North American natural gas, which was among the worst performing areas of the markets in the 2010's when abundant new gas supplies caused prices to plummet. Low prices attracted new industrial development, which in turn boosted demand. Exports of liquefied natural gas (LNG) soared over the decade as low cost American supplies were shipped overseas. Natural gas stocks as a whole performed well during the 2020's, although some companies with poor finances foundered.

Financials

Bank stocks performed well in the 2020's after greatly trailing the S&P 500 in the 2010's. Several factors contributed to the good results.

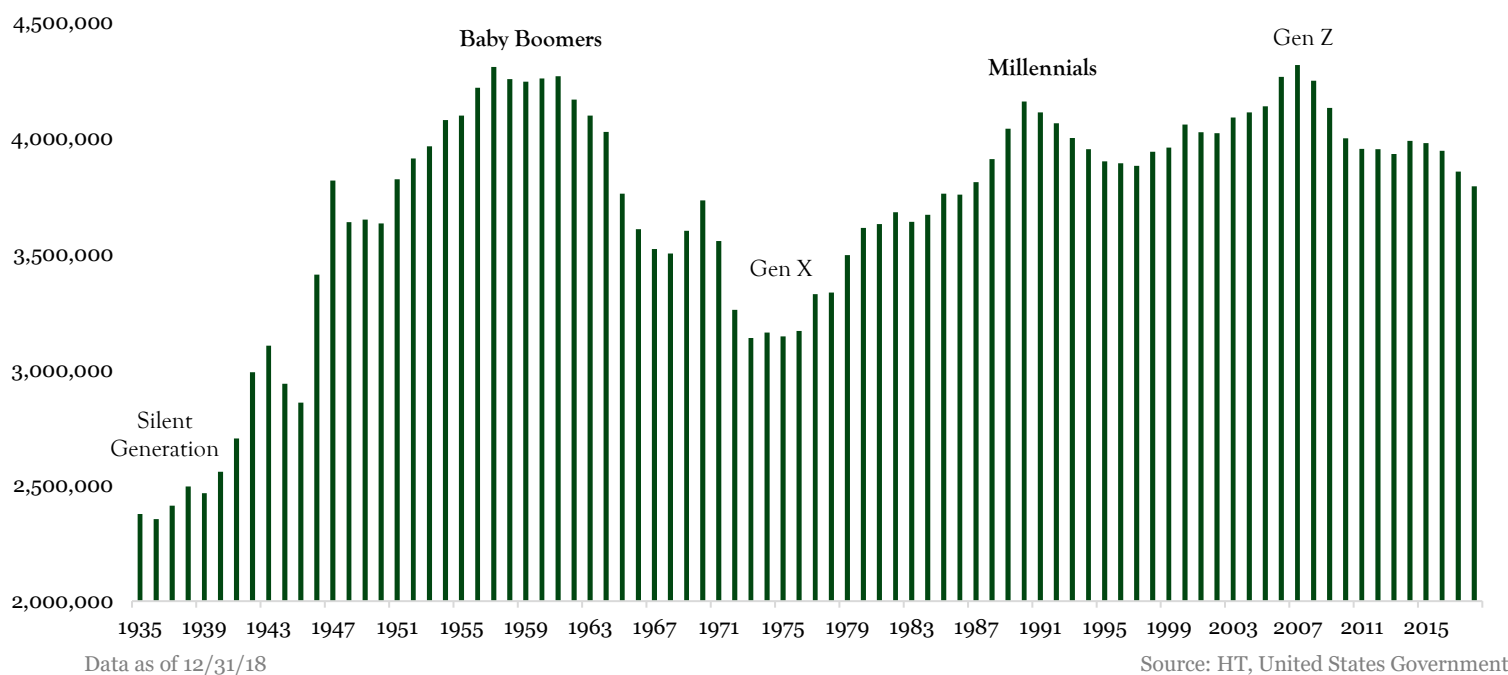
First, low stock prices and solid dividends a decade ago set the stage for attractive returns. In 2020, the S&P Banking index traded at a Price to Earnings ratio of just 12x and a dividend yield of 2.5%.

The main development, however, was the rise in borrowing by Millennials, especially for mortgages. The peak birth year for millennials was 1991 and the typical first time homebuyer is 30-35 years old, meaning that 2021-2026 were strong years for the housing market. Of course, first-time home buyers tend to do a lot of additional spending – especially when young families with children are involved – and banks benefited as credit card balances rose. Banks also profited as interest rates returned to more normal levels following a period of ultra-low rates in the 2010's.

Large financial institutions have been among the largest users of artificial intelligence and machine learning techniques to drive new business and lower costs. Similar to the way Amazon recommends products to online shoppers, banks today are adept at matching services to customers based on factors like their financial situation, the availability of discounts on brands they like, and even their travel preferences. Meanwhile, new technologies have helped banks to expedite the loan approval process, reduce fraud, and – yes – replace workers with digital alternatives.

Finally, banks benefited as Washington's regulatory focus shifted during the decade toward large technology companies.

Total U.S. Births (1935-2018)



U.S. Sector Performance: The View from 2030

Industrials

The 2020's were a culmination of the manufacturing trend of the last 50 years to produce more goods with fewer people. This has been a boon to industrial sector profits and stock prices. However, in Washington D.C., there is a political crisis over the state of manufacturing jobs in America.

Several familiar technological developments came to a head in the 2020's and increased factory productivity. This includes the use of robotics and sensor technologies to manage factories and supply chains more efficiently than ever.

But the major development was the rise of artificial intelligence (AI) to oversee and optimize the production process. This includes so-called predictive maintenance, which allows manufacturers to anticipate and address problems on the production line before they occur, thus greatly reducing down time. AI also has improved quality control by predicting how subtle changes to the manufacturing process, such as machine behavior and raw materials, can affect the final product. AI can even suggest ways to optimize product design by taking into consideration different material types, production methods, and budget limitations.

Today, in 2030, "lights out" manufacturing has taken hold in America. Some factories are fully automated with little human intervention, and thus have no need to keep the lights on -- or air conditioning or heat, for that matter -- thus further reducing costs.

The trend toward automation has greatly reduced the need for unskilled labor in manufacturing. By 2025, most manufacturing workers had a college degree. Manufacturing jobs today are associated less with manual labor and more with programming the robots that do the work. Pay for these skilled positions is good; however, it has become increasingly difficult for unskilled workers to earn a living wage in manufacturing (or almost any sector of the economy).

To address this challenge, some politicians are calling for the implementation of a Universal Basic Income -- that is, money paid to all Americans regardless of their work situation. Other politicians argue instead for Universal Basic Capital -- i.e. granting to every citizen shares in America's most successful companies.

Telecommunications

A final major theme of the 2020's was the rise of 5G, or fifth generation cellular wireless. This service, now widespread, is up to fifty times faster than the 4G wireless service common in 2020.

Today, wireless technology is more prevalent than ever. Homes, factories, autonomous vehicles, and even implantable medical devices rely on the faster speeds and greater data capacity of 5G.

As a result, many Americans have eliminated their broadband internet service, and instead pay up for robust wireless service. Wireless providers have seen their profits and stock prices rise, although the gains have been restrained by the high cost of rolling out and maintaining 5G networks.

Fixed Income

Bonds delivered only modest returns in the 2020's. This is not a surprise, as the 10-year Treasury began 2020 with a yield of just 1.9%. Returns were even more modest after adjusting for inflation. Even so, there were bright spots for bond investors:

Municipal bonds performed relatively well. Tax rates for individuals rose during the 2020's as Washington was forced to address rising fiscal deficits. This made the tax benefit of owning municipals even more valuable.

High Yield Corporate Bonds offered attractive opportunities as periodic concerns over the economic growth caused temporary sell-offs in the asset class, creating compelling entry points for investors.

Emerging Market Bonds were among the best performing areas of the bond market. As the dollar declined, emerging market currencies rose and boosted the returns for U.S. investors.

Summary view from the hypothetical perspective of an investor in the year 2030: A decade ago, in 2020, investors had a choice to make. They could focus their portfolio on bonds and accept very modest returns. Or, they could focus on stocks in search of higher returns, and accept higher volatility along the way. By 2030, investors who emphasized stocks and stayed the course, despite market ups and downs, were happy they did so.

Investment Strategy Summary for 2020

The following is a summary of our present day outlook and strategy for 2020:

- We expect global economic growth to revive in 2020 and for the bull market in stocks to continue. Recession fears are fading, and investors now have greater clarity on the three main areas of uncertainty in 2019: the trade war with China, Federal Reserve interest rate policy, and Brexit. That said, a near-term pullback in stocks would not be a surprise following 2019's strong gains.

- As the global economy improves, we expect economically-sensitive investments to perform well. Many of these areas are still attractively valued, in our opinion, due to lingering concern about the global economy. Among U.S. stocks, areas of opportunity include the technology, industrials, and financials sectors. Financials could perform well if interest rates rise in response to better economic growth.

- Outside the U.S., emerging markets should perform better now that the trade war is less of a concern. European stocks could also perform well due to the region's close economic ties to China.

- "Recession proof" areas of the equity markets are generally expensive, in our opinion. This includes defensive sectors such as utilities and consumer stocks. These stocks could lag the market if interest rates rise in response to better economic growth.

- Interest rates on Treasury bonds are very low and do not reflect the potential for a rebound in economic growth, in our opinion. We expect interest rates to drift higher in 2020. Bond investors should have only modest interest-rate sensitivity in their portfolios.

- The economic expansion could eventually end in typical fashion, with the economy overheating, inflation rising, and the Federal Reserve raising interest rates. However, those conditions are not present today.

- While we do not forecast a recession, investors should remain mindful that the economic expansion is already the longest in history. Thus, despite our upbeat outlook, now is not the time to throw caution to the wind.

Fixed Dollar Assets

- Short-term interest rates are high today compared to long-term rates, making short-term fixed-income vehicles an attractive option.

Fixed Income Strategy

- Emphasize short-term bond funds, which are a good source of income today relative to the amount of risk entailed.
- Some foreign bond markets offer attractive valuations and solid return potential, in our opinion.
- Municipal bonds continue to enjoy solid fundamentals, including strong demand from investors and limited new supply.

Equity Strategy

- We believe economically-sensitive parts of the global equity markets are generally inexpensive and poised to perform well as recession fears fade.
- Overweight emerging markets given the potential for higher long-term returns. More broadly, international markets appear to be inexpensive, but may require stronger Chinese economic growth to perform better.
- Avoid speculative parts of the U.S. market, including many recent IPO's.

Other Assets

- Some corners of the real estate market exhibit positive fundamentals and a solid level of income.

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