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GLOBAL CIO PERSPECTIVES

Augmented Reality

FISCAL AND MONETARY STIMULUS HAVE DISTORTED UNDERLYING U.S. GROWTH PROSPECTS

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AUGMENTED REALITY

An accommodative Federal Reserve, aggressive fiscal stimulus and receding trade tensions have boosted U.S. equities to record highs. In reality, economic growth is stable but modest, corporate profits have been disappointing, and political risks are building as we get closer to the national election.

Introduction

In 1967, a group of technology enthusiasts descended upon New York City to see the latest in hi-tech wizardry, including the newest pocket AM radios and solid-state color TVs. This gathering evolved into the Consumer Electronics Show (CES), one of Las Vegas premier events, attracting 4,000 exhibitors and nearly 200,000 attendees. This year's highlights included a concept air-taxi designed by Hyundai for Uber, foldable smartphones, and an array of home robots, illustrating just how far technology has advanced from the days when pocket radios were a feature attraction. One of the more talked about product demonstrations was the major advancement in "augmented reality", with a Chinese firm debuting a pair of glasses for $500 that appears to be far superior to the current state-of-the-art ones costing several times as much.

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Augmented reality is a technology that superimposes images onto your field of vision, mostly delivered today via smartphones but eventually with increasingly cost-competitive hi-tech glasses. Augmented reality holds great promise for gaming, industrial, and retail applications. As an example, imagine visiting a store where prices, descriptions, and reviews of items appear automatically whenever they are in your field of vision, instead of having to pick up your phone and do a search every time you wanted product information. Some technologists expect that augmented reality glasses rather than phone screens will be the dominant way we interface with information in the future.

Augmented reality is also a useful metaphor for today's U.S. market and economic environment where investor euphoria has been rising, along with equity valuations, while underlying economic growth has been enhanced by fiscal and monetary stimulus. The American Association of Individual Investors (AAII) investment survey conducted in mid-January confirmed this positive investor sentiment with its most bullish reading since early October of 2018, just before the market suffered a sharp correction.

Complacency on the economy has not been limited to U.S. investors. Over 5,000 miles from Las Vegas is the site of another closely followed January event. Located in the Swiss resort city of Davos, the World Economic Forum (WEF) began in 1971 as the European Management Forum. By 1987 it adopted the WEF name and today hosts roughly 3,000 invited leaders from the public and private sectors.

One of the most anticipated publications from Davos is its annual report identifying top global risks (see Exhibit 1). What is especially interesting is how these risks have evolved over time. In 2010, in the wake of the global financial crisis, three of the top five risks were related to economic affairs while there was no mention of climate change. By 2020, the environment is identified in each of the top five risks.

Few would dispute that climate risk needs to be a top priority to galvanize support for action in the public and private sectors. Another scorching year (2019 was the second hottest year on record) and tragic climate

EXHIBIT 1: **TOP 5 GLOBAL RISKS IN TERMS OF LIKELIHOOD**

	2010	2015	2020
1st	Asset price collapse	Interstate conflict with regional consequences	Biodiversity loss
2nd	Slowing Chinese economy (<6%)	Extreme weather events	Climate action failure
3rd	Chronic disease	Failure of national governance	Extreme weather
4th	Fiscal crises	State collapse or crisis	Human-made environmental disaster
5th	Global governance gaps	High structural unemployment or underemployment	Natural disaster

Source: World Economic Forum.

events around the globe have understandably taken focus from other global risks. However, the WEF seems to be falling prey to recency bias by only focusing on climate to the exclusion of all other risks.

But if so many accomplished minds at the WEF can underemphasize economic and other risks, why should investors be any different? In 2007 and 2008, the WEF highlighted pandemics as a top global risk. The current outbreak of the Wuhan coronavirus suggests that pandemics should have a permanent place on this list of top risks, especially when considering that the world's populations are increasingly mobile. This raises the potential to spread diseases before they can be contained by local authorities.

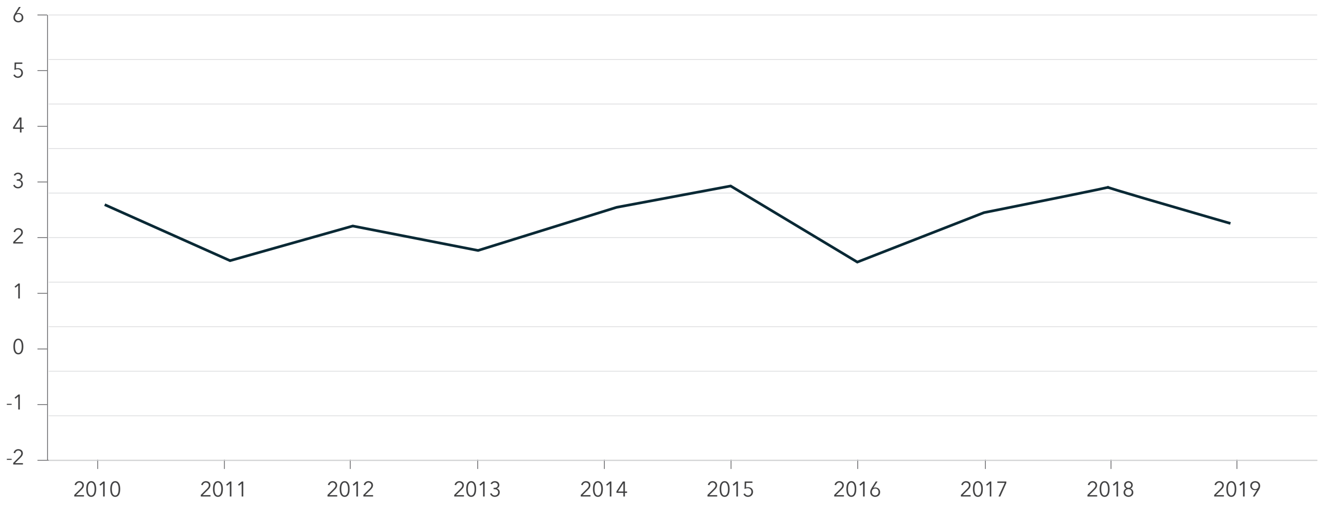
While it is too early to assess the impact of the coronavirus on economies and markets, it serves as a reminder that equity valuations need to properly account for exogenous risks that can and will arise in a haphazard fashion. Currently, the U.S. market seems to be ahead of underlying fundamentals, leaving little margin for error in 2020, whether the catalyst is a global pandemic, disappointing earnings, or political risk. The chart below (see Exhibit 2) illustrates that the S&P 500 Index's price-earnings ratio (PER) is at its highest level since the global financial crisis, and well above its long-term historic norm.

Investors have been emboldened that recession odds which spiked in late 2018 have receded. However, a closer look at actual economic growth paints a less constructive picture. U.S. GDP growth finished at roughly 2.0% for 2019 despite three rate cuts by the Fed, continuing a trend of sub 3.0% growth since the financial crisis. When the Tax Cut and Jobs Act was passed in late 2017, Treasury Secretary Mnuchin said it would pay for itself by spurring average growth of 2.9% over the next 10 years. Meanwhile, growth has been stuck at 2% (see Exhibit 3), and deficits are widening, a sign that the U.S. economy is not as healthy as it appears.

EXHIBIT 2: **ADJUSTED FORWARD PER OF S&P 500 INDEX**

Source: Bloomberg.

EXHIBIT 3: **U.S. REAL GDP % CHANGE**



Source: Bloomberg. *2019 is estimated

Many take comfort in current U.S. economic growth because: 1) GDP of 2% is relatively good in a slow growth world, where the only major economy growing faster is China, 2) U.S. unemployment of 3.7% is the lowest since the late 1960s, and 3) inflation appears well contained. These data suggest a so-called "Goldilocks" environment, with enough growth to keep unemployment low, but not so much to trigger interest rate increases.

In reality, the U.S. deficit spending is an alarming 4.7% of GDP (see Exhibit 4), the highest of any major economy. GDP growth should be much higher than 2.0% given this level of spending, which is not sustainable. Unemployment is low in the U.S. as it is in every economy with aging demographics. France is an exception with high unemployment for a variety of reasons, including the youngest population in Europe, a key factor in an economy that has not historically fostered new companies to absorb new entrants to the labor force.

One of the popular arguments supporting today's high valuations in the U.S. market is that low yields are driving investors to equities because there is no alternative. The yield of the S&P 500 Index at 1.8% (see Exhibit 5) is almost identical to that of cash or of 10-year Treasuries. Every major market has higher yields and lower rates, except for China. This is an imperfect comparison, because of the U.S. dominance in the low-yielding, fast-growing tech sector. But if we exclude technology firms, we see many companies with pedestrian growth whose yields have been driven down (and PERs up) because of their use as bond substitutes for income-oriented investors. Interestingly, the relationship between lower bond yields driving equity yields lower (and share prices higher) has broken down in most of the rest of the world, where investors can still earn a decent premium over local bond market yields.

The U.S. economy may be considered a safe haven in a slow growth world, but its market valuations are pricing in better growth prospects than seem realistic.

EXHIBIT 4

	Real GDP	Budget as % of GDP (Budget Balance)	CPI	Unemployment Rate
US	2.9	-4.7	1.8	3.7
Canada	2.0	-0.6	1.9	5.7
UK	1.1	-2.2	1.8	4.1
Germany	0.6	1.9	1.4	5.0
France	1.7	-2.5	1.3	9.1
China	6.1	-4.1	2.9	3.8
Hong Kong	3.0	3.4	2.9	2.9
Australia	2.7	0.0	1.6	5.2
South Korea	2.0	1.3	0.4	3.8
Japan	0.3	-2.6	0.5	2.4

Source: Bloomberg.

EXHIBIT 5

	Yield Equity Index	Yield Government 10 Year Bond	Short Term Cash Yield (Central Bank Rate)
US	1.80	1.73	1.75
Canada	3.00	1.41	1.75
UK	4.80	0.59	0.75
Germany	3.00	-0.31	0.00
France	3.00	-0.07	0.00
China	2.00	2.98	4.35
Hong Kong	3.50	1.46	2.00
Australia	4.50	1.08	0.75
South Korea	1.90	1.67	1.25
Japan	1.90	-0.03	-0.10

Source: Bloomberg.

Summary & Conclusion

Market timing is a notoriously difficult task because most of the time markets will trade within a reasonable band around fair value. The U.S. market seems to be at the top end of that fair value range. It is certainly possible the market valuations remain high or become even more elevated, but there is no shortage of risks that can cause a market correction to bring PE ratios back in line with historic norms. It is human nature to get caught up in the euphoria of a strong market as a herding bias is a strong and instinctive one. Just as powerful is the hindsight bias that makes every market correction seem obvious after the fact, even without the use of augmented reality glasses.

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