

*December 31,
2019*

Macroeconomic and Geopolitical Review of 2019 / Outlook for 2020

December 31, 2019

As 2020 begins, ample liquidity and confidence in the US consumer sector have driven one of the most remarkable equity market returns in modern US history. With the S&P 500 Index up ~30% over the last 12 months, 2020 starts on the heels of a 10%+ market gain during the final quarter of 2019 alone.

This contrasts markedly with where 2019 began.

Following a drop in equities of almost 15% during the final quarter of 2018, 2019 started with a trajectory of tightening US monetary policy and growing expectations the long US business cycle expansion might finally be nearing its end. During the first quarter of 2019, however, expectations of Federal Reserve policy direction shifted dramatically. This combined with sustained underlying strength in the US labor market and consumer sector to drive gains in US equities of a scale predicted by none when 2019 started.

Does a similar reversal in expectations loom for 2020?

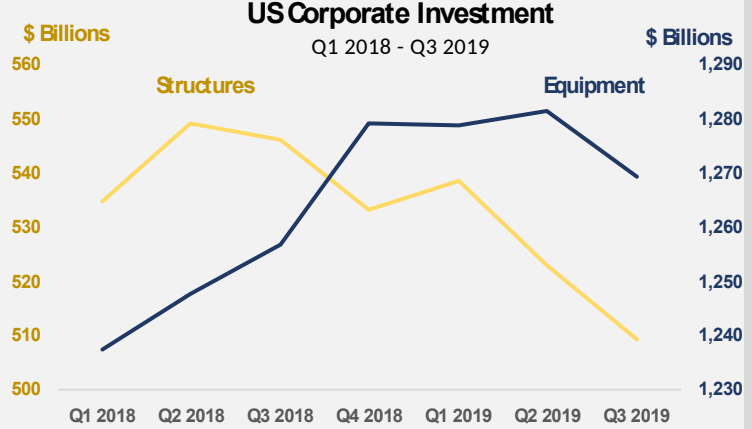
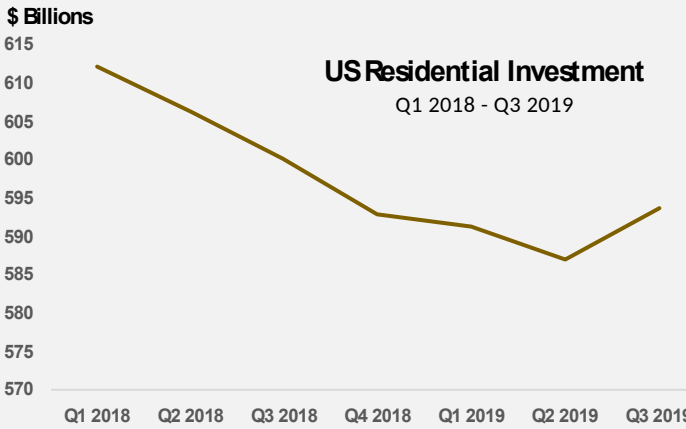
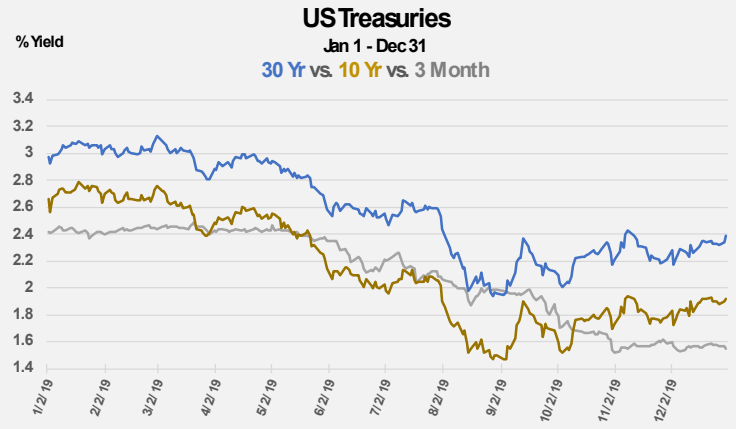
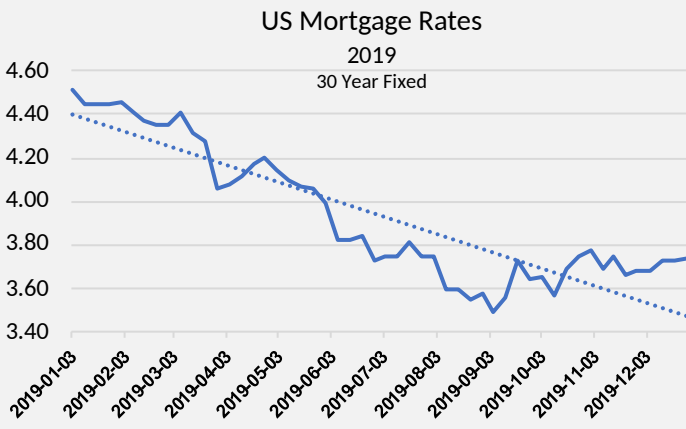
This report assesses the extent to which bearish factors which haunted 2019's advance - global macroeconomic weakness, financial market instability, and significant geopolitical volatility - have vanished. The sustainability of sentiment driving markets as 2020 begins is assessed in detail.

A DRAMATIC SENTIMENT REVERSAL

Current sentiment - as reflected in Q4 2019's impressive gains - seems to reflect a sense that the wall of worry the bull market climbed in 2019 was significantly overstated. This bullish perspective sees the Federal Reserve as having clearly demonstrated over the past year an ability and willingness to sustain US economic expansion via aggressive monetary policy. Confidence in the Fed's policy trajectory has been reinforced by continued record-low unemployment numbers, plus a consistently strong US consumer sector (which has even strengthened recently in terms of real wage gains).

Bolstering this bullish perspective have been positive expectations of how lower long-term interest rates might flow through into economic activity via the US mortgage sector. Thanks to Fed policy action and a deep inversion of the US yield curve, mortgage rates decreased significantly during the first three quarters of 2019. These lower mortgage rates have led to expectations of both sustained US consumer spending and a rebound in real estate investment.

This boost to the consumer and investment outlook is expected to be complemented by a cyclical rebound in corporate investment, as structural and other projects that were deferred during recent global economic uncertainty are finally pursued.



INTERNATIONAL OUTLOOK SOLIDIFIES

Complementing this positive US sentiment is a sense that many of the international economic pressures that weighed heavily during 2019 are poised for a cyclical rebound.

Chinese authorities now appear firmly committed to reinforcing economic growth in the world's second largest economy via monetary and fiscal stimulus. With the looming signature of a Phase One trade deal, there seems to be a broad sense that the US-China trade war is headed towards a resolution. Concerns about further deterioration in the global trading and investment environment have ebbed markedly, with positive implications for global growth and US exports.

These bullish expectations are a significant shift from the narrative that dominated 2019 and the volatility of just a few months ago.

2020 thus begins with almost the inverse of the negative sentiment that characterized the beginning of 2019.

POSITIVE SENTIMENT DESPITE FINANCIAL INSTABILITIES

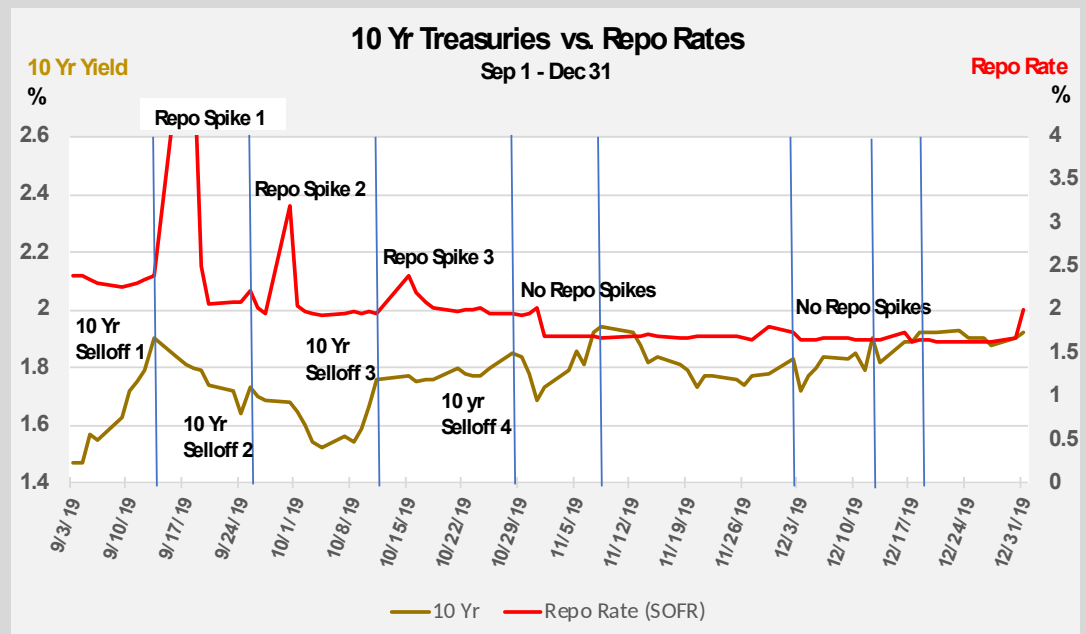
This positive outlook has emerged even as significant instabilities plagued a key component of the US financial system - the repurchase "repo" market - during the final months of 2019.

Despite initial missteps and multiple spikes in repo rates following the widely noted repo turmoil in mid-September, confidence seems to now be strong that the Fed has stabilized and isolated this critical sector of the US financial system. Such an assessment is borne out by our analysis below.

However, we continue to believe 2019's repo market instabilities were widely misunderstood and have key correlations with shifts in US Treasury markets. This correlation indicates a potential further instability should there be a significant selloff in US Treasuries - a scenario we discuss later in this report.

The graph below highlights the relationship between US Treasury bond selloffs and repo spikes.

SUCCESSFUL REPO INTERVENTION



In our October special report, we highlighted that the conventional explanation for mid-September's repo-market rate spike was unsatisfactory, noting how the repo-spike followed a sharp sell-off in US Treasuries during the first two weeks of September.

Our assessment was that financial sector balance sheet pressures related to this sudden selloff in US Treasuries - and a related collapse in momentum strategies driving a need for cash in the hedge fund sector - were likely drivers of the repo spike. The Bank for International Settlements confirmed in December that hedge fund

demand for cash played a key role in driving the repo turmoil in a BIS report covering repo instabilities.

The above graph shows the initial repo spike of September was directly correlated to a previous sharp selloff in US Treasuries, but it also reinforces currently-prevailing wisdom that Fed liquidity operations have brought the situation under control.

After a relatively minor selloff in T-bonds at the end of September correlated with a second and disproportionate resurgence of repo rates (Repo Spike 2), subsequent US Treasury bond selloffs had a muted impact on repo rates thanks to decisive Fed liquidity operations.

This timeline of repo turmoil and stabilization corresponds with the emergence and subsequent rapid evaporation of volatility in equity markets. This offers confidence in the Fed's ability to stabilize markets. It might also indicate that financial market instabilities were more significant in late Q3 and early Q4 2019 than the impressive equity market performance of Q4 would imply. This perspective is reinforced by our analysis of other credit markets during this same period.

EQUITY MARKET VOLATILITY EVAPORATES...

In the aftermath of repo-market instability, aggressive Fed policy during Q4 2019 reinforced a building shift in sentiment related to US-China trade relations. The equity market volatility that had been emerging during August, September, and early October of 2019 quickly evaporated.

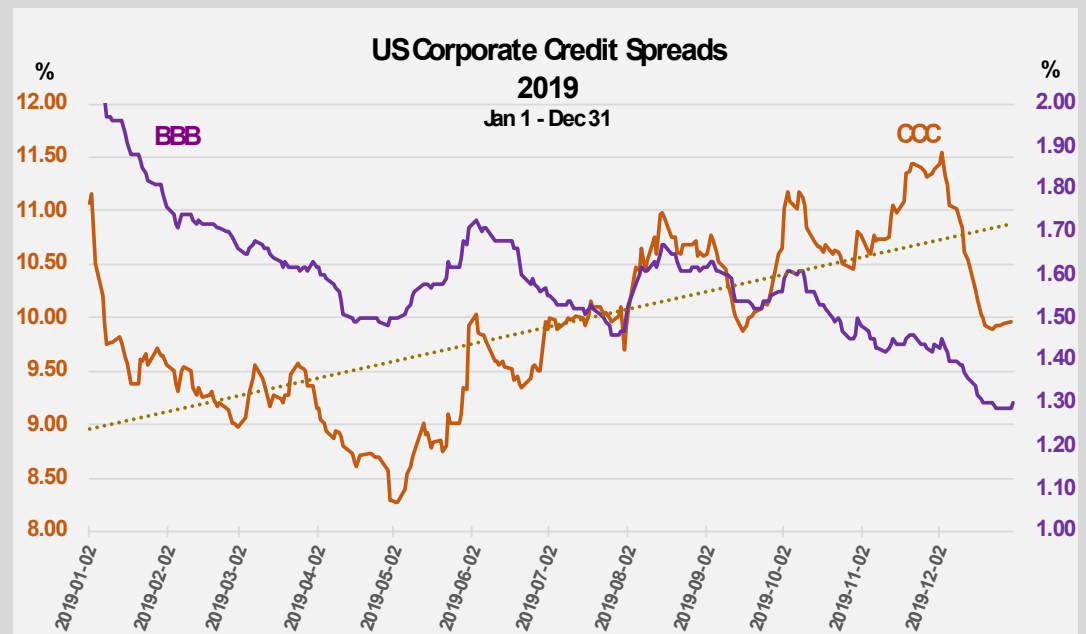
Technical market indicators had hinted in early Q4 2019 at strong equity market upside potential amidst the nascent emergence of a major sentiment shift. However, these early Q4 bullish indicators diverged significantly from developments emerging in credit markets at the same time.

**...AMIDST
CONCERNING
TRENDS IN
CORPORATE
BOND SPREADS**

In tracking the timing of a potential shift in the US business cycle, we expect the earliest indicators of such a shift to emerge in credit markets. Spreads on US corporate debt are of particular focus.

During Q2 2019, credit market indicators began to deteriorate significantly. Widening spreads were most pronounced at the most vulnerable end of the public corporate credit market: CCC-rated bonds.

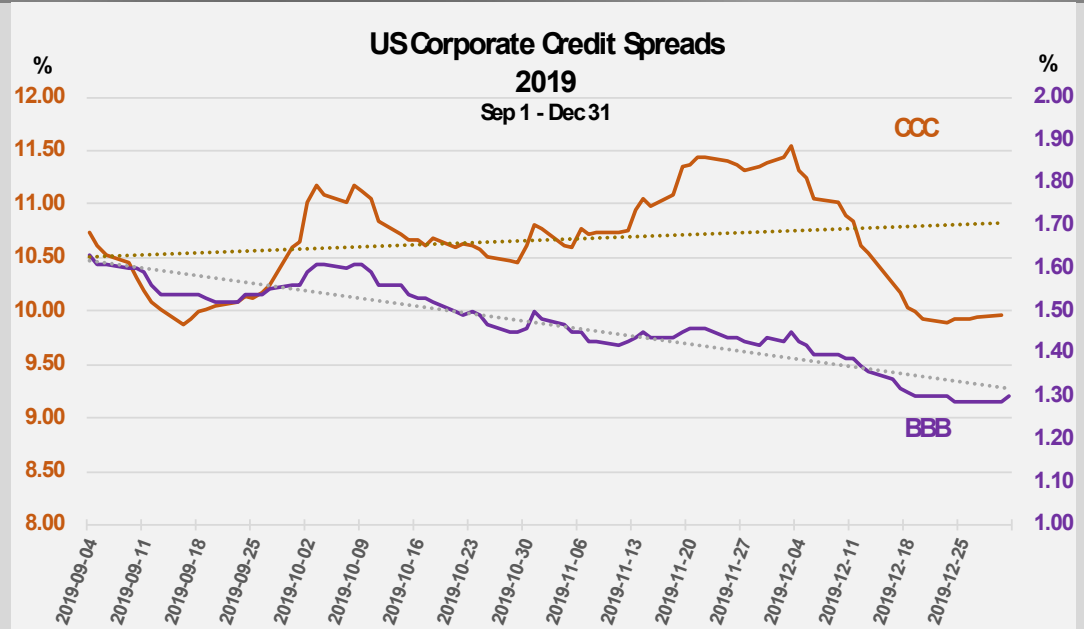
In mid Q3 2019, this deterioration in credit spreads suddenly accelerated, extending from CCC bonds into BBB borderline investment grade bonds. A spike in CCC spreads leading into Q4 coincided not only with the initial spike in repo rates but also emerging signs of instability in the Collateralized Loan Obligation (CLO) market.



These events cumulatively led us to suspect an initial downward turn in the exceptionally long US business cycle might be underway. Despite signs of a sentiment shift and positive technical indicators in equity markets, our primary concern was that financial market instabilities had a strong potential to accelerate in the highly leveraged US economy.

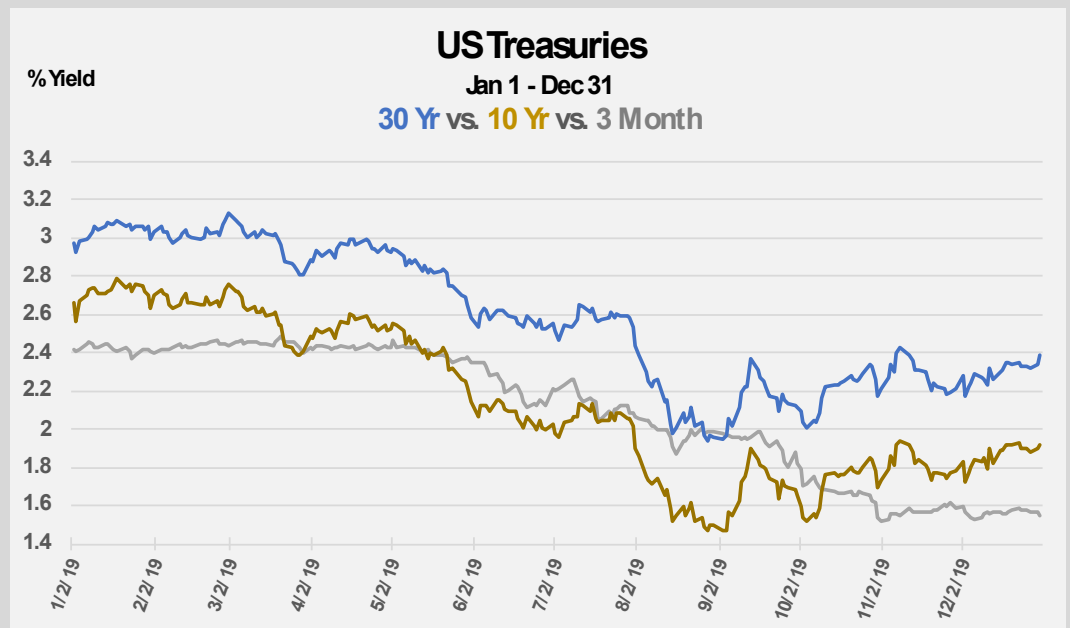
Corporate credit markets did not, however, continue their rapid deterioration. In the aftermath of the Fed's Q4 2019 liquidity operations, BBB spreads recovered. Though CCC spreads continued to widen during October and November, as the Fed's repo intervention and an apparent return to Quantitative Easing took hold spreads in CCC corporate bonds collapsed in December. They ended the year back at the levels they began Q4 2019, with BBB spreads ending 2019 at historic lows.

**Q4 2019
REVERSAL IN
CORPORATE
SPREADS...**



The extended 2019 inversion of the US yield curve - widely heralded in Q2 and Q3 2019 as a sign that global recessionary pressures were poised to spill over into a downturn in the US business cycle - seems also to have evaporated as a concern. In Q4 2019, the yield curve returned to relatively normal, equity market volatility collapsed, and equity indices steadily rose to close out 2019.

**...YIELD CURVE
RETURNS TO
NORMAL**



OUTLOOK FOR 2020

This volatility in financial indicators and market outlooks during 2019 is remarkable and raises some potential questions about underlying systemic stability (though it also indicates remarkable market resiliency). As a new year begins, do the bearish or bullish perspectives of 2019 make sense for 2020?

SHORT-TERM BULLISH SUPPORT

Our perspective is that the dramatic market fluctuations and bearish indicators of 2019 are indicative of long-term market weaknesses. However, as is natural within any cyclical process, short-term bullish support has emerged.

The strength of this bullish support will depend upon to what extent the shift in macroeconomic indicators highlighted above takes hold. It will also depend importantly upon geopolitical developments.

Geopolitical risks are not the only risks to the positive market sentiment that characterizes the beginning of 2020. We do, however, anticipate 2020 to be defined by shifts in geopolitical risk as much as major macroeconomic shifts.

In terms of macroeconomic risks, the most immediate risk appears to be a market correction following Q4 2019's significant gains, driven by either adverse geopolitical developments that disappoint market expectations, disappointing earnings reports from 4Q 2019, or a combination of the above with profit taking.

MACRO DATA TO WATCH

Moving beyond early in the first quarter of 2019, a primary macroeconomic focus will be whether consumption and residential investment continue to show strength and to what extent broader business investment rebounds. Export growth as an indicator of growing international demand and return on American trade efforts will be a further key indicator to follow.

As we have highlighted in previous reports, our primary focus as an indicator of a turn in the business cycle is credit spreads. This is encouraging regarding current market confidence as corporate credit spreads continue to be exceptionally low.

FOCUS ON TREASURY YIELD TRAJECTORY

Our focus on the credit market highlights what we consider to be an emerging but underappreciated risk: increasing US Treasury yields.

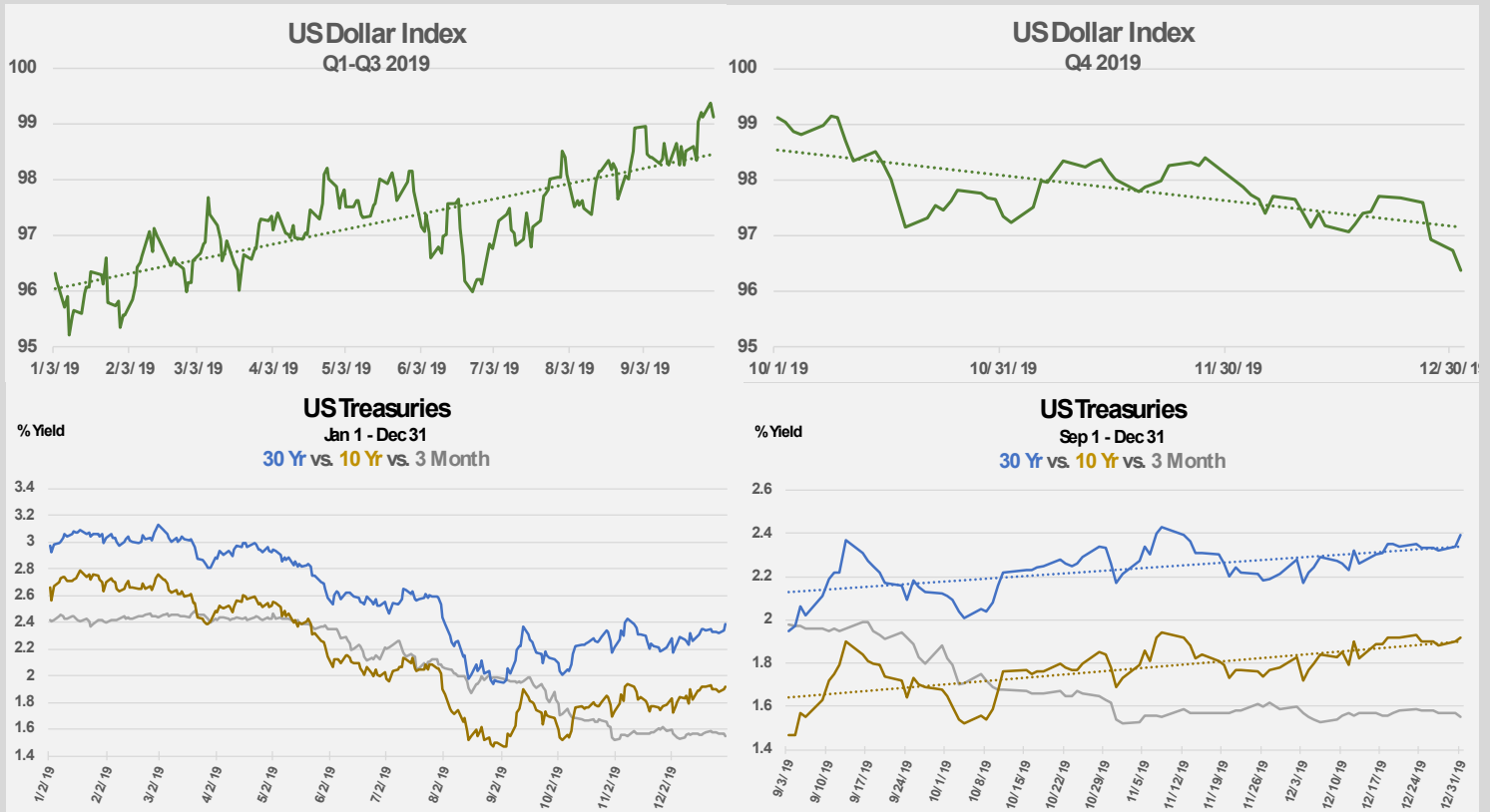
On its surface, the late 2019 increase in US Treasury Bond yields seems a positive development, insofar as it reflects an improvement of sentiment and a shift from risk-off assets towards a risk-on orientation. Rising yields have also reversed the inversion of the yield curve, putting financial conditions more in line with historical norms and removing a source of market concern.

Increasing US Treasury yields do, however, have the potential to flow through to tighter financial conditions elsewhere even if credit spreads remain historically low.

This dynamic rebalancing of US Treasury rates is part of the natural economic cyclical process, which would normally be responded to with a Fed rate cut if higher yields impact economic activity. Our concern is that any trend towards higher yields might evolve more quickly than anticipated and put pressure on Fed policy.

A key driver of the sustained inversion of the US yield curve in 2019 was capital

flowing into US Treasuries - the highest returning safe-haven asset during a period of global economic uncertainty. Any reversal of this dynamic (for example, should a significant recovery in global markets encourage capital to return to overseas assets) might drive US yields higher. Such outflows could also be expected to lead to a depreciation of the US dollar, and in this context the significant dollar depreciation of December 2019 raises some concerns.



Continued accommodative Fed policy is dependent upon low inflation, and recent rapid dollar depreciation represents a potential inflationary pressure. Alongside exceptionally low unemployment and growing expectations that economic growth is poised to pick up, it seems possible that recent increases in US Treasury yields represent not only a shift to risk-on assets.

To the extent these yield shifts and dollar dynamics represent a reversal of capital flows and potential Inflationary pressure that might limit flexibility or effectiveness of Fed operations at the short-end of the yield curve, this would be a significant surprise to financial markets, much as the dovish shift in Fed policy had a significant financial market impact in 2019.

Despite the Fed's Q4 repo intervention, our assessment is that market expectations of a Fed dovish rate bias amidst historic low interest rates continue to be misplaced.

GEOPOLITICS AND POLITICAL RISK: A DEFINING THEME OF 2020

We have highlighted in previous reports our concern that there is a short-term market vulnerability related to sentiment that has built up around a US-China Phase One trade deal. This relates not only to whether a Phase One deal should prove elusive but also vulnerability related to a potential "sell on the news" dynamic once any deal is finally signed.

China, however, is only one - and perhaps not the most significant - of multiple political risks that we see having the potential to shift sentiment in 2020.

Beyond the potential for a short-term market correction related to profit taking, we consider the strength and duration of the current bullish trend will be shaped by not just a few key macroeconomic and financial data points. Shifts in sentiment related to politics are likely to be especially important in 2020.

Despite the market's focus on how US-China relations seem to have stabilized short-term, we expect political risk to grow in importance as a factor driving market performance in 2020. This is due in part to a strong potential we see for one or more of the US's "minor power" foreign policy challenges to come to a head in 2020.

In both Iran and Korea, we see a strong tendency in 2020 for US pressure to evolve either into international conflict or a significant foreign policy victory, which could entail major market sentiment shifts. Political risk associated with the 2020 US Presidential election can be expected to also emerge as a potent market force.

We have highlighted previously our perspective that expectations related to a resolution of US-China trade disputes are significantly inflated. Both US and Chinese leaders, however, do appear inclined to pursue a truce in 2020 regarding trade tensions.

Chinese authorities' short-term motivations behind a truce are an immediate priority on solidifying economic growth. This truce also reflects, though, a general appreciation within China that it is strategically beneficial for China to delay confrontation with the United States given relative economic growth rates and China's rapid military modernization.

Trump administration short-term motivations for a truce are driven by the 2020 elections, as well as what we see as a strategic shift in 2020 to focus US resources on addressing smaller and more manageable foreign policy threats.

This US-China trade truce has the potential to help drive short term global macroeconomic recovery, in particular due to its sentiment impact. Outside of a few specific sectors, it is unclear how substantial an impact there will be on US-China trade. The text of the agreement has yet to be released, but beyond sentiment the primary US macroeconomic impact appears likely to be on the agricultural sector short-term and the financial services sector longer-term.

The agricultural sector is of course a high priority for President Trump for election reasons. Agriculture is also a sector of extensive need in China given a relative lack of arable land compared to population and recent livestock epidemics that have

US-CHINA STABILIZATION ILLUSORY

A CYCLICAL PAUSE IN A MUCH LONGER BATTLE

exacerbated inflationary pressures in Chinese food staples. In this respect, the Phase One deal offers political benefits to both sides. It does not, however, represent a fundamental shift in contentious US-China disputes over trade and economic models.

Other than a cooling of rhetoric and rumored Chinese commitments to increase intellectual property protections, no significant victories appear to have emerged from nearly 3 years of US-China trade negotiations. A Phase One agreement merely represents an initial pause within a much longer strategic battle.

Any Phase One trade deal should be recognized as a temporary cyclical upswing within a long-term pattern of increasing US-China economic and political tensions. The extent of this long-term trend has tended to be significantly underestimated in the financial and business community, but more significant confrontation and "decoupling" is a clear national security policy trajectory in both the US and China.

2020 MAY BE A TRUCE...

US-China economic tensions are nonetheless likely to be muted during 2020 relative to 2019. Trump administration indications that Phase Two trade negotiations will commence immediately upon conclusion of a Phase One deal, however, do suggest US pressure on China will continue as at least a minor geopolitical theme during 2020.

The primary threat we see which might undermine this detente in 2020 are geopolitical developments outside of the direct US-China bilateral relationship (i.e. vis-a-vis Iran and North Korea), as discussed below.

...BUT HOSTILITIES LIKELY TO ACCELERATE POST-ELECTION

Beyond geopolitical posturing related to the use of US power in resolving disputes in Iran and Korea, we see the most likely period for a next cyclical downturn in bilateral US-China economic relations as coming after the 2020 US elections. There continues to be a risk of direct tension related to Phase Two trade negotiations - particularly should US-China differences over the handling of Iran or North Korea grow.

Our primary concern is that a post-election downturn in relations will be significantly more severe than is currently anticipated by markets. This is based on our cyclical understanding of Trump administration strategy towards China, and policy efforts being pursued currently by both sides.

Though it is far from certain the 2020 elections will result in a second term for President Trump, we strongly believe the Trump administration's engagement of China in his first term is simply laying the groundwork for a much more aggressive push for structural reforms within China in his second term.

FINANCIAL SURRENDER OR FINANCIAL WAR?

Market sentiment has interpreted China's opening of its financial sector with significant optimism. The willingness of China to open its financial system to investment by US firms should be considered with caution. This concession during Phase One negotiations should be appreciated not as a capitulation to US demands but rather a recognition by Chinese policymakers that they need to rapidly accelerate the modernization of their financial system.

Within the Chinese policymaker community, 2019 has seen growing talk of the need to prepare for the US-China trade war evolving into "financial war." Isolating China's financial system from dependence on US financial institutions and regulations has

thus become a key Chinese national security strategy. In this context, inviting US firms to invest in China on an accelerated time scale may seem paradoxical, but accelerating US financial firm participation within China offers multiple modernization benefits (as well as potential points of leverage).

CHINA SEEKS TO ISOLATE ITSELF FROM US FINANCIAL VULNERABILITY

Insulating China from vulnerability to US financial sanctions has become a central priority of Communist Party policy. This is in part because of how US sanctions were used at the onset of 2019 to arrest and prosecute a well-connected Party member visiting Canada (Meng Wanzhou, CFO of Huawei). The vulnerability of Chinese firms and citizens to US financial sanctions (against Iran and elsewhere) has combined with longer-term hegemonic concerns to spur an acceleration of policies in China aimed at financial independence.

Taken cumulatively, these policies have serious economic and geopolitical implications that diverge strongly from bullish sentiment spurred by the US-China Phase One deal.

The aggressive development in 2019 of a Chinese digital currency as a method of settling international payments is a key pillar of efforts to isolate China from vulnerability to US financial sanctions. Though it may have a limited direct impact in the next twelve months, this effort is likely to accelerate during 2020 and points to a significantly different direction of the US-China bilateral relationship than seems priced into sentiment as the year begins.

LONG-TERM DOLLAR IMPLICATIONS POTENTIALLY SIGNIFICANT

It is important to recognize that Chinese authorities are working hard to develop the necessary financial infrastructure for a global trading system in which China's trading partners can settle business outside of the current norm of US-dollar denominated settlements. There may be significant gaps between Chinese strategic ideals and probable outcomes, yet long-term implications for US dollar demand are potentially very significant.

The US dollar's looming demise has been a common refrain for as long as nearly any financial professional can recall, but in 2019 the world's second largest economy and largest trading nation accelerated efforts to develop a dollar alternative for international trade. This represents an entirely unprecedented shift.

Furthermore, in 2019 dependence on the US dollar as a global financial threat became a topic of discussion at even the highest levels of Western policy circles (see the speech of Bank of England Governor Mark Carney at the 2019 Jackson Hole Fed Economic Policy Symposium).

The 2019 rush into US dollar assets as a hedge against heightened risk (alongside the continued outperformance of the US economy) highlights the continued centrality of US dollar assets in global finance. Nonetheless, both in the short- and long-term we see an underappreciated US macroeconomic risk related to the US dollar and demand for US Treasuries.

FINANCIAL WAR DOES NOT EQUAL CHINA DUMPS TREASURIES

One area that should not be of concern - but which has been one of the more pervasive hypotheticals in terms of talk of "financial war" between the US and China - is the likelihood that Chinese authorities will strike out at the US by suddenly liquidating China's large stock of US Treasury bonds. This is a threat only in terms of

its potential to impact uninformed sentiment.

Such an expectation fundamentally fails to understand the critical role US dollar reserves play within China's development strategy. The accumulated US Treasuries that are held in China's central bank and sovereign wealth funds are a critical component of Chinese authorities' plan for restructuring and stabilizing the Chinese financial system, as demonstrated by actions in 2019.

DOLLAR RESERVES FOR RECAPITALIZING CHINESE BANKS

Not only do dollar reserves allow China to be able to intervene in foreign exchange markets to stabilize the value of the Chinese yuan. In December 2019, China debuted an effort we have long been anticipating - the leverage of its accumulated reserves to help restructure its significantly indebted financial system.

Chinese government-controlled sovereign wealth funds - capitalized with central bank foreign currency reserves - have begun to use their balance sheets to recapitalize Chinese banks. We expect this form of leveraging China's fx reserves to be used as a central tactic to help address debt issues in the Chinese economy.

Concerns that US dollar reserves will be dumped on global markets as a weapon of financial destruction against the US misses the long-term role these accumulated reserves play in Chinese economic plans.

This does not mean that a reduction in Chinese demand for US dollars should be dismissed in terms of its potential to shift dynamics in the US dollar and US Treasury market. China's trillions in US dollar reserves have been accumulated as a result of its longstanding balance of payments surpluses with the US, and any balancing of the US-China trade deficit will naturally lead to a reduction of Chinese demand for US Treasuries. China has also been actively pursuing diversification of its currency reserves alongside a significant diversification of its export markets - further indicating future reduction in US dollar demand.

BEYOND US- CHINA GEOPOLITICAL DYNAMICS

Geopolitical dynamics that might undermine any short-term US-China economic detente extend beyond direct US-China bilateral disputes. US pressure on Chinese policy in Hong Kong, South China Sea militarization, treatment of Uighur nationalities and human rights, and Taiwan relations has grown significantly in intensity during 2019 - as has Chinese pushback. Nonetheless, these political differences have been minimized relative to economic goals in order to focus on other short-term priorities in 2020: a temporary detente that we believe is unlikely to hold long-term.

Short of a major sudden deterioration in the above areas, the primary risk to US-China relations and global geopolitical conflict more broadly in 2020 relates to conflict in other areas of US foreign policy priority.

NORTH KOREA

North Korea is currently the primary venue of potential US-China geopolitical conflict. Threats from Kim Jong Un at the end of 2019 of an aggressive military “present” for the United States unless the US shifts its negotiating strategy should be assessed in terms of the US-China geopolitical context.

North Korea is not a perfect proxy for the hardline elements of the Chinese Communist Party - despite the regime's dependence on Chinese aid for long term survival, weapons- and other development. In fact, we assess the unspoken holy grail of Trump administration efforts with North Korea is actually to draw North Korea away from the sphere of Chinese influence into a more pro-Western orientation - a strategy that has been significantly underappreciated in conventional analysis.

Such a shift would represent a major geopolitical rebalancing, far beyond walking back the DPRK's aggressive development of nuclear weapons with delivery systems that could threaten the United States. This ambitious shift may appear wholly unrealistic but represents the carrot being balanced against the heavy stick that was explicitly threatened in initial Trump negotiating approaches.

Ideologically, such a path fits with North Korean rhetoric of self-reliance, presents an opportunity for Kim Jong Un to make a revolutionary impact on his country's history, and addresses the reality that China historically has represented a far greater imperial threat to Korea than the United States.

As President Trump pursues this extremely contentious goal, Kim Jong Un walks a cautious balance to maintain the critical support of Chinese hardline elements. Any aggressive posturing against the United States - and especially any consequential move such as unveiling enhanced nuclear or long-range ballistic missile capabilities - is unlikely to be done without close consultation with DPRK allies in the China policy apparatus.

Hardline elements within China view the DPRK as a proxy to be supported as a pawn against the US, but there are significant alternative views of the DPRK within China. DPRK moves thus do not offer a perfect proxy for Chinese hardline elements but do offer a critical window into understanding US-China geopolitical tensions at their most extreme.

While a non-committal US-China economic detente is pursued despite heightened US-China political bilateral tensions, North Korea-US relations represent an alternative outlet for these tensions.

Any major North Korean move that risks US retaliation can be seen as a sign of geopolitical deterioration between the US and China. This would indicate hardline support within China has the upper hand in internal Chinese policy debates and a decision has been made to encourage the DPRK to act aggressively. Should conflict subsequently escalate, this has the potential to lead to more direct US-China tension and dramatically undermine the sense of economic detente that has appeared to serve as a foundation of market confidence.

Such a sentiment shift would perhaps have a more significant US market impact than the direct economic fallout of US-North Korea strategic conflict (this of course is wholly dependent on the scale of such a conflict). Our assessment is that the primary global

economic risk in this dynamic is less widescale war than US-China (and US-Russia) geopolitical deterioration and a concurrent shift in sentiment.

IRAN

Another key area of geopolitical conflict that has the potential to escalate significantly in 2020 is US conflict with Iran. We have highlighted in our reports during 2019 our assessment that the risk of armed conflict with Iran is significantly higher than consensus expectations.

Our assessment of this conflict risk derives from our perception of Trump administration strategy towards Iran - or more specifically versus hardline elements of the Iranian regime and the Iranian Revolutionary Guard Corp (IRGC). As noted in our 2019 reports, we identify the principal desired Trump administration policy outcome is destruction of the IRGC and the cessation of its support of aggressive overseas activities via direct IRGC action and proxies.

To this end, sanctions against Iran are aimed at encouraging popular discontent that threatens to overthrow the Iranian regime and undermine the IRGC. Putting down popular demonstrations is the responsibility of domestic elements of the IRGC, which not only might drive a wedge between moderate reformist elements within Iran and the IRGC but also can give the United States potential justification for attacking IRGC assets as a "defense of human rights."

In the final quarter of 2019, this aspect of US strategy seemed to have some success insofar as widespread demonstrations in Iran culminated in IRGC action - action that reportedly resulted in over a thousand civilian deaths and was widely condemned internationally.

As highlighted in our previous assessments of conflict probability, a second pillar of US strategy is spurring IRGC elements that feel under pressure within Iran to strike out overseas - so that they might then be directly engaged by US forces in retaliatory action. This dynamic also emerged significantly in the fourth quarter of 2019.

December 2019 saw both increased activity by IRGC naval assets in the Persian Gulf and also direct attacks by the IRGC and its proxies against US assets in Iraq. The killing of an American security contractor by IRGC-affiliated forces was followed by subsequent US retaliation against IRGC and IRGC proxies in Iraq - the latest escalation in a cyclical process that has been steadily marching towards direct and open US-IRGC conflict.

Whether this will be confined to conflict with IRGC proxies abroad, direct attack of IRGC forces in Iran, or engagement of the broader Iranian regime and military, will of course determine the macroeconomic impact of this evolution. Our assessment is that conflict with IRGC proxies abroad is a high-probability medium- to long-term outcome, but direct US strikes on IRGC forces in Iran are also high-probability.

Though the natural cyclical evolution of this process would be escalation into a broad US-Iran war, we believe the probability of that outcome is actually limited. Were the Iranian regime to declare war on the US in response to a US attack on IRGC assets within Iranian borders, we believe the duration of this declaration would be short as internal strife between the IRGC and other elements of the Iranian military and state emerged. This does not, however, imply that conflict with IRGC elements and IRGC

proxies abroad might not continue for an extended period of time.

A cyclical war of attrition waged directly between US forces in-region and the IRGC and IRGC-proxies is the outcome we currently project as most likely. This is likely to be characterized by increased regional violence and destruction, but without a full-scale declaration of war that sees the US and non-IRGC military engaged in extended active combat in Iran.

Beyond the regional impact and impact on oil markets of such developments, of key importance will be the extent to which Iran is able to rally other major nations to its side. In this context, joint Iran-Russia-China naval drills during December represent a concerning escalation.

Despite these naval drills, we assess it highly unlikely that China in particular is willing to actively become embroiled in any US-Iranian conflict. Rather, recent Chinese statements lamenting “bullying behavior” by the United States highlight the narrative being developed within China to frame challenging the United States geopolitically, and hint at a potential for US-Iran conflict to spill over into US -China relations.

We expect this spillover to manifest itself most strongly in Chinese politics domestically, and internationally within the context of ongoing Chinese and other efforts to develop dollar-alternative financial payment systems to facilitate global evasion of US sanctions (similar to the INSTEX system pursued in Europe to facilitate non-USD, non-SWIFT transactions with Iran).

VENEZUELA

A final point of potential geopolitical conflict we have highlighted during 2019 has been the potential for tensions in Venezuela to evolve into more significant US-Russia tension. This tail-end risk has not emerged in any significant way.

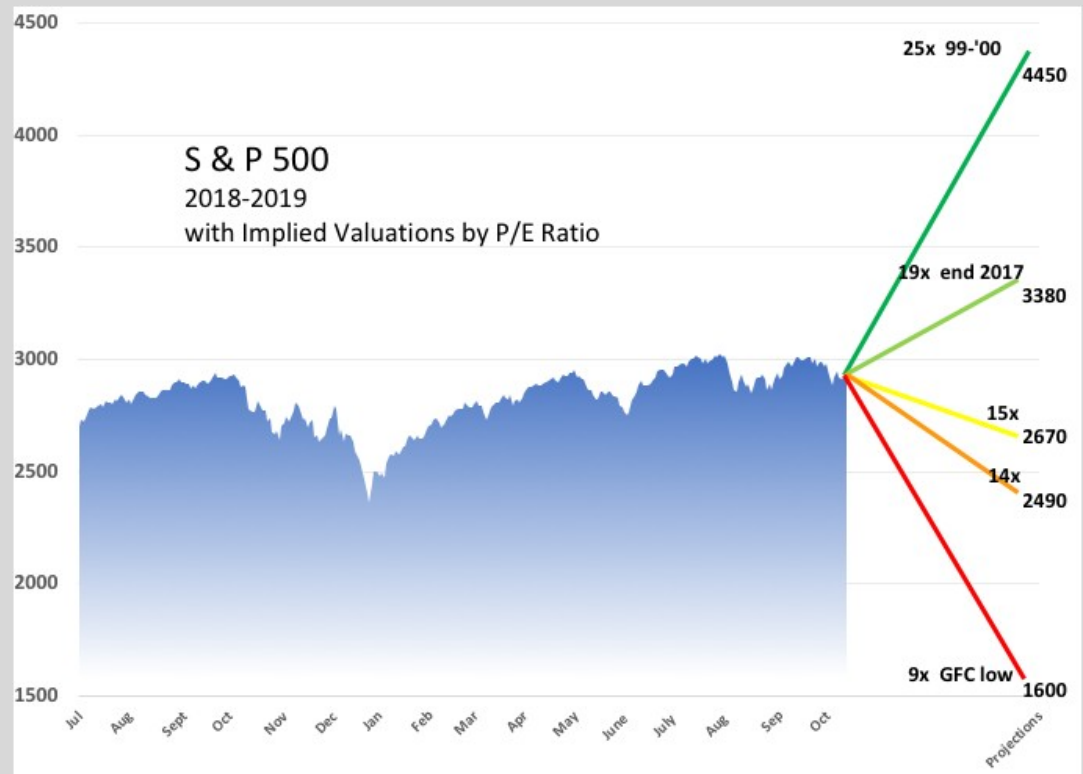
With the Venezuelan opposition fragmenting and apparently weakening at the end of 2019, it is unclear whether the Venezuelan situation is in the process of stabilizing with the Maduro regime dominant, or entering a more volatile era with opposition and regime supporters resorting to more extreme measures. We will be watching these developments closely in 2020.

**AN ALTERNATIVE
GEOPOLITICAL
AND
MACROECONOMIC
PRISM**

In our Q4 2019 Special Report, we highlighted a few alternative market trajectories based on different historical P/E ratios (see graph below). In that analysis, we highlighted that the geopolitical and macroeconomic environments which characterized the timeframes when higher P/E trajectories dominated (green lines on graph, 2017 and '99-00) were significantly different than the geopolitical and macro environment of early Q4 2019.

Nonetheless, the market has evolved along the trajectory of these higher valuations.

It is tempting to simply attribute market dynamics to irrational expectations and sentiment exceeding what is sustainable per fundamentals. But humility requires an analyst to assess what the broad market might have right that the analyst has wrong.



**A NEW FINANCIAL
AND ECONOMIC
REALITY**

From a macroeconomic standpoint, we have highlighted the shift in macroeconomic fundamentals that we believe has been driving sentiment behind 2019's dramatic equity gains. We have also highlighted the risks to these fundamentals - not only should earnings or other macro variables disappoint expectations, but also should cyclical interest rate pressures lead to unexpected structural pressures on monetary policy, economic growth, and financial systems.

In addition to these short-term macroeconomic and financial concerns, a key underlying driver of bearish concerns from a long-term perspective is the historically abnormal level of debt not just in the US public and private sector but also globally.

Research into financial crises has highlighted that crises have tended to manifest in economies that carry levels of debt which are actually below the debt levels already surpassed by the US and many other economies. Negative interest rates are also virtually unheard of in human history but are currently applied to trillions of dollars of assets in the global financial system - a paradigm that seems unsustainable per every school of traditional economic thought. The length of the current US business cycle also exceeds any prior US expansion.

With all of these dynamics pointing to an unsustainable trajectory and highlighting major likely long-term market and economic weaknesses, it is nonetheless worth considering alternative hypotheses instead of dismissing markets as irrational.

One possible hypothesis is that what was dubbed as the emergence of "the New Economy" or "the Information Economy" is in fact even more revolutionary than has been widely realized.

Though Federal Reserve liquidity provision has been exceptional, market gains have exceeded growth in money supply. Equity market inflation is not merely a monetary phenomenon, though sentiment shifts shaped by Fed policy are certainly a critical factor.

IS VOLATILITY BEING SUSTAINABLY SUPPRESSED BY TECHNOLOGY?

These sentiment shifts might also be driven by a recognition that something has fundamentally shifted in the structure of economies and financial systems which makes volatility and risk significantly lower than previous eras. Perhaps technological and financial innovation have driven a diffusion of risks alongside an exchange of information to drive efficiency gains in the US economy and allow volatility to be suppressed to an extent that has never before been possible.

With real-time data streams - and computing power to instantaneously process that data and make immediate decisions based upon algorithms - information delays that previously might have led to inefficient inventory accumulation or poor financial decisions are increasingly being eliminated. This could theoretically dramatically suppress common cyclical pressures that built up in the past due to imperfect information and decision lags, thereby suppressing economic and financial volatility.

In an economy and financial system that as-a-whole respond to fluctuations more quickly - limiting volatility and maximizing the use of capital and other resources - the nature of what is sustainable in terms of debt, growth, and other financial and economic factors may be different than traditional economic and financial theories suggest.

OR WISHFUL THINKING?

Such optimism unfortunately strikes us as very similar to the thinking that has tended to drive financial manias in human history. It may have a real economic and financial basis, though, and should not be ignored. The rapid algorithmic nature of decisions today strikes us as having strong potential to suppress minor short-term cyclical valuations. But it also would seem to have the potential to drive more severe volatility when momentum is building rapidly within major longer-term cyclical shifts.

Furthermore, the ability of individuals and entities to maintain unusually high levels of debt without liquidating assets seems to depend on a lack of volatility within this virtuous cycle. Relative stability in income or the ability to rapidly find alternative

sources of income are critical to cover service of historically high debt levels.

This might be easily achieved in a well-functioning market where unemployment is very low and the economic system is running near capacity (as has characterized 2019). However, should a period of severe dislocation emerge, there would appear to be a high risk that disrupted income streams would prove unreliable to service high levels of debt. Current models may fundamentally underestimate potential systemic risk, portending an eventual probability of some type of model breakdown or even systemic collapse - the most bearish of fears behind 2019's extremes of expectations.

Between these extremes of bullish and bearish perspectives, it would seem foolish not to consider the possibility that both have merit and a new economic and financial paradigm is driving markets now. Given the exceptional ways in which Fed policy and markets have responded in recent years amidst an exceptionally long period of economic expansion - an expansion which appears set to continue well into 2020 - this may not precisely define 2020 outcomes but is worth considering for context.

In this vein of alternative thinking, our projection that the more optimistic paths per the above graph were unlikely given geopolitical dynamics in Q4 2019 is worth revisiting. It strikes us as a possibility that current market valuations indicate a broad sense that alternative and quite positive geopolitical outcomes are probable.

We have highlighted repeatedly our assessment that optimism on China-US relations is misplaced, based on our assessment of Chinese Communist Party regime strategy. Our in-depth knowledge of China makes us very skeptical of any expectation that a fundamental regime change in China is pending - the type of geopolitical shift that would deliver a boost to confidence of the type which might send sentiment soaring towards the upper bounds of historic valuations.

However, as noted above, Iran and North Korea are other geopolitical conflicts that are a level of magnitude below US-China tensions but nonetheless could have a significant impact on sentiment.

Should Trump administration strategy towards Iran or North Korea prove successful, with either North Korea renouncing aggressive weapons and re-orienting towards the west - or the regime in Tehran dismantling IRGC efforts or even being overthrown by popular will - this could have a huge positive impact on sentiment and drive a market trajectory in keeping with the most optimistic of historic valuations.

As 2020 begins, we do not see those dominoes falling directly into place. Still, one can certainly hope for a Happy New Year.

For comment on this report - or to discuss interest in bespoke research or being added to the Grey G Capital Research distribution list - please contact the report's principal author:

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A POSITIVE GEOPOLITICAL SHOCK