2019 Outlook – October Assessment

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I. 2019 Outlook - October Update

At the beginning of 2019, the fury of the stock market’s precipitous decline during 2018 Q4 led many to believe that recession might be imminent. In 1959, before he became Fed chairman, Alan Greenspan opined that “stock prices drive economic activity.” Looking back, revised December data appears to bear out the wisdom of that observation. Retail sales in the U.S. fell 2.3% from November to December or about 31% on an annualized basis. It was not a very merry Christmas for retailers.

As 2019 began, the U.S. economy was at an inflection point where the potential for negative feedback from severely damaged investor, consumer and business confidence could have cascaded in an ever-worsening downward spiral.

Sensing the fragility of the situation, Fed officials, communicated that monetary policy would be adjusted to support economic activity. This was ratified by the FOMC’s monetary policy statement issued following its January meeting by not raising the federal funds rate, indicating that balance sheet shrinkage would be ended sooner and introducing the word “patient” to indicate that the federal funds rate would not be raised for a considerable time and leaving the door open, through the language that policy was data dependent, that rates would be cut if the economy faltered.

This reversal in monetary policy was sufficient to restore investor confidence. The U.S. stock market began a vigorous recovery in January and by the end of April reached a new all-time high, totally wiping out the 20% 2018 Q4 decline in stock prices. And, consistent with Alan Greenspan’s 1959 observation, as investor confidence improved, and as stock prices rose, a recovery in business and consumer optimism quickly followed.

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Goldman Sachs has quantified the relationship between what is happening in financial markets and real economic activity by constructing a financial conditions index (FCI) and demonstrating that changes in this index unambiguously lead changes in economic activity. The linkage between the two is changes in investor, consumer and business sentiment which lead to spending and capital expenditures decisions.

However, in May growing evidence of slowing global growth, particularly in China, which has been a driver of global growth over the past couple of decades, and the escalation in the U.S. trade war with China accompanied by a breakdown in negotiations between the two countries, fostered another swoon in investor confidence, albeit not nearly as violent as what occurred in 2018 Q4. This time the Fed responded quickly with soothing words and again ratified its probable intent to ease monetary policy at the June FOMC meeting by extracting the word “patient” from its monetary policy statement and indicating that it was not concerned about inflationary pressures.

Once again investor sentiment was buoyed up and stock prices again rose to new highs.

The FOMC then ratified market expectations by cutting the federal funds rate by 25 basis points on July 31st and simultaneously ended shrinkage of its balance sheet. However, the market was disappointed that the FOMC’s policy statement was ambiguous about the possibility of further rate cuts, which the market had already priced in.

The market’s disappointment was followed within days by President Trump’s announcement that 10% tariffs would be imposed on September 1st on all Chinese imports not already subject to tariffs. This decision followed the failure of a second attempt to negotiate a trade deal with China.

And, if these developments were not bad enough, Germany and China released disappointing reports on economic activity and demonstrators shut down the Hong Kong airport. Hardly noticed because of everything else that was going on, Argentina’s financial markets crashed when the presidential primary election did not turn out as expected. All of this led to a global market panic on August 14th. U.S. stock prices fell nearly 3%. Bond yields plunged and the price of gold surged.

Investor sentiment darkened. Talk of the possibility of recession mushroomed once again and the media was filled with stories.

But, events unfolded in September which reduced the perceived threat of U.S. and global recessions. The U.K. parliament repudiated its prime minister, Boris Johnson,
and passed a law requiring him to seek an extension in the Brexit negotiations with the European Union (EU) beyond the October 31st deadline, if a deal acceptable to parliament could not be reached by the deadline. Italy cobbled together a new EU friendly government that avoided a snap election. China and the U.S. backed off belligerent rhetoric, President Trump delayed implementation of the most recent round of tariffs from October 1st to October 15th, and both countries agreed to resume trade discussions. The European Central Bank (ECB) approved aggressive monetary easing policies intended to boost EU economic activity. And, the U.S. Federal Open Market Committee (FOMC) cut the federal funds rate for a second time at its meeting on September 18th.

In early October three unrelated developments occurred in quick succession which boosted market sentiment and pushed recession concerns further into the background.

First, Irish Prime Minister Leo Varakar and U.K. Prime Minister Boris Johnson met on October 10th to discuss the U.K.’s negotiations with the EU to leave the EU — better known as Brexit. At the conclusion of the meeting they issued a statement outlining a “pathway to a deal.” The pathway involves the U.K. agreeing to customs inspections and regulatory border formalities between Northern Ireland and the U.K. Market reaction was positive because of the belief that a “no deal” Brexit would exact heavy economic damage on both the U.K. and the EU. However, “the pathway to a deal” is anathema to the 10 members of the U.K. parliament who are members of the Northern Ireland’s Democratic Unionist Party (DUP). Because Northern Ireland is part of the U.K., it is their position that there should be no barriers. Up until now, these 10 have aligned with the Conservative Party and have been instrumental in keeping the Conservative Party in power in the U.K. parliament. The upshot is that Johnson is now in a position to negotiate a workable exit with the EU, but will probably lose the votes of the 10 DUP members, but this could be overcome by gaining votes from others who previous voted against Theresa May’s deal. Matters will move quickly and, as of this writing, there are many possible outcomes, but the greatest probability is an orderly Brexit.

Second, President Trump announced on October 11th a “Phase One” trade deal with China. Chinese Vice Premier Liu He, however, was more guarded, saying only that “we have made substantial progress in many fields.” In reality, no binding deal has yet been struck. President Trump agreed to delay implementation of tariffs scheduled to go into effect on October 15th in return for China’s agreement to resume purchase of American agricultural goods. There is still a long way to go to reach a binding agreement and when, and if, it occurs, it will be limited in scope. Nonetheless, the message to the markets is that further escalation in the trade war with China is unlikely. This assessment also applies to tariffs on EU automobiles —
they are not likely to be implemented. So, while this deal, which isn’t yet a deal, is limited in scope, it unequivocally limits potential further trade war damage. In that sense it is a positive development for markets and the economy.

Third, the Federal Reserve announced on October 11th that it would expand bank reserves over the next six months beginning with monthly purchases of $60 billion in Treasury bills. As with the other two developments, this policy shift is very market friendly because it commits the Fed to expanding liquidity. The Fed is billing this as “organic” growth meaning that the amount of bank reserves should grow in line over time with the size of the economy and, thus, should not be construed as quantitative easing. The excuse in part for this shift in policy is to provide liquidity to the repo market. However, increasing bank reserves does nothing directly to increase liquidity in the repo market. Thus, it is not surprising that the Federal Reserve also intends to continue its open market operations in support of the repo market until at least January. Call it what you like, but the policy shift will have an effect similar to an intentionally acknowledged QE policy and investors and markets will love it.

In response to the policy developments in September and October, the yield curve flattened, the inversion disappeared, and long-term interest rates bounced back partially. The U.S. stock market is once again near its all-time high level reached in July. While political and policy developments have soothed markets and bought time, the underlying U.S. and global economic imbalances remain entrenched and uncorrected. Recession risk remains elevated even though its onset appears to have been delayed for the time being.

These periodic episodes of market anxiety demonstrate the importance of monetary and fiscal policy in supporting favorable market confidence. Abrupt and negative changes in market confidence, if not reversed quickly, can trigger a collapse in business and consumer confidence that adversely impacts real economic activity. Once confidence frays across the board, it sets into motion a series of developments that can lead to recession.

Monetary policy alone cannot cure underlying and fundamental imbalances in the U.S. and global economies. I described these imbalances at the beginning of the year and they are articulated in the paragraphs which follow with updated commentary about developments.

Accommodative monetary policy can delay the day of reckoning, but once imbalances become too great, monetary policy cannot by itself prevent recession. This lesson is clear from the experience of the Great Financial Crisis and Great Recession of 2007-09.
Moreover, accommodative monetary policy can have perverse effects, if it prevents correction of imbalances and, worse, if it fosters an escalation in imbalances. That would appear to be the case today. One needs to look no further than Japan and Europe, both of which have had super-aggressively accommodative monetary policies for several years. Both are on the cusp of recession. And, there is doubt that monetary policy can continue to come to the rescue, as embodied in the quip that monetary policy may be out ’ammunition’ or ‘bullets’.

Given all of this, it is natural to raise the question of when recession will occur and cleanse the economy of the imbalances that have been building. What we know is that accommodative monetary policy, through its favorable impacts on investor, consumer and business confidence, can support economic activity and extend an expansion for a very long time. The FOMC has been very clear that it sees its mission to support the economy in the short run and this view appears to be supported by beliefs of policymakers that the potential longer run consequences of this approach to policy are not significant. This, of course, is debatable, but I am skeptical of this sanguine view.

What I can say, I believe with confidence, is that recession is not yet imminent. What I can also opine is that the day of reckoning is inevitable but the timing could be a long time in coming.
II. **2019 Outlook – Beginning of the Year:** (The paragraphs that follow were drafted at the beginning of 2019 and have not been edited for subsequent developments. *Updates are shown in bold italicized print.*)

As 2019 commenced, what economists refer to as *tail risk,* which is large deviations from generally anticipated outcomes, was unusually high. While the consensus does not expect recession to occur during 2019, *tail risk* is significant and the possibility of recession occurring in the U.S., and some other countries, has risen.

Specific outcome projections in this “**Outlook**” were set at the beginning of 2019 and were tied to an overall assumption that growth would slow gradually from 2018’s significantly above potential pace but that no recession would occur. However, if recession does begin before the end of 2019, actual outcomes by the end of 2019 will differ considerably, and negatively, from the projections.

At the beginning of 2019, in the case of the U.S., unemployment was significantly below the natural rate and this gap is expected to widen during the course of 2019 and will add to wage and inflation pressures. However, increasing labor scarcity will result in slower employment growth and that will have knock on impacts resulting in slower spending, investment and GDP growth. In addition, the benefits of fiscal stimulus will wane during 2019 and turn negative by the end of the year.

We are in the mature phase of the business cycle. Best to enjoy the good times now because we know from history that strong economic momentum, when the economy is operating above full capacity, usually eventually leads to recession and correction of the imbalances that built up during the euphoric period of strong growth.

Recession risks are rising but the timing of onset of recession is uncertain. In the best case, growth will slow to a sustainable level and economic imbalances will moderate without recession. Such a benign *soft landing,* based on history, is not a high probability outcome.

Views about timing of a recession and its severity differ. A recession could commence as soon as sometime during 2019, although most view this as a low probability. As time passes it is likely, although not assured, that the probability of recession will increase. Political developments, policy errors, or sharp declines in consumer, business, and investor sentiment could accelerate the timing of recession and its severity.
At the beginning of 2019, several significant risks faced the U.S. and global economies: (Updates to discussion of significant risks articulated at the beginning of the year covering Q1 are in blue bold italicized print; updates covering Q2 are in blue bold italicized underlined print; updates covering Q3 are in red bold italicized print.)

- **The U.S. economy is operating above full capacity.** Based upon Congressional Budget Office (CBO) analysis, the U.S. economy entered 2019 operating about 0.30% (subsequently revised to 0.55%) above capacity on a four-quarter moving average basis. This is expected to grow to approximately 0.8% to 1.0% by the end of the year. In the past the economy has rarely operated at full capacity for very long before recession occurred. Soft landings don’t usually occur. **Economic expansions don’t die of old age, they die when the economy operates above capacity and overheats.**

In early 2019, most forecasters lowered their expectations for U.S. real GDP growth in 2019, but all forecasts remained well above estimates of long-term potential growth. Q1 real GDP growth of 3.1% was stronger than expected, but fundamental growth was actually quite weak (1.1%) when the effects of inventory building, net exports and government spending are purged. Reflecting accommodative U.S. monetary policy and a reacceleration in China’s growth following its recent slowdown, prior to the escalation in the U.S.-China trade war, U.S. economic growth had been expected to strengthen during the remainder of 2019. During April, Goldman Sachs and other forecasters upgraded the outlook for U.S. GDP growth. The collapse of U.S.-Chinese trade negotiations and the implementation of new and higher tariffs by both countries is expected to slow GDP growth in both countries in coming quarters.

This risk remains but may have moderated somewhat because Presidents Trump and Xi agreed in late June to resume negotiations and delay implementation of additional tariffs. Monetary policy actions, Chinese stimulus, strong business and consumer confidence in the U.S. lessen this risk in the near term, but over the longer term the U.S.-China trade war seems likely to reverse springtime’s more favorable developments. Although the labor market remains robust and consumer confidence is trending at cyclical high levels, other indicators, particularly in the manufacturing sector, continued to weaken progressively during Q2.
The optimism of Q2 gave way to investor pessimism in Q3. The trade détente between the U.S. and China had a very short life and President Trump imposed 10% tariffs on additional Chinese imports to be effective September 1st, later delayed to October 15th and then suspended on October 11th and some deferred until the end of 2019. While most economic reports reflect solid economic activity and a high level of business and consumer confidence, growth momentum is ebbing gradually. This is particularly apparent in the manufacturing sector, which entered recession in August, but is also showing up in the growth slowdown in total hours worked and gradually ebbing consumer income and spending growth rates. Also, although not much talked about, business investment has weakened considerably, a casualty of slowing global growth and increased policy uncertainty.

• Excessive corporate debt. GS published an analysis of corporate debt on May 4, 2019, in which it concluded that even though corporate debt as a share of GDP is at an all-time high, it is below previous peaks as a share of corporate cash flows and corporate assets, which are more salient measures of risk. Other developments also lessen the risk posed by the high level of corporate debt. These include lower interest rates, more stable cash flows, a shift toward longer maturities, and reduced dependence of capital expenditures on external financing. GS concluded that if the economy enters recession, “...defaults would rise, spreads would widen, and capital spending would decline substantially.” But, risks posed by corporate debt are no greater than those which preceded previous recessions.

This is a longer-term risk, which is escalating gradually. Low interest rates and easy access to credit are encouraging leverage and enabling weak competitors to remain in business.

While high corporate debt leverage may appear to be manageable as long as the economy is expanding, this could change quickly if recession occurs. The risk is that revenue shortfalls in a recession could force overleveraged companies into bankruptcy. Uber, for example, could be quite vulnerable. Once a prominent bankruptcy occurs, it is usually followed by others because credit dries up. This is one of the ways in which a recession, like a virulent cancer, can develop and deepen. There is a ray of hope that the speculative fervor that leads to overleverage may be abating a bit. The poster child is WeWork and its
failed IPO. It seems that the market has remembered that in the long run value is created by positive cash flows and profits, not something that had been much of a focus until the spotlight on the likes of Uber revealed significant underlying weaknesses in the business model.

- **Leveraged loans and collateralized debt obligations (CLOs).** *This is a longer-term risk, which is worsening gradually, powered by investor appetite for yield and belief that risks are limited.*

  During the first half of 2019 CLOs performed extremely well as financial conditions eased and market volatility declined. But new issuance declined as investors increasingly shied away from this asset class. This is a favorable development as it lessens the potential for speculative over extension in this asset class. Not surprisingly, as demand has fallen, yields have risen, reflecting sanity on the part of many investors – one should get paid for the risk inherent in these instruments.

- **Deteriorating residential loan credit standards.** *Over the past two years the GSEs have liberalized residential loan credit standards for debt service coverage and loan-to-value ratios, which elevate the potential for significant losses should recession occur and be accompanied by home price depreciation.*

  There is emerging data that indicates that the GSEs are tightening credit standards since the new director of the Federal Housing Finance Agency was confirmed by the Senate. *This risk remains, but it is limited in scope.*

- **Trade war** – this risk will depend upon the outcome of U.S.-China negotiations and whether the U.S. decides to impose tariffs on automobiles and auto parts.

  This risk escalated sharply in early May with the failure of U.S.-Chinese trade negotiations and the implementation of higher and additional tariffs on imports of goods by both countries. In addition, the Trump Administration has been noticeably silent about the possibility of implementing auto tariffs and has not released the Commerce Department’s report. If new tariffs are imposed on imported European goods, the European Union is expected to retaliate in kind.
This risk has increased and is contributing to slowing global economic growth. Uncertainty has led to slower growth in business capital expenditures.

The second attempt at trade negotiations in late July went no where and President Trump, contrary to the advice of many of his advisors, announced that 10% tariffs would be imposed on September 1st on all remaining Chinese imports not already subject to tariffs. China immediately retaliated by prohibiting import of American agricultural products and let the Chinese currency depreciate. This escalation in the trade war came at a time when growth was already slowing in many countries, including China. Even though tariffs have been directed primarily at China, it is becoming evident that significant spill over effects have affected other countries. Germany, whose economy relies heavily on exports, has been particularly hard hit. Germany’s manufacturing sector has contracted in every month in 2019 so far. Germany’s export economy is in recession and the entire economy is perilously close to recession and will be in recession if the consumers pull back and the services economy falters.

While the direct effects of tariffs on growth are limited, the indirect effects increasingly appear to be substantial. GS estimates that U.S. real GDP will decrease over the next year by 0.6% because of tightening financial conditions, increased policy uncertainty depressing business investment and supply chain disruptions. GS’s view may turn out to be optimistic if negative feedbacks kick in.

In September President Trump delayed implementation of the latest round of tariffs until October 15th and China and the U.S. agreed to resume trade talks. President Trump announced on October 11th a “Phase One” trade deal with China. Chinese Vice Premier Liu He, however, was more guarded, saying only that “we have made substantial progress in many fields.” In reality, no binding deal has yet been struck. President Trump agreed to suspend implementation of tariffs scheduled to go into effect on October 15th in return for China’s agreement to resume purchase of American agricultural goods. There is still a long way to go to reach a binding agreement and when, and if, it occurs, it will be limited in scope. Nonetheless, the message to the markets is that further escalation in the trade war with China is unlikely. This assessment also applies to tariffs on EU automobiles – they are not
likely to be implemented. So, while this deal, which isn’t yet a deal, is limited in scope, it unequivocally limits potential further trade war damage. In that sense it is a positive development for markets and the economy.

- **Tight monetary policy** the FOMC’s change to a neutral monetary policy in January lessened this risk.

  FOMC monetary policy review could result in a revised inflation target in an attempt to assure that inflation averages 2% over the entire cycle – this would result in keeping rates low until inflation rises well above 2%. In addition, FOMC policy will end quantitative tightening in September, which will reduce the risk of tighter market liquidity. Financial markets expect the Fed will need to reduce the federal funds rate by 75 basis points by the end of 2019 and another 25 basis points in early 2020. The slightly inverted yield curve suggests that monetary policy may be too tight.

  Financial conditions in the U.S. eased considerably during the first half of 2019 which diminished this risk. However, as Q2 drew to a close, financial markets became concerned increasingly by slowing global growth and escalating trade tension and expectations for decreases in short-term interest rates rose. At its July 31st meeting, the FOMC responded to market pressure by cutting the federal funds rate by 25 basis points. In addition, the FOMC eased liquidity by ending QT.

  Market relief in response to the federal funds rate cut was very short-lived and negative economic data from Germany and China, along with escalation of the U.S.–China trade conflict led to volatility in global stock markets and a plunge in long-term government bond yields. Pressure built on global central banks to ease monetary policy, perhaps aggressively. It is unclear, however, whether monetary policy has much fire power left. Bond yields are deeply negative in Europe. Quantitative easing has had little lasting impact on improving economic activity and raising inflation in both Europe and Japan. The same lack of monetary policy effectiveness may be ahead for the U.S. Nonetheless, the ECB announced additional aggressive monetary policy easing in early September and the FOMC is cut the federal funds rate on September 18th.
The Federal Reserve announced on October 11th that it would expand bank reserves over the next six months beginning with monthly purchases of $60 billion in Treasury bills. This policy shift is very market friendly because it commits the Fed to expanding liquidity. The Fed is billing this as “organic” growth meaning that the amount of bank reserves should grow in line over time with the size of the economy and, thus, should not be construed as quantitative easing. The excuse in part for this shift in policy is to provide liquidity to the repo market. However, increasing bank reserves does nothing directly to increase liquidity in the repo market. Thus, it is not surprising that the Federal Reserve also intends to continue its open market operations in support of the repo market until at least January. Call it what you like, but the policy shift will have an effect similar to an intentionally acknowledged QE policy and investors and markets will love it. Clearly, monetary policy is now very accommodative and no longer a significant recessionary risk. However, the consequences of all too abundant liquidity for asset bubbles has been amplified.

- **Tightening financial conditions** ï  since the beginning of the year this risk has lessened, but greater than expected deceleration in global growth could easily reignite tightening.

*Financial conditions in the U.S. eased considerably in the first quarter but tightened somewhat in May in response to the failed U.S.-Chinese trade negotiations, but eased again as it became apparent that the FOMC would probably cut interest rates. By early July financial conditions in the U.S. had returned to the level that existed during much of 2018 prior to Q4’s financial markets tempest.*

*This risk diminished in the first half of 2019, but could quickly return if U.S. and global economic activity weakens more than expected.*

*Indeed, right on cue after the failure of trade negotiations, financial conditions tightened considerably in late July and August as angst about slowing global growth, including in the U.S., and other risks spooked market participants. This tightening proved to be temporary as the market relaxed in response to favorable political developments in the U.K. and Italy and easier Chinese and ECB monetary policy. As Q4 began, financial conditions remained favorable.*
• Declining consumer, business, and investor sentiment. Consumer and investor sentiment have improved since the beginning of the year; some measures of business confidence have softened. 

This risk diminished in the first half of 2019, but could worsen quickly, if financial market volatility returns. Accommodative monetary policy will be important in maintaining positive investor sentiment.

Business and consumer confidence remained at cyclically high levels during Q3. Consumer confidence dropped sharply in the University of Michigan survey released on August 16th, but this measure recovered in September and October. Other consumer confidence surveys remain near cyclical highs. While sentiment remains strong about current conditions, anxiety about the future has risen.

• Escalating political uncertainty. Sparring between President Trump and Congress has not had any apparent impact on economic activity. However, the next bout of political uncertainty that is certain to occur involves the need for Congress to raise the federal debt ceiling and pass a budget resolution for fiscal 2020 not later than September 30, 2019. Failure to pass a budget resolution would result in the implementation of sequestration, a legacy of the Budget Control Act, which would result in substantial spending cuts.

The risk of political uncertainty in the U.S. has diminished in the short run, but could escalate at any time and probably will in September. Political uncertainty is rising in the U.K. and Europe and could be amplified by the recent EU parliamentary elections, although there is no evidence of this occurring. These risks are slow moving and the extent of the risks won't be visible for several months.

Somewhat unexpectedly Republicans and Democrats agreed to a budget compromise in late July and passed legislation which lifted spending caps and suspended the debt ceiling until July 31, 2021, thus reducing the potential for a government shutdown at the end of September. Congress passed a continuing resolution to fund the government until November 21st. Thus, the possibility of a government shutdown remains.
After electrifying revelations from an intelligence agency whistleblower about President Trump’s attempts to enlist Ukraine in investigating Joe Biden and his son for corruption, The House of Representatives initiated an impeachment inquiry. To date there has been little visible impact of this development on markets or economic activity. But the matter is volatile and fast moving and, thus, bears close watching with respect to potential negative impacts on the economy.

- **Rise of populism and nationalism.** *This is a long-term risk, which is evolving slowly. The recent parliamentary election in Greece in which a centrist party ousted the incumbent populist party is a hopeful sign that populism may be receding as a political force.*

  President Trump’s version of populism continues to resonate with a large segment of the American population. Populism on the left has also gained some traction. If recession occurs, and if it is severe, this risk would probably increase substantially.

- **Brexit and the European Union** the risk of “no deal” is rising and if realized would have negative consequences for economic activity in the U.K., but also in Europe.

  *The U.K. and the EU kicked the can down the road by extending the deadline for a deal from March 29th to October 31st; this risk remains; uncertainty is depressing U.K. economic activity. U.K. political uncertainty has escalated with the decision of Prime Minister Theresa May to resign. It is likely that Boris Johnson, a Brexit hardliner, will succeed her. However, this will not necessarily lead to a “no deal” Brexit but alternatively to Parliament’s acceptance of a slightly altered “May Plan” with an extended implementation time frame.*

  Boris Johnson became the British Prime Minister in July and commenced procedural maneuvers to force a “No Deal” Brexit. Parliament pushed back and passed a law requiring the prime minister to seek an extension of the October 31st deadline if a plan of exit with the EU acceptable to Parliament could not be negotiated by that time.

  On October 10th Irish Prime Minister Leo Varakar and U.K. Prime Minister Boris Johnson met to discuss the U.K.’s negotiations with the EU to leave the EU – better known as Brexit. At the conclusion of the meeting they issued a statement outlining a “pathway to a deal.”
pathway involves the U.K. agreeing to customs inspections and regulatory border formalities between Northern Ireland and the U.K. Market reaction was positive because of the belief that a “no deal” Brexit would exact heavy economic damage on both the U.K. and the EU. However, “the pathway to a deal” is anathema to the 10 members of the U.K. parliament who are members of the Northern Ireland’s Democratic Unionist Party (DUP). Because Northern Ireland is part of the U.K., it is their position that there should be no barriers. Up until now, these 10 have aligned with the Conservative Party and have been instrumental in keeping the Conservative Party in power in the U.K. parliament. The upshot is that Johnson is now in a position to negotiate a workable exit with the EU, but will probably lose the votes of the 10 DUP members, but this could be overcome by gaining votes from others who previous voted against Theresa May’s deal. Matters will move quickly and, as of this writing, there are many possible outcomes, but the greatest probability is an orderly Brexit.

- **Slowing growth – Italy, France and Germany**

  Italy is in recession and if it deepens this could strengthen populist and nationalist political movements, which could threaten the euro and trigger an existential crisis for the EU.

  This risk is escalating – Italy is in recession; growth has slowed in Germany and it may soon join Italy in recession; ECB’s monetary policy has been ineffective in preventing substantial deceleration in EU economic growth. Italy and the EU averted a budgetary crisis a few months ago, but once post-EU-election politics are resolved, this crisis could erupt anew since Italy’s economic malaise remains and probably is worsening. Another risk that could be triggered by slowing growth is a European banking crisis, and if it occurs, German banks could be the focal point; in this regard, the weakness of Deutsche Bank is especially worrisome.

  Germany’s manufacturing sector is already in deep recession and if employment weakens the rest of the economy will probably be pulled into recession. So far employment has held up well; in fact, Germany’s unemployment rate is extremely low and stable. Germany could avoid the risk of recession by aggressive fiscal policy, although politicians appear reluctant. Unlike many other countries, Germany’s public debt to GDP ratio is relatively low, so there is plenty of room for deficit spending. A concern, however, is that German banks are weakly capitalized and stuffed with loans that could quickly sour if recession
grips the EU. This vulnerability is a consequence of Germany’s policy of depending on exports for growth which has involved running an enormous trade surplus for several years. German banks have financed the purchase of German exports by other countries. Recession could impair the ability of borrowers to service those loans.

Italy headed off a potential political crisis by forming a new coalition government. However, the glue that holds the new government together is antipathy toward the League and its leader Matteo Salvini and fear that the League might do well if a new election were held. The life span of the new government could be short.

Italy’s economy has been in recession and its banks are loaded with nonperforming credits. A budgetary dispute with the EC several months ago was papered over, but not resolved. Italy must present its budget plan to the EC by October 15th. Because of the recession, it is likely to include a substantial deficit which would exceed EU policy guidelines. This sets up a potential political confrontation between Italy and the EC. Both the EU and the new Italian government seem likely to find a way to provide some fiscal budget flexibility to deal with Italy’s recessionary environment. The situation is fluid, but given economic malaise and political turmoil, risks of an EU existential event, although delayed by formation of the new government, remain in place.

- **Slowing growth – China, emerging markets** economic conditions are expected to improve in China during the second half of 2019; if this does not occur as expect, global growth will decelerate more than expected.

China’s stock markets were up 31% through mid-April, reflecting investor optimism that policy would end the growth slowdown and that U.S.-Chinese trade negotiations would conclude amicably. Much of the growth optimism about a better 2019 second half in the U.S. and many global economies hinges on growth reacceleration in China. Current Chinese policies support, but do not guarantee, such an outcome. With the failure of U.S.-Chinese trade negotiations in early May, Chinese stock markets sold off sharply, but did not give all of their 2019 gains. Even though Presidents Trump and Xi agreed to recommence trade negotiations, the Shanghai stock market has trended sideways since early May, perhaps because expectations for a favorable outcome to the
renewed talks are low. Japan and many emerging markets economies have slowed, reflecting weaker Chinese growth.

This is a significant risk. It is too soon to determine whether Chinese policy actions will be effective in boosting global growth and, unfortunately, the trade war with the U.S. adds to downside risks. Data reported in the last month are not encouraging.

China’s July economic activity reports were weak and amplified fears that the trade war with the U.S. and slowing global growth is taking a significant toll on the Chinese economy. Previously, when slowing global growth threatened Chinese growth, policymakers deployed massive fiscal stimulus which not only spurred the Chinese economy but also helped reverse the global economic slowdown. However, fiscal stimulus came at a cost of increasing debt substantially. Chinese policymakers are well aware of the hazards of excessive debt leverage and have chosen to allow growth to slow to a more sustainable level rather than risk another round of debt fueled growth that would increase financial fragility. This policy is also consistent with the transition of the Chinese economy from an infrastructure/export focus to a consumer focus. Thus, it seems increasingly likely that China will not rescue the global economy from slowing growth this time around. That said, China has taken some modest steps to ease monetary policy.

- Turmoil in U.S. financial markets (this risk was not included in the original list, but it is significant enough to add to the list) - Trading in financial instruments has increasingly migrated to indexed products otherwise referred to as ETFs (exchange traded funds). The market share of ETFs continues to increase. The risk posed by ETFs could be severe if a substantial decline in stock markets leads to substantial selling of ETFs and a flight to cash. The underlying liquidity of many ETFs has not been tested under extremely adverse market conditions. If it turns out that many of these products lack liquidity, attempts to liquidate them could have adverse contagion effects on other segments of financial markets and deepen the severity of a market downturn. And, because the Dodd-Frank Act limited the Fed’s ability to act as lender of last resort by providing liquidity to specific market segments, the Fed’s ability to derail a financial panic limits or precludes some of the actions it took to arrest the downward spiral unleashed by the Great Financial Crisis.
Prices in U.S. stock markets continue to climb ever higher, spurred by low interest rates and the expectation that the FOMC will ease monetary policy.

Whether ETFs turn out to be a significant problem will not be known until a full-scale crisis erupts in financial markets. Whether lower interest rates can sustain high stock prices also remains to be seen. The risk is that recession decimates earnings and this more than offsets the benefits of more abundant liquidity and easier monetary policy. Charles Gave, who is highly respected in financial markets, believes that weakening corporate profits, as reported in recent revisions to the National Income Accounts, indicate that U.S. stock prices are overvalued in the aggregate by 55%. My sense is that Gave’s overvaluation estimate depends not just on the level of profits but also on a higher discount rate (higher long-term interest rates). If long-term interest rates follow the European precedent of collapsing to zero or even going negative, such an outcome should provide support for higher stock prices. Given these various possibilities, it is little wonder that investors are increasingly nervous.

Recession risks were very much on the minds of many as the stock market plunged in December 2018. Concern dissipated as stock markets recovered in Q1 2019 and went on to new highs in April and again in July. However, stock market volatility and the plunge in bond yields in late July and August renewed anxieties about imminent recession. Unlike the recession scare at the end of 2018, global and U.S. hard economic data are weakening, which suggests that the possibility of recession, even though most models indicate a probability substantially below 50%, should be taken more seriously now. Nonetheless, in response to favorable political and policy developments in September and early October, U.S. stock markets are near July highs and recession anxieties have receded into the background.

- Almost half of CEO’s attending a Yale C.E.O. summit in December expected the U.S. economy to be in recession by the end of 2018 (that is not a misprint), which obviously did not happen.
- Corporate CFO’s were also gloomy in December — according to the Duke University/CFO Global Business Outlook survey, 48.6% expect the U.S. economy to be in recession by the end of 2019.
- Each month the Conference Board asks CEOs to rank their concerns. In January 2018, recession risk ranked 19th out of 19 choices. In January 2019,
recession risk ranked first. This ranking, however, has probably declined since January.

- Over half of the economists polled by the Wall Street Journal expect recession to begin in 2020; 10% expect recession to begin in 2019.
- In December, Goldman Sachs pegged recession odds at 15% in 2019, but noted that the market’s probability was 50%. In January, GS calculated the odds of a recession beginning in the next 12 months as 14%, but that probability would rise to 20% if the global growth rate declines by 1%

*GS reduced recession odds in the next 12 months to 10% in early April and boosted its outlook for growth in the U.S. over the next two years. Although growth in economic activity in the U.S. is clearly slowing, the slowdown is from above potential to potential. The labor market is strong, consumer sentiment is near cyclical highs. As long as financial conditions do not tighten, and they are not likely to do so as long as the FOMC eases monetary policy, recession is not likely to occur.*

*Like most other forecasters, GS reduced its 2019 real GDP growth forecast in July, but GS remains among a shrinking group of optimists. GS believes easier monetary policy will do its job of extending the economic expansion and expects that interest rate cuts this year will need to be reversed following the 2020 presidential election. Even though this is an out-of-consensus forecast, recent risk-reducing developments domestically and internationally support the plausibility of this view.*

- Bank of America/Merrill Lynch recession model indicated a 21% chance of recession (updated Feb. 12th), but an alternative recession model, based upon financial markets measures, placed the odds of recession in 2019 at approximately 40% (this probability has probably declined with the market’s improvement in January and February).

*Notwithstanding the turbulence in financial markets during July and August, B of A’s model pegs recession probability over the next 12 months at 20%, about the same odds which prevailed during last December’s market storm. However, based upon the slope of the yield curve alone, B of A’s analysis indicated a 51% probability of recession within 12 months in August. That probability has declined in September and October as financial conditions have eased.*
The New York Federal Reserve’s recession model indicated a 31% probability of occurrence within the next 12 months in late July. But, again, this probability likely has diminished somewhat as financial conditions eased during September and early October. 

Michael Harnett’s fund manager survey, conducted between August 2nd and 8th, indicated that 34% of investors expect a recession to begin within 12 months.

However, economic activity data in the first quarter, while weak, did not validate December’s extreme pessimism. In addition, the FOMC’s moderation of monetary policy in late January from a tightening bias to neutral contributed to a lessening of fear that recession might be imminent. Optimism re-emerged. Neither the extreme pessimism in December nor the renewed optimism in the first quarter appear to be consistent with evolving trends in global economic activity. Data clearly indicate that global growth is slowing gradually and the preponderance of risks to the outlook continue to be negative, although short-term risks have diminished somewhat.

What we know from past experience is that forecasting a recession’s onset is notoriously difficult. The fact is that we are usually well into recession before the consensus acknowledges it. What we do know from history is that when risks are unusually high, as they are at the beginning of 2019, the economy is especially vulnerable to unexpected shocks. Consumer, business and investor sentiment can plunge quickly and propel the economy into a downward spiral. Trying to forecast the pivotal shock and perhaps more importantly, its timing, is a crap shoot. The best policy is to be prepared for disaster while hoping for benign outcomes.

As October heads toward Halloween, economic activity in the U.S. remains quite solid, with the exception of the manufacturing sector which has been weakening for several months in response to slower global growth and trade policy and which moved into recession in August. While the labor market remains strong, growth in total hours worked peaked at 2.26% in August 2018 and has trended down steadily to 1.34% in September 2019. Growth in payroll employment peaked at 1.58% in January and had eased slightly to 1.26% by September. Changes in the rate of growth in hours worked leads changes in payroll employment because employers cut (increase) hours before they cut (increase) bodies. Notably, growth in household employment, which unlike payroll employment is never revised, peaked at 1.83% in December 2018 and had fallen to 1.03% in September. Revisions in payroll employment can be substantial at turning points in the cycle because BLS’s sampling methodology for small firms is notoriously inaccurate in catching shifts in
trends. BLS announced in July that payroll employment was overstated by 501,000 through December 2018. It seems more likely than not that growth in payroll employment continues to be overstated in 2019. With this in mind, employment growth is probably softening, but the labor market is still strong as evidenced by the extremely low unemployment rate of 3.5%.

Consumer disposable income growth peaked at 6.1% in December 2018 and has since slowed to 5.1% in August and is projected to slow to 4.6% in December, reflecting slowing total hours worked, partially offset by higher wage rate growth. In response, consumer spending has been slowing from a recent peak growth rate of 5.4% in November 2018 to 4.3% in August and is projected to fall further to 4.2% by December.

Turmoil in financial markets leads to tighter financial conditions and can adversely impact economic activity with a lag. Gyrations in stock prices have a significant impact on business and consumer confidence. This was evident in December and January data releases. However, since the stock market recovered quickly following the August recession scare, as it did at the beginning of the year, it appears that the damage to confidence and real economic activity was short lived as was the case during the first half of 2019. Markets are betting now that easier monetary policy will again do the job of restoring fraying confidence and the economic expansion will roll on, albeit with easy monetary policy and lower interest rates. However, real economic activity is weakening currently in a gradual way, which was not the case in December. So, keep an eye on the stock market and confidence surveys for clues as to whether the August volatility in financial markets morphs into a full-blown crisis in confidence that precipitates recession. For now, that threat has not been realized.
III. 2019 and Beyond – Forecast Summary for the U.S. and the Rest of the World, Highlights of Key Issues, and Identification of Risks

Observations about the 2019 U.S. and global economic outlook and risks to the outlook are listed below. As events unfold during 2019, this will enable the reader to track my analytical prowess. Observations which are on track are denoted by “+”; observations not on track are denoted by “-“; indeterminate observations are denoted by “?” and general observations are denoted by “√”.

Forecasting accuracy, which is always difficult, becomes much more so when the economy is strong and above the long-term sustainable trend level, and when significant economic imbalances have accumulated, which is the situation in which the U.S. economy finds itself at the beginning of 2019. The difficulty in forecasting involves pinpointing the turning point. Almost no one does this well. Recession forecasting models are relatively crude and reliable forecast lead times have been very short. What we know from experience is that recessions occur when the economy becomes overheated and the Fed is tightening. Both of these phenomena are in place. The timing of recession onset, however, depends upon human psychology. And, when human psychology is highly positive, it tends to feed upon itself and sustain momentum, often for longer than seems possible. While consumer sentiment was at a very high level at the beginning of 2019, business and investor confidence had deteriorated from peak levels reached in 2018. Strong consumer optimism based on rising employment and incomes could outweigh business and investor anxieties. Alternatively, investor driven financial market volatility could erode consumer confidence and slow spending growth with the consequence of hastening recession onset.

In any event, 2019 looks set to be a volatile year with a higher than normal chance that outcomes by the end of the year will be significantly different and worse than outcomes expected at the beginning of the year.

1. U.S. ᵇ Outlook – October Update: (The paragraphs that follow provide a summarized snapshot of the economy’s performance month-by-month)

Calm returned to financial markets in January and February as investors realized that economic growth remains strong and the threat of recession is not imminent. The reversal in sentiment was helped by soothing words from Federal Reserve officials and reinforced by the FOMC’s monetary policy change from a tightening bias, foreshadowing two rate hikes during 2019, to a neutral bias, indicating a pause in rate changes and a data-dependent patience in determining
whether the next rate change is an increase or decrease. The partial government shutdown in January will reduce 2019 Q1 GDP growth but about 75% of the loss will be recouped in Q2. All employment indicators remain very strong and the labor market is operating above full capacity; however, inflationary pressures remain quiescent. Real GDP growth is in a slowing trend but remains well above full potential. Measures of business, consumer, and investor sentiment weakened some in January but remain near cyclical highs.

Data reported in March, particularly for the months of December and January, were very weak, reflecting the consequences of 2018’s year-end stock market correction and the partial government shutdown. 2019 Q1 GDP growth is likely to be less than 1% and could be negative, reflecting a slowdown in consumer spending and decreases in inventories, which outgrew demand in 2018 Q3 and Q4. Bad weather and the partial government shutdown will also depress 2019 Q1 GDP growth. Preliminary March data support the story of slowing U.S. growth but do not suggest that recession is imminent. Most forecasters believe that 2019 Q1 weakness will be temporary and not a precursor of recession. The consensus expects that more accommodative monetary policy and reacceleration of Chinese growth during 2019 will boost the pace of U.S. GDP growth modestly above the long-term potential level.

Data reported in April and early May mostly covering March were stronger and benefitted from easier monetary policy and strong stock market performance. Surprisingly, the Advance Estimate of 2019 Q1 GDP came in at a very strong 3.18%, although the Private Domestic estimate of GDP, which eliminates inventories, net exports and government and is a better GDP measure of trend growth, was a very weak 1.09%. Payroll employment grew strongly in March and April, but household employment declined in both months. This divergence makes no sense and is most likely due to sampling error. The likely interpretation is that the labor market is not as strong as it appears from March and April data and the decline in the U-3 unemployment rate to 3.58% in April to a 50-year low probably artificially depressed by statistical noise. Wages continue to edge up but to a lesser extent than implied by employment growth and the low unemployment rate. The core inflation rate declined, perhaps due to transitory factors as suggested by Federal Reserve Chair Jerome Powell, but the failure of inflation to rise seems more fundamentally based. On April 30th, the S&P 500 stock average hit an all-time high, completely recovering from the 2018 Q4 nearly 20% drop in stock prices. Consumer confidence recovered to cyclical highs in April, reflecting the stock market’s stellar performance. However, the ISM manufacturing and services indices weakened in April. The major event in early May was the collapse in U.S.-China trade negotiations and the reciprocal implementation of
higher tariffs. The sense of optimism that rebuilt during Q1 and April is now threatened and is a reminder that major risks still bedevil the U.S. and global economies. While the Fed’s monetary policy has resulted in easier financial conditions and reduced the likelihood of recession in the near term, recession risk remains elevated.

Data reported in June covering April and May reflected continued strong consumer and business sentiment. However, survey measures of business activity are weakening and business activity, which has been above potential, is moderating. Stock prices recovered about 70% of May’s decline; however, interest rates continued to fall. The bond market now expects the Fed to cut the federal funds rate at least 50 basis points in 2019 and another 25 basis points in early 2020, beginning as soon as the FOMC meeting in July. May’s employment report was extremely disappointing, but employment growth, averaging over the first five months of the year, remains above long-term potential. Growth in wages continues to trend up gradually, but remains at a moderate level. Inflation measures continue to be soft. However, tariffs will boost inflation temporarily later this year, but as indicated by falling inflation expectations, this development is not expected to have a permanent impact on inflation. Global growth continues to slow, with weakness particularly apparent in Europe, Japan and emerging economies.

July – global growth is clearly weakening and policy responses have yet to shift momentum in a more favorable direction. In the U.S. the manufacturing sector has slowed to stall speed. Slowing global growth and increased uncertainty has led to a slowing in business investment growth and housing investment continues to languish. Employment growth remains strong and unemployment continues to decline below the natural rate. However, the rate of growth, particularly as measured by total hours worked, is slowing gradually, a trend that seems likely to continue. The slowdown in the rate of growth in total hours worked is occurring and a slowing in the recent acceleration in wage rates is possible. And as this occurs, growth in consumer spending, which accounts for nearly 70% of GDP will also gradually slow. The slowdown in consumer spending could accelerate, if consumer sentiment wavers, but recent survey data indicate strong consumer optimism. Overall, the portrait that recent economic data are painting is one of continued strong economic activity in the U.S. which is gradually slowing to the underlying long-term potential rate of growth. For the time being the risk of recession remains minimal.

August – investor anxiety about the possibility of recession escalated rapidly in early August. A prominent cause was the failure of U.S.-China trade negotiations followed immediately by additional tariffs and other retaliatory measures by both countries. This came on top of slowing global growth. Then, Germany and China
reported disappointing economic activity. Certainly, the mood of investors has changed quickly for the worse. Whenever this has occurred in the recent past, soothing words from the Federal Reserve and easier monetary policy has diffused the apparent crisis of confidence. The underlying strength of the economy assisted in reversing sentiment. The economy is still very strong, but some cracks are emerging. The manufacturing sector is struggling and business investment is weakening (growth was negative in Q2). Growth in hours worked has slowed significantly over the past year and is now lower than the growth rate in the number of people employed. What this portends is that growth in take home pay is slowing, even while growth in the average hourly wage rate is rising. This trend will lead eventually to slower growth in consumer spending.

Government investment spending has supported economic growth in recent quarters but this stimulus is on track to begin fading. While economic growth is still above its long-run potential level, it is likely to continue to decelerate to its potential level. The question is whether, as most forecasters expect, growth will match its potential level and stay there or whether it will continue to slow well below potential.

**September** – risks that spooked markets in August seemed less consequential in early September. The Italian political crisis was resolved, the U.K. parliament passed a bill to require the prime minister to avoid a "No Deal" Brexit and seek a negotiation extension from the EU, the ECB announced additional aggressive monetary stimulus, China took steps to ease its monetary policy, China and the U.S. agreed to reengage in trade talks, and confidence is building that the FOMC will cut interest rates at least once more this year and possibly twice. In response, market anxiety abated in September and long-term interest rates rose. While consumer and business sentiment continues to be robust, signs of slowing economic growth in the U.S. continue to accumulate. Business investment has weakened in response to slowing global growth and uncertainty stemming from the U.S.-China trade war. The manufacturing sector has entered recession, but the service sector remains strong. Growth in employment and total hours worked is slowing gradually as is growth in consumer incomes and spending. In summary, growth in the U.S. is slowing to its long-term potential level. Because underlying imbalances remain, the economy remains vulnerable to shocks that could precipitate recession. However, absent a shock that severely damages consumer and business sentiment, recession is not yet a certain outcome over the next few months.

**October** – GS’ s current activity indicator (CAI) tells the story well of cross-currents in the U.S. and global economies. CAI is a measure that compiles real-time survey and hard economic data reports. That compilation is then linked
statistically to the growth rate in real GDP. CAI was 1.2% in early October, signaling that a substantial slowing in real GDP growth is coming. However, sub-measures for the survey and hard data components are telling a very different story. The aggregate measure for survey data is 0.4%, perilously close to signaling recession, while the hard data measure is 2.5%, indicative of robust economic activity. Arguably, survey data are more timely, but they also can be influenced by opinion as well as by fact. It is possible that recent survey data have been depressed by the August recession scare. Sifting through all of this, the most likely story is that while the manufacturing sector is in recession, activity in the rest of the U.S. economy is solid but slowing from an above full-employment level. Recent policy developments will support continuing growth and push the possible onset of recession into the future.

- According to the U.S. Citi Surprise Index, economic data reports released in August and early September were generally more favorable than expected; however, the trend began to reverse in late September and early October.
- According to the National Association of Manufacturers, 67.9% of manufacturers were “somewhat” or “very positive” about the outlook in Q3 compared to 79.3% in Q2 and 89.5% in Q1.
- The Treasury yield curve inverted slightly from March 22nd to March 28th; research indicates that the spread between the yields on the 3-month Treasury bill and the 10-year Treasury note is the most reliable indicator of impending recession when it turns negative – yield curve inversions have preceded every recession by approximately 12 months, but not every yield curve inversion has been followed by recession; however, as optimism rose about stronger U.S. growth, this spread turned modestly positive, averaging +9 basis points between March 29th and May 10th, but inverted again on May 13th, as markets reacted to the failure of U.S.–China trade negotiations and both countries lifted tariffs substantially, and has remained inverted until October 10th, averaging -18 basis points, widening to over -35 basis points in August; on October 11th the yield curve return to a modest positive slope of +8 basis points in response to investor optimism about the possibility of U.S.-China mini trade deal, favorable developments in Brexit negotiations, the Fed’s commitment to increase substantially the amount of reserves in the banking system, and the expectation that global central banks, including the Federal Reserve, will continue to ease monetary policy in coming months.
NY Fed analysis pegged the odds of a recession in the next 12 months at 32% in August; however, recession mentions, which spiked in August declined sharply in September and October as the latest recession scare abated.

Duke CFO survey 2019 Q3: 55% became more pessimistic and 12% became more optimistic compared to 2019 Q2; 53% expect recession to begin by 2020 Q3 and 67% expect recession to occur by the end of 2020; Q2: 48% expect recession to begin by 2020 Q2, up from 38% in 2019 Q1; 69% expect recession to commence by the end of 2020.

Leading Economic Indicators (LEI) index was flat in January; +0.1% in February; +0.2% in March to 111.7; +.1% in April to 111.8; -.1% in May at 111.7; down -.1% to 111.6 in June; +.5% to 112.2 in July, a stagnating trend that suggests U.S. growth is likely to decelerate in coming months.

Financial conditions, which spiked in 2018 Q4, eased gradually during the first half of 2019 to the level that prevailed during Q2 and Q3 2018; easier financial conditions are correlated with stronger growth in economic activity; financial conditions tightened slightly in late July and August, but not to an extent that would have a material adverse impact on economic activity, and have eased slightly in September and early October.

Evercore ISI’s mid-July survey of retailers, industrials, and real estate builders, indicated record high inventories; industrials which especially high; companies will focus over Q3 and Q4 in bringing inventories down and this will depress real GDP growth.

- **2019 real GDP Y/Y** growth projections range from 2.4% to 2.6%, still well above the long-term potential growth rate of 1.6% to 2.0%. The FOMC’s central tendency Q4/Q4 projections range from 2.3% to 2.5%. (Q4/Q4 projections are highly dependent upon potential anomalies in Q4 data; therefore, Y/Y estimates, which average all four quarters, usually are more stable estimates.) Risks are tilted to the downside because of slowing international growth, tightening monetary policy and financial conditions, elevated political uncertainty, a heightened potential for declines in consumer, business, and investor optimism.

- **2018 Q4 “Final Estimate”** = 2.1% (revised down from 2.2%); 2018 = 2.9%
- **B of A 2019 original real GDP forecast** = 2.7%, **revised** = 2.3%; **GS original** = 2.4%; **revised** = 2.3%; **Bill’s original BASE scenario** =
2.47%, revised = 2.35%; Bill’s original STRONG GROWTH scenario = 2.53%, revised = 2.35%

+ Final Q1 GDP annualized growth = 3.1%; however, netting out growth in inventories and slowing growth in imports reduced the final estimate of GDP to 1.3%, which is a more reliable indicator of the fundamental trend in GDP growth
- 2019 Q2 final = 2.0%, revised down from 2.1% in advance report
- 2019 Q3 estimate: GS = 2.0%; B of A = 1.6%

### Composition of 2019 and 2018 Quarterly GDP Growth

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<tbody>
<tr>
<td>Personal Consumption</td>
<td>2.85%</td>
<td>3.10%</td>
<td>3.03%</td>
<td>.78%</td>
<td>.97%</td>
<td>2.34%</td>
<td>2.70%</td>
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<tr>
<td>Private Investment</td>
<td></td>
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<tr>
<td>Nonresidential</td>
<td>-.08%</td>
<td>-.09%</td>
<td>-.14%</td>
<td>.60%</td>
<td>.64%</td>
<td>.29%</td>
<td>1.04%</td>
</tr>
<tr>
<td>Residential</td>
<td>-.06%</td>
<td>-.11%</td>
<td>-.11%</td>
<td>-.04%</td>
<td>-.18%</td>
<td>-.16%</td>
<td>-.15%</td>
</tr>
<tr>
<td>Inventories</td>
<td>-.86%</td>
<td>-.91%</td>
<td>-.91%</td>
<td>.53%</td>
<td>.07%</td>
<td>2.14%</td>
<td>-1.20%</td>
</tr>
<tr>
<td>Net Exports</td>
<td>-.65%</td>
<td>-.72%</td>
<td>-.68%</td>
<td>.73%</td>
<td>-.35%</td>
<td>-2.05%</td>
<td>.67%</td>
</tr>
<tr>
<td>Government</td>
<td>.85%</td>
<td>.77%</td>
<td>.82%</td>
<td>.50%</td>
<td>-.07%</td>
<td>.36%</td>
<td>.44%</td>
</tr>
<tr>
<td>Total</td>
<td>2.05%</td>
<td>2.04%</td>
<td>2.01%</td>
<td>3.10%</td>
<td>1.08%</td>
<td>2.92%</td>
<td>3.50%</td>
</tr>
<tr>
<td>Final Sales</td>
<td>2.91%</td>
<td>2.95%</td>
<td>2.92%</td>
<td>2.57%</td>
<td>1.01%</td>
<td>.78%</td>
<td>4.70%</td>
</tr>
<tr>
<td>Private</td>
<td>2.06%</td>
<td>2.18%</td>
<td>2.10%</td>
<td>2.07%</td>
<td>1.08%</td>
<td>.42%</td>
<td>4.26%</td>
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<tr>
<td>Private Domestic</td>
<td>2.71%</td>
<td>2.90%</td>
<td>2.78%</td>
<td>1.34%</td>
<td>1.43%</td>
<td>2.47%</td>
<td>3.59%</td>
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Momentum in GDP growth peaked in 2018 Q3 and has slowed progressively over the last 3 quarters; however, growth in “Private Domestic” GDP remains well above its long-run potential.
- GS’s U.S. Current Activity Indicator (CAI), which is a proxy for real GDP growth, was 1.8% in December 2018, above GS’s long-term potential level of 1.6%, but below its forecast 2019 GDP growth rate; January = 1.3%; February = 2.3%; March = 2.3%; April = 1.9%; May = 1.6%; June = 1.1%; July = 1.3%; August = 1.6%; September = 1.2% (composite of survey indicators = 0.4% and reported data = 2.5%)
- Chicago Fed National Activity monthly Index (3-month trend) indicates that economic activity is decelerating to a below trend pace: December = -.05 (.08); January = -.04 (.06); February = -.61 (-.23); March = -.06 (-.24); April = -.83 (-.50); May = -.14 (-.34); June = +.13 (-.28); July = -.41 (-.14); August = +.10 (-.06); (positive values indicate above trend growth and vice versa for negative values)
- LEI was flat in January; +0.1% in February; +0.2% in March to 111.7; +.1% in April to 111.8; -.1% in May at 111.7; -.1% in June to 111.6; +.4% to 112.1 in July; no change in August = 112.1, a stagnating trend that suggests U.S. growth is likely to decelerate in coming months
Real GDP Growth Forecasts

(year-over-year average)

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<td>Actual</td>
<td>2.91</td>
<td>1.64</td>
<td>2.37</td>
<td>2.93</td>
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<td>B of A</td>
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<td>2.28</td>
<td>1.55</td>
<td>1.68</td>
<td>1.70</td>
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<td>GS</td>
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<td></td>
<td>2.29</td>
<td>2.12</td>
<td>2.13</td>
<td>1.84</td>
<td>1.73</td>
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<td>IHS Markit</td>
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<td>2.30</td>
<td>2.30</td>
<td>2.10</td>
<td>1.80</td>
<td>1.60</td>
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<td>Economy.com</td>
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<td></td>
<td>2.30</td>
<td>1.70</td>
<td>2.10</td>
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<tr>
<td>Blue Chip Average</td>
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<td></td>
<td>2.40</td>
<td>1.80</td>
<td>1.70</td>
<td>1.90</td>
<td>2.00</td>
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<tr>
<td>CBO</td>
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<td></td>
<td>2.24</td>
<td>2.05</td>
<td>1.82</td>
<td>1.71</td>
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<tr>
<td>FOMC High*</td>
<td>2.30</td>
<td>2.10</td>
<td>2.00</td>
<td>2.00</td>
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<tr>
<td>FOMC Low*</td>
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Bill’s Scenarios

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*Q4 to Q4 ᵃ sensitive to specific Q4 values and may diverge from year-over-year trend.

- **Real GDP output gap**, which moved from negative to positive (overheated) during 2018, will become even more positive, which means the economy will overheat to an even greater extent during 2019. By the end of 2019 the positive output gap should be in a range of 0.9% to 1.1%. (CBO will revise its estimates of potential real GDP growth sometime during 2019, which could change the end of the year forecast output gap.)
  - 2018 output gap = 0.55% (0.30% prior to July 2019 National Income Accounts revisions which increased the level of GDP and CBO revisions which increased the level of potential real GDP), indicating the economy was operating slightly above its potential
  - CBO revised 10-year economic projections in January lowered the forecast year-end 2019 output gap from 1.08% to 0.87%, July GDP revisions for the past several years lifted the projected year-end output gap to .90%; CBO revised its economic projections in late August, which reduced the year-end output gap to .74%
  - Original year-end 2019 output gap in Bill’s BASE scenario = 1.16%; revised = 0.93%
  - 2019 Q1 gap = .71%; Q2 = .77%; estimated Q3 = .81%

- **Potential structural rate of real GDP growth** will remain well below actual real GDP growth during 2019 in a range of 1.5% to 1.6%. Long-term potential real GDP growth will edge up in coming years to between 1.7% and 2.0%, based upon improving productivity.
CBO original 2019 potential growth = 2.10%; January revision = 2.13%; August revision = 2.05%
Bill’s 2019 original estimate of potential growth was between 1.5% and 1.6%; revised estimate of 2019 potential growth increased to 1.9% because of strong productivity growth
Long-term potential GDP growth: CBO = 1.75%; B of A = 1.70%; GS = 1.75%; FOMC = 1.80% to 2.00%; Bill’s BASE scenario = 1.83%; Bill’s STRONG GROWTH scenario = 1.98%

- Productivity should remain relatively stable in 2019 in a range of 1.2% to 1.4% compared to an expected 1.3% gain in 2018; it will continue to fall well short of the historical 2.1% average.
  - 2018 = 1.30% (4-quarter moving average); 1.03% YoY
  - Bill’s 2019 original forecast = 1.37%; revised = 1.78% (4-quarter moving average)
  - B of A 2019 original forecast = .88%; revised = 1.90% (4-quarter moving average)
  - 2019 Q1 annualized productivity = 3.5%, four-quarter moving average = 1.39%, YoY = 1.67%; Q2 annualized productivity = 2.3%, four-quarter moving average = 1.42%, YoY = 1.78%

Nonfarm Business Productivity
(Seven-Year Rate of Change)

Payroll and household employment growth should slow during 2019 because employment is well above its long-term natural level and should
converge closer to the natural rate of growth in the labor force which is about 80,000 to 100,000 new entrants monthly; however, given the strength in expected economic activity during 2019, payroll and household employment growth should average between 160,000 and 190,000 per month; risks are tilted to the downside

- Payroll employment grew 191,938 (219,833 before two annual benchmarking adjustments – one in February and one in August) monthly during 2018
- BLS benchmarked payroll employment in February but the impact on 2018 payroll employment was negligible – average 2018 monthly payroll employment increased 3,000; however, the August 2019 adjustment reduced monthly payroll employment by 41,750 from April through December 2018
- GS 2019 monthly payroll original forecast = 156,000, revised = 145,000; B of A original = 178,000, revised = 135,000; Bill's BASE original = 177,500, revised = 140,563
- January 2019 payroll = 270,000 (312,000 before August adjustment); February = 14,000 (56,000 before August adjustment); March = 111,000 (153,000 before August adjustment); April = 216,000; May = 62,000; June = 178,000; July = 166,000; August = 168,000; September = 136,000; YTD monthly average = 146,861
- Census Bureau updated population controls in February which reduced the number of people eligible to work by 800,000, the number in the labor force by 506,000, the number employed by 488,000, and the number unemployed by 18,000 – the adjustments did not impact the employment participation ratio or the unemployment rate
- Household employment grew 199,500 monthly during 2018 (240,167 monthly excluding a downward adjustment of 488,000 for 2018 stemming from updating of population controls)
- Household employment: January = 236,000; February = 255,000; March = -200,000; April = -103,000; May = 112,000; June = 248,000; July = 282,000; August = 225,000; September = 125,000; YTD monthly average = 131,064; (household monthly average tracking below payroll monthly average; August benchmarking adjustment to payroll employment reduced the difference – the two measures should converge over time – the average YTD difference narrowed to 16,000 in September; it seems likely that the benchmark revisions in January 2020 will reduce 2019 payroll employment and narrow the gap further or eliminate it altogether)
The Conference Board’s difference between jobs plentiful and jobs hard to get was 33.3% in December 2018; it is likely to fall, perhaps substantially in 2019; January = 33.7%; February = 34.3%; March = 28.3%; April = 33.2%; May = 33.5%; June = 27.6%; July = 33.4%; August = 38.3% (record high); September = 33.2% (decline in “jobs plentiful” component)

Evercore ISI employee placement (average of temporary and permanent) index = 61.3 in December (a value above 50 indicates expansion); January = 59.6; February = 60.3; March = 61.5; April = 62.5; May = 62.6; June and July = 62.8; August = 62.4; September = 63.5; October 11th = 65.6

Job openings rate, quit rate and hiring rate (JOLTS data) remain at strongly positive cyclical levels but moderated slightly in June, July and August

- Employment participation should edge down slightly from its December 2018 level during 2019 in a range of 62.75% to 63.05%, as strong employment growth offsets the longer-term declining trend in participation due to demographically-embedded retirements of baby boomers.

- The participation rate was 63.05% in December 2018; January = 63.21%; February = 63.15%; March = 63.03%; April = 62.80%; May = 62.83%; June = 62.92; July = 63.02; August and September = 63.18; average YTD = 63.04%; stronger than expected participation rate in
January and February due to return of discouraged workers to the labor force and prime age women, particularly those under the age of 35 with professional degrees

- **Unemployment rate** should edge down slightly from 3.9% to between 3.2% and 3.6%.
  - January = 4.0%; the increase in the unemployment rate in January occurred because the increase in the participation rate caused the labor force (495,000) to increase much more than the number employed (236,000); February = 3.8%, reflecting a 300,000 decrease in the number unemployed; March = 3.8%; April and May = 3.6%; June, July and August = 3.7%; September = 3.5%
  - The 4-week moving average of unemployment claims hit a new multi-decade low of 206,000 in late-April; this is all the more indicative of a very tight labor market considering that total employment has growth considerably since the previous low mark in claims in 1969; the 4-week moving average edged up to 214,000 in the week ending October 5th
**U-3 and U-6 Unemployment Rates**

![Graph showing U-3 and U-6 unemployment rates](image1)

*Source: Bureau of Labor Statistics*

**LT (>26 weeks) and ST (<26 weeks) Unemployment Rates**

![Graph showing LT and ST unemployment rates](image2)

*Source: Bureau of Labor Statistics*
• Wage rate growth, reported by BLS for all employees and non-supervisory and production workers, should edge up slightly during 2018 to a range of 3.2% to 3.6%.

- Hourly wage growth for all employees (12-month moving average) was 2.88% in December 2018; January = 2.92%; February = 2.99%; March = 3.05%; April = 3.11%; May = 3.15%; June = 3.20%; July = 3.25%; August = 3.29%; September = 3.31%
Hourly wage growth for production and nonsupervisory employees (12-month moving average) was 2.85% in December 2018; January = 2.94%; February = 3.03%; March = 3.10%; April = 3.17%; May = 3.23%; June = 3.30%; July = 3.38%; August = 3.44%; September = 3.51%
Evercore ISI employee pricing power (average of temporary and permanent) index = 68.6 in December (a value above 50 indicates increasing pricing power); January = 69.0; February = 68.9; March = 68.1; April = 68.4; May = 69.0; June = 70.2; July = 72.0; August = 72.5; September = 73.6; October 11th = 73.5

- GS’s wage tracker was 3.04% in Q4 2018; January = 3.2%; February = 3.4%; March = 3.0%; April = 2.8%; May = 3.1%; June, July and August = 3.4%; September and October = 3.2%

- The Atlanta Federal Reserve Bank unweighted wage tracker was 3.5% in December 2018; January, February and March = 3.5%; April and May = 3.6%; June, July and August = 3.7%; September = 3.6%

- 2018 Q4 employment cost index increase: total = 2.89%; wages and salaries = 3.00%; benefits = 2.75%

- 2019 Q1 employment cost index YoY increase: total = 2.79%; wages and salaries = 2.82%; benefits = 2.65%; 2019 Q2: total = 2.78%; wages and salaries = 2.96%; benefits = 2.26%

- Evercore ISI’s April survey of CFOs indicated that growth rates in wages are expected to increase in a net of 30% of companies compared to 54% in the previous survey conducted in October 2018; 84% of companies expect to increase employee wages over the next 12 months compared to 86% in October 2018
• **Nominal consumer disposable income** growth, measured on a 12-month moving average basis should increase during 2019 primarily because of rising wage rates; growth should be in a range of 5.0% to 5.5%.
  - Nominal disposable income grew 6.12% in 2018 (revised up substantially in the July 2019 revisions of National Income Accounts from the previously reported 4.90%)
  - January = 6.02%; February = 5.93%; March = 5.82%; April = 5.71%; May = 5.59%; June = 5.43%; July = 5.25%; August = 5.08% (12-month moving average); trend is decelerating

• **Nominal consumer spending** growth on a 12-month moving average basis should slow during 2019 because of slower employment growth, much slower growth in wealth (financial assets and housing), moderating levels of optimism; growth should be in a range of 4.25% to 4.75%.
  - Nominal consumer spending grew 5.28% in 2018 (revised up in the July 2019 revisions of National Income Accounts from the previously reported 4.89%)
  - January = 5.21%; February = 5.11%; March = 5.06%; April = 4.98%; May = 4.84%; June = 4.71%; July = 4.54%; August = 4.34% (12-month moving average); spending growth is slowing, but below income growth, which means the saving rate is increasing
Real Personal Consumption Growth Rate Forecasts

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- Auto sales should decline during 2019
  - Auto sales averaged 17.21 million units during 2018; January = 16.71 million units; February = 16.52 million; March = 17.26 million; April = 16.48 million; May = 17.39; June = 17.18; July = 16.88; August = 17.00; September = 17.19; average YTD = 16.93
• **Retail sales** growth should be stable or slightly slower during 2019

  ✓ Retail sales grew 3.1% in 2018 (quarterly average YoY), after peaking at 6.1% in July 2018

  + Retail sales declined 2.3% in the month of December, reflecting adverse impacts of financial market volatility, rebounded 1.6% in January, fell 0.7% in February, adversely impacted by delays in tax refunds; rose 2.0% in March, rose 0.3% in April, 0.4% in May, 0.3% in June. 0.8% in July and 0.6% in August

  + The quarterly YoY average annual growth rate: January = 2.4%; February = 1.7%; March = 2.6% April = 3.0%, May = 3.4%, June and July = 3.2%, August = 3.8%; financial market turmoil in 2018 Q4 and its impact on consumer confidence were major factors in the spending slowdown in January and February; financial markets improved early in the year and this helped boost spending growth progressively from March through August

  ✓ 38% of retailers reported in mid-July that inventories were “too high” or “a little too high” compared to 15% that indicated that inventories were “a little too low” or “too low”; this large gap of 23%, combined with slower employment and income growth, could depress economic activity in coming months

  ✓ Rent per square foot on Fifth Avenue in New York has plummeted over the past 3 years by 40%, indicating the powerful disruptive impact of online shopping

• **Consumer confidence** in 2019 should decline from historically high levels in 2018.

  ✓ Conference Board = 126.6 in December 2018; January = 121.7, almost all the decline was in expectations sub-index, possibly influenced by the partial government shutdown, while the current conditions index was stable; February = 131.4, reflecting a strong rebound in the expectations component; March = 124.2, reflecting a sharp decline in the present economic conditions index; April = 129.2; May = 131.3, reflecting improvements in both the current conditions and expectations components; June = 124.3, reflecting declines in both the current conditions and expectations components; July = 135.8, reversing the decline in current conditions and expectations that occurred in June; August = 134.2 (increase in current conditions component offset by decrease in expectations component); September = 125.1 (declines in both current and expected conditions components)
University of Michigan = 95.3 in December 2018; January = 91.2, which was worse than expected and a two-year low; February = 93.8; March = 98.4; April = 97.2; May = 100.0; June = 98.2 (decline in expectations outweighed increase in current conditions); July = 98.4 (increase in expectations offset decline in current conditions); August = 89.8 (decline reflects trade war escalation and stock market decline); September = 93.2; October preliminary = 96.0

Bloomberg = 59.6 in December 2018; January = 58.2; February = 61.0; March = 62.1; April = 60.4; May = 60.8; June = 62.6; July = 64.7 (highest since 2000 and close to a record high); August = 63.4; September = 62.0; October 10th = 62.7

Evercore ISI = 54.5 in December 2018; January = 54.2; February = 53.2; March and April = 54.2; May = 53.4; June = 53.4; July = 52.9; August = 52.8; September = 51.9; October 11th = 52.4

A CNN consumer 2019 Q1 poll found that 71% of Americans believe that economic conditions are good; the peak rating for this poll was 89% in 1999; in 2008 only 8% agreed that economic conditions were good

- **Consumer credit growth** should slow during 2019; however revolving credit growth could rebound from 2018’s depressed level which was caused primarily by cuts in personal income taxes.
  - Total consumer credit 12-month moving average: December 2018 = 4.8%; January and February = 4.8%; March = 4.9%; April and May = 5.1%; June and July = 5.2%; August = 5.0%
  - Revolving consumer credit 12-month moving average: December 2018 = 3.5%; January and February = 3.2%; March = 3.3% (possible rebound in growth did not occur in 2019 Q1, but rebounded in Q2); April = 3.8%; May = 4.1%; June and July = 4.6%; August = 4.3%
  - Non-revolving credit 12-month moving average: December 2018 = 5.3%; January = 5.3%; February = 5.4%; March, April, and May = 5.5%; June and July = 5.4%; August = 5.5%

Federal Reserve Senior Loan Officer Opinion Survey: residential mortgage underwriting standards were unchanged in 2019 Q2, and demand strengthened; underwriting standards tightened on credit cards but were unchanged for other types of consumer loans, and demand was stronger for all categories
• **Household personal saving rate** will rise as growth in disposable income exceeds growth in consumer spending; the saving rate should improve to a range of 6.5% to 7.5%.
  - The average consumer saving rate in 2018 = 7.69% (6.68% prior to July 2019 revisions in National Income Accounts data)
    - January = 8.28%; February = 8.83%; March = 8.36%; April = 8.09%; May = 7.98%; June = 8.05%; July = 7.83%; August = 8.13%; YTD = 8.19%

**Saving Rate**

(2014-2019: percentage)

- Stock prices, as measured by the S&P 500 average, should be between 5% higher or 15% lower: on the downside reflecting pressure on profit margins, slower revenue growth, rising labor costs and higher short-term interest rates; on the upside reflecting growth friendly fiscal policy and investor optimism.
  - Analysts expect S&P 500 earnings per share to increase 1% (revised down from 4%) from $162 in 2018 to $163.56 (revised down from $168) in 2019; analyst forecasts for 2019 are edging lower
  - NFIB earnings trend weakening (% higher - % lower): peak May 2018 = +3%; December = -7%; January = -5%; February = -9%; March = -8%; April = -3%; May = -1%; June = -7%; July = -4%; August = -1%; September = -3%
  - Stock prices YTD: January = 7.9%; February = 11.1%; March = 13.1%; April = 17.5%; May = 9.8%; June = 17.3%; July = 18.9% (record high
for S&P 500 on July 15th); August = 16.7%; September = 18.7%; October 11th = 18.5%

- National Income Account revisions in July reversed the previously reported growth in corporate profits to a decrease

- **Business activity** will weaken slightly but remain positive with both the PMI manufacturing and service indices averaging above 50.

  + PMI manufacturing index = 54.3 in December 2018; January = 56.6, reflecting increases in the orders and production sub-indices; February = 54.2; March = 55.3; April = 52.8 (pulled down by weaker new orders, production and employment); May = 52.1 (increase in new orders and employment; decrease in production); June = 51.7 (new orders sub-index declined to 50.0, but production and employment increased); July = 51.2 (new orders strengthened but employment and production weakened); August = 49.1; September = 47.8 (contraction and worst since Great Recession of 2008-2009 – new orders, production and employment contracted in both August and September)

  ✓ IHS Markit PMI is similar to the PMI manufacturing index but is based on a broader sample of companies; the two generally track each other, but the PMI (Markit), arguably, is a more accurate indicator: it rose to 51.0 in September from 50.3 in August

  + PMI non-manufacturing (services) index = 58.0 in December 2018; January = 56.7; February = 59.7, which was contrary survey evidence to the “slowing growth” story; March = 56.1; April = 55.5; May = 56.9 business activity, orders and employment increased from April); June = 55.1 (new orders and employment softened); July = 53.7; (employment increased but new orders and business activity decreased); August = 56.4 (stronger than expected – improvement in activity and orders, but decline in employment); September = 52.6 (weaker than expected – activity, new orders and employment decreased)

  + NFIB optimism index = 104.4 in December; January = 101.2; February = 101.7; March = 101.8; April = 103.5; May = 105.0; June = 103.3; July = 104.7; August = 103.1; September 101.8

  + GS analyst index = 61.3 in December; January = 67.9; February = 59.0; March = 53.2; April = 53.5; May = 49.2 (contraction, but equates to trend growth and a composite manufacturing and non-manufacturing PMIs of approximately 53 – extreme weakness in new orders and shipments in May and June); June = 50.3; July = 50.8
(new orders continued to be depressed but shipments rebounded; materials prices weakened for the first time in 2019); August = 48.2 (sales, orders and employment declined); September = 38.5 (sales and orders well below 50, but wages/labor costs significantly above 50, indicating downward pressure on profits)

✓ Manufacturers “very” or “somewhat” positive about their company’s outlook: 2018 Q4 = 88.7%; 2019 Q1 = 89.5%; Q2 = 79.8%; Q3 = 67.9%

+ Duke CFO Optimism Index: 2018 Q4 = 66.4; 2019 Q1 = 64.6; 2019 Q2 = 65.7; Q3 = 62.6 (50 dividing line between expansion and contraction)

✓ 64% of industrial companies reported in mid-July that inventories were “too high” or “a little too high” compared to only 7% that indicated that inventories were “too low”: the gap of 57% is a record high and implies that a major liquidation of inventories will occur in coming months and this will depress economic activity in Q3 and perhaps Q4

• Industrial production will increase in 2019 but at a slower rate than in 2018.
  ✓ The industrial production index was 110.6 in December 2018, up 4.0% over December 2017; January = 110.1, up 3.8%; February = 109.6, up 3.4%; March = 109.7, up 2.9%; April = 109.0, up 1.9%; May = 109.2, up 1.6%; June = 109.4, up 1.2%; July = 109.2, up 1.1%; August = 109.9, up 0.7%

• Capacity utilization will be stable to slightly higher, but will remain below 80%, which is traditionally considered to be a capacity level that stimulates investment spending.
  ✓ Capacity utilization = 79.5% in December 2018; January = 79.0%; February = 78.5; March = 78.4%; April, May and June = 77.8%; June = 77.9%; July = 77.5%; August = 77.9%

• Business investment inflation-adjusted spending growth should decrease as U.S. economic growth slows; growth in 2019 is expected to be in a range of 3.0% to 3.5% (the average for the past 20 years = 3.24%).
  ✓ 2018 = 6.36%
  - 2019 first half annual rate = 1.67%
  ✓ GS original 2019 forecast = 3.3%; revised = 2.4%; (forecast update reduced because of expected impacts of the trade war with China); (GS’s capital expenditures tracker has eased from nearly 10% to less than 3% in the past year)
  ✓ B of A original 2019 forecast = 3.5%; revised = 2.5%
Evercore ISI capital goods index was 64.3 in December (acceleration above 50; deceleration below 50); January = 62.4; February = 60.9; March = 60.3; April = 59.9; May = 57.6; June = 55.3; July = 54.4; August = 51.9; September = 48.5 (contraction in September); October 4th = 48.5

NFIB net percentage planning to increase capital spending in next three to six months: December 2018 = 25%; January = 25%; February, March and April = 27%; May = 30%; June = 26%; July = 28%; August = 28%; September = 27%

NFIB percentage reporting making capital outlays in the past six months: December 2018 = 61%; January = 60%; February = 58%; March = 60%; April = 58%; May = 64%; June = 54%; July = 57%; August = 59%; September = 57%

Favorable tax changes have had limited impact on business investment spending; expectations for economic growth are the principal driver and falling sales expectations are leading to lower business investment spending

Oil and gas rig count in the U.S. has been declining gradually during 2019, reflecting slowing growth in demand; softening in oil prices
Real Private Investment (Residential and Nonresidential) Growth Rate Forecasts

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*Average 1999-2019

**Real private investment = 2.24% for 1999-2019

- **Business credit** growth should continue to expand near levels experienced in 2018, but credit spreads should widen.
  - Federal Reserve Senior Loan Officer Opinion Survey: underwriting standards for business loans for large and medium-sized companies were unchanged in 2019 Q2 and demand was unchanged; underwriting standards for business loans were eased for smaller firms and demand weakened; underwriting standards tightened on commercial real estate loans – demand was unchanged for commercial real estate and multi-family loans but weakened for construction and development loans
  + BAA and high yield bond credit spreads blew out during December’s severe market correction; by early June spreads had tightened but not to the level preceding December’s blow out; spreads have trended sideways in July-September

- **Residential housing investment** should decline in 2019 in a range of 0% to -3%; housing starts should grow in a range of -6.5% to +3.0%.
  ✓ 2018 residential housing investment = -1.47%
Housing investment declined at an annual rate of -2.0% in the first half of 2019

- GS 2019 original housing investment forecast = -2.1%; revised = -1.9% with improvement in the second half of 2019 to an annual growth rate of 6.0% by Q4 due to lower interest rates and demographic trends favoring increased home ownership
- B of A 2019 original housing investment forecast = -1.3%; revised = 0.1%

- 2018 housing starts = 3.4% (single family = 2.4%; multi-family = 5.6%)
- GS housing starts 2019 original forecast = -0.7%; revised = 2.7%
- B of A housing starts 2019 original forecast = 2.9%; revised = 0.1%
- Bill’s BASE housing starts 2019 original scenario = -6.4%; revised = -1.8%

- 12-month moving average change in housing starts: August = -2.4%

- The NAHB December 2018 housing index = 56 (value greater than 50 means is favorable); January = 58; February and March = 62; April = 63; May = 66; June = 64, July = 65, signaling stabilization in housing after a rough 2018 Q4; August = 67; September = 68

- Evercore ISI’s homebuilder index = 50.3 in December; January = 49.9, February = 52.1; March = 53.6; April = 55.9; May = 56.1; June = 54.9; July = 53.1; August = 55.7; September = 54.8; October 11th = 55.9 (50 is the dividing line between expansion and contraction)

- Existing home sales peaked in November 2017, but higher interest rates and higher housing prices depressed affordability and caused sales to decline during 2018 (most adversely affected were investor, vacation and second homes); sales fell further in January, but rebounded strongly in February, declined in March and April, rose in May, declined in June; rose in July and August; over the past 12 months sales of existing homes have risen 2.6%

- New home sales were unchanged in 2018 from 2017; annual rate of change (12-month moving average): January = -1.6%; February = -2.7%, March =-2.9%, April = -3.1%; May = -4.3%; June = -2.9%; July = -2.8%; August = -1.8%

- Household formation decelerated in 2019 Q to 2.20 million from 2.31 million in 2019 Q1, but remains well above the long-term average of 1.18 million; 2018 Q4 = 2.02 million

- The home ownership rate bottomed at 63.1% in 2016 Q2 and has risen slightly since then: 2018 Q4 = 64.6%; 2019 Q1 = 64.3%; 2019 Q2 = 64.2 %
43% of real estate builders reported in mid-July that inventories were a “little too high” compared to 29% that indicated inventories were a “little too low”: this gap of 14%, while not extremely large, will be a head wind to real estate investment in coming months.

- **Residential housing prices** should rise more slowly in 2019 in a range of 2% to 4%.
  - S&P Core Logic Case Shiller national housing price index 2018 = 4.8%; 20-city index = 4.6%
  - S&P Core Logic Case Shiller national housing price index peaked at 6.5% in March 2018 and has trended down since then: January = 4.5%; February = 4.4%; March and April = 4.5%; May = 4.4%; June = 4.0%; July = 3.6%
  - S&P Core Logic Case Shiller 20-city housing price index peaked at 6.6% in March 2018 and has trended down since then: January = 4.2%; February = 3.6%; March = 3.1%; April = 2.8%; May = 2.6%; June = 2.4%; July = 2.2%
  - FHFA housing purchase-only price index 2018 = 6.6%; January = 6.5%; February = 6.1%; March = 5.8%; April and May = 5.6%; June = 5.5%; July = 5.2%
  - GS 2019 housing price original 2019 forecast = 3.1%; revised = 3.2%
  - B of A 2019 original housing price 2019 forecast = 3.2%; revised 2019 = 3.3%

*Cumulative Real Housing Price Appreciation Relative to Long-Term Trend (1975-2019)*
Bill’s BASE scenario 2019 housing price forecast original = 2.2%; revised = 2.2%

- **Trade deficit** should rise in 2019 in a range of 3.0% to 3.5%.
  - December 2018 trade deficit = 3.05%
  - January = 3.02%; February = 3.01%; March = 3.03%; April = 3.02%; May = 3.07%; June = 3.11%; July and August = 3.09%
  - Annual growth rates in both goods imports (9.7%) and exports (9.2%) peaked in October 2018; annual growth in imports slowed to 2.5%, in August and growth in exports slowed to 1.1%, reflecting the impact of tariffs on prices; further declines in growth of goods imports and exports are expected
  - In ISM’s semi-annual survey, released in May, 59% of manufacturers reported that tariffs have led to increases in the prices of goods produced and one-third indicated that tariffs have resulted in disruptions of supply chains
  - President Trump announced on October 11th that the U.S. and China had agreed to phase 1 of a trade deal and indicated that increases in tariff scheduled to take effect on October 15th would be deferred; details supposedly will be worked out in time for President Trump’s meeting with President Xi at the G20 summit on November 20th; China did not agree that there is a deal but commented that progress is being made; analysts are generally dubious that much real progress has been made

- The **dollar’s value** on a trade-weighted basis should be stable to slightly stronger as U.S. economic growth exceeds global growth, in a range of 0.0 to 3.0%.
  - 2018 dollar change = 3.7%
  - 12-month change: January = 5.5%; February = 6.6%; March = 6.5%; April = 6.8%; May = 4.4%; June = 2.1%; July = 1.8%; August = 2.0%; September = 3.0%; YTD change = 0.7%; (some analysts argue that the dollar is 10 to 15% overvalued)

- **Oil prices** are likely to remain in the long-term range of $40 to $55 that balances global supply and demand because weaker global growth and abundant and flexible supply in the U.S. which will continue to constrain prices.
  - West Texas Intermediate oil prices averaged $49.52 per barrel in December 2018
WTI: January = $51; February = $55; March = $58; April = $64; May = $61; June = $55; July = $58; August = $55; September = $57 (prices jumped to $62 after the attack on Saudi Arabia’s oil facilities, but by the end of the month fell back to $54); early October = $53; average YTD = $56.93

- As 2019 progresses, slowing global growth is reducing oil demand and contributing to softening oil prices
- OPEC approved a 9-month extension in July until March 2020 of a reduction in supply of 1.2 million barrels per day; without this reduction, oil prices would be much lower and within the original forecast range
- September’s China-Iran oil deal at discounted prices will eventually contribute to lower oil prices because it will enable Iran to increase production and permit China to reduce purchases in the open market
- The attack on Saudi Arabia’s oil facilities temporarily reduced daily production by 5.7 million barrels; world oil prices temporarily jumped more than 10%

- Monetary policy: the Federal Reserve might raise the federal funds rate twice during 2019 in 25 basis point increments or it might decrease rates once.

- FOMC – 2 increases; Revised FOMC – 2 decreases; January FOMC meeting changed policy to neutral – data dependent, March meeting dot plot indicated no increases in 2019 and only one increase in 2021; June meeting indicated 1 decrease in 2019 and 1 increase in 2021; July FOMC meeting implemented a 25 basis point cut; September FOMC meeting implemented a second 25 basis point cut, which was opposed by 2 members (two other members wanted to cut rates 50 basis points); members were split between no further cuts in 2019 and one more cut; (the market expects the FOMC to cut rates again in October and possibly also in December)

- FOMC minutes for the September 17-18 meeting noted that downside risks had risen somewhat, inflation remained below the 2% target, and policy remained data dependent, implying an easing bias; there was also discussion about illiquidity in the repo market with the observation that any increase in the purchase of securities that might occur should not be considered to be re-implementation of a QE policy

- Market forward yield curve – 2.5 decreases in 2019 (two have occurred already) and 2.5 additional cuts in 2020 and 2021
Original GS – pause early in the year followed by 2 increases; revised GS – 3 decreases in 2019 (July, September and October); (GS believes these reductions will be temporary and will be followed by 4 rate increases in 2020 and 2021)

Original B of A – 2 increases in Q1 and Q2; revised B of A – 4 decreases in 2019 (July, September, October and December) and 1 increase in 2021

My econometric model projects 1 increase during 2019, which would actually be 3 increases during the remainder of 2019 since the FOMC cuts rates in July and again in September – this will not happen; my model indicates, based on historical relationships, what the federal funds rate would be given the current strength of employment and economic activity; the model does not include the effects of deteriorating global economic conditions, the trade war or the accumulating negative impact of global monetary policies on interest rates; notably, in the long run, my model’s interest-rate projections agree with those of the market

Number of Federal Funds Rate Changes of 25 Basis Points

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*FOMC, B of A, GS and CBO rates are equilibrium estimates

#Bill’s estimates are forecasts which peak above the projected equilibrium rate
Fed Beige Book – the September 4th report covered the period from July 9th to August 23rd; growth continued at a “modest” pace with little change in momentum from the previous report, although there was a net downgrade of 1 (2 downgrades and 1 upgrade) of the 12 districts; manufacturing was mixed and decreased slightly on net, job growth was modest, consumer spending was modestly positive, prices rose modestly overall, wage growth was modest to moderate – no change from the previous report – but with strong upward pressure on entry-level and low-skill wages; (Fed nomenclature for describing economic activity: flat, slight, modest, moderate, strong, in ascending order)

The FOMC reduced the federal funds rate by 25 basis points to a range of 2.00 – 2.25% at its July 31st meeting (2 members were opposed to the cut and dissented) and characterized the cut as insurance against downside risks; weakening global growth, a slowdown in U.S. manufacturing, trade policy, and inflation stuck below the 2% target (“the domestic inflation shortfall has continued”; “global disinflationary pressures persist”) were cited as reasons for the rate cut; the policy statement left some ambiguity about the FOMC’s view about additional rate cuts (statement language was watered down from “closely monitor” developments to “continue to monitor”); the FOMC cut rates in September to a range of 1.75 – 2.00% and are expected to deliver a third rate cut in October
The FOMC terminated balance sheet shrinkage at the beginning of August and announced on October 11th its intention to purchase Treasury bills monthly for at least the next six months to raise the level of bank reserves; initially the monthly amount will be $60 billion, but that could change; this action follows an acute liquidity squeeze in the repo market that began in mid-September; the Fed indicated it would continue “temporary” open market operations to support the repo market through January.

- **Total inflation** measures (CPI and CPE) will rise in 2019 as the impacts of the 2018 rise in energy prices fall out of the indices: total CPI will rise 1.6% to 1.8% and total CPE will rise 1.7% to 1.9%.
  + December 2018 total CPI = 1.95%; January = 1.52%; February = 1.50%; March = 1.86%; April = 2.00%; May = 1.80%; June = 1.66%; July = 1.81% (a little stronger than expected); August = 1.76%; September = 1.72%
  - December 2018 total CPE = 1.78%; January = 1.41%; February = 1.31%; March = 1.40%; April = 1.52%; May = 1.38% (weaker than expected); June = 1.36%; July = 1.44%; August = 1.44%
  + GS total 2019 original forecast = 1.6%; revised = 1.8%
  ✓ B of A total 2019 original CPI forecast = 1.5% (average for year), revised = 1.8%; total original PCE forecast = 1.6%; revised = 1.5%
  ✓ FOMC total 2019 original PCE forecast = 1.8% to 2.1%; revised = 1.5% to 1.6%
  ✓ Market expected long-term CPI inflation rate, embedded in TIPS (Treasury Inflation Protected Securities) = 2.02% (approximately 1.72% CPE) in December 2018; October 11th = 1.78% (CPE equivalent = 1.48%)
  ✓ Consumer long-term expected CPI (University of Michigan Survey): December 2018 = 2.6%; January = 2.6%; February = 2.3%; March = 2.5%; April = 2.3%; May = 2.6%; June = 2.3%; July = 2.5%; August = 2.6%; September = 2.4%; October = 2.2% (this survey consistently reports higher inflation expectations than TIPS, so what is important to watch is directional changes in consumer expectations)
  ✓ GS’s commodity price index was down -16.2% in September from a year earlier, which indicates deflation pressures.
• **Core inflation** (CPI and CPE) will rise slightly from 2018’s level in response to an economy operating above full capacity: core CPI will rise 2.2% to 2.4% and core CPE will rise 1.9% to 2.1%.

  ✓ December core CPI = 2.21%; January = 2.15%; February = 2.08%; March = 2.04%; April = 2.07%; May = 2.00% (core CPI is weaker than expected but should return to the forecast range by the end of the year); June = 2.13%; July = 2.21%; August = 2.39%; September 2.36%

  ✓ December core CPE = 1.97%; January = 1.77%; February = 1.62%; March = 1.48%; April = 1.57%; May = 1.48%; June = 1.61%; July = 1.66%; August = 1.77%

  ✓ GS original core 2019 CPI forecast = 2.3%, **revised** = 2.2%; original core PCE = 2.0%; revised core PCE = 1.7%; (GS’s core CPE tracker has risen to nearly 2.0%, implying prevalence of upside pressures on inflation, including the impact of tariffs on imported goods)

  ✓ B of A core 2019 CPI original forecast = 2.2%, **revised** = 2.4%; core PCE original = 2.0%, **revised** = 1.8%

  ✓ FOMC core 2019 PCE original forecast = 2.0% to 2.1%; **revised** = 1.7% to 1.8%
### Core PCE Inflation Forecasts

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#### Bill’s Scenarios

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### Core CPI Inflation Forecasts

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*CPI is total index; over the past 20 years core CPI has averaged 30 basis points higher than core CPE.

- The 10-year Treasury rate is likely to remain relatively stable during 2019 and fluctuate during the year in a range between 2.00% and 3.00%. Strong real GDP and employment growth would push the rate toward the top end of the range; soft inflation and/or heightened financial instability would push the rate toward the bottom end of the range.
- The 10-year Treasury Note yield was 2.69% on the last trading day of 2018.
- The 10-year Treasury Note yield was 1.76% on October 11th, after dipping to 1.47% on August 29th.
- The Treasury yield curve inverted slightly from March 22nd to March 28th; research indicates that the spread between the yields on the 3-month Treasury bill and the 10-year Treasury note is the most reliable indicator of impending recession when it turns negative – yield curve inversions have preceded every recession by...
approximately 12 months, but not every yield curve inversion has been followed by recession; however, as optimism rose about stronger U.S. growth, this spread turned modestly positive, averaging +9 basis points between March 29th and May 10th, but inverted again on May 13th, as markets reacted to the failure of U.S. – China trade negotiations and both countries lifted tariffs substantially, and has remained inverted until October 10th, averaging -18 basis points, widening to over -35 basis points in August; on October 11th the yield curve return to a modest positive slope of +8 basis points in response to investor optimism about the possibility of U.S.-China mini trade deal, favorable developments in Brexit negotiations, the Fed’s commitment to increase substantially the amount of reserves in the banking system, and the expectation that global central banks, including the Federal Reserve, will continue to ease monetary policy in coming months.

**State and local investment spending** growth will be modest within a real growth rate of 1.0% to 1.5%.
- State and local investment spending rose 1.0% in 2018
- **Original GS 2019 forecast = 1.4%; revised forecast = 1.5%**
- State and local investment spending grew at an annual rate of 3.0% in the first half of 2019
- State and local tax receipts stopped growing in January, but increased slightly in February and more strongly in March and April,
then revenue growth slowed slightly in May: Evercore ISI diffusion index: December = 57.2; January = 50.0; February = 51.6 – softening driven primarily by declines in estimated income tax payments and weakening sales tax revenues; 25% of states reported increases in revenue and 19% reported decreases in February; March = 54.5; April = 63.1 (sharp improvement driven primarily by increases in estimated personal income taxes, stemming from changes in the Tax Cuts and Jobs Act and strong financial market performance); May = 61.7 (personal income tax receipts softened and sales tax revenues strengthened); June = 59.5 (sales tax revenues weakened, particularly in states won by President Trump in the 2016 election); July = 56.2; August = 55.0; September = 54.6

Federal and State and Local Investment Spending Growth Rates

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<td>1.82</td>
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*1999-2019 annual average growth rate = 1.54%

- The federal budget deficit as a percentage of nominal GDP will increase from fiscal year 2018’s level of 3.83% to a range of 4.5% to 5.0%. Stronger than expected growth would push the deficit toward the lower end of the range.
  - CBO fiscal 2019 deficit: original = 4.62%; revised = 4.47%
  - GS fiscal 2019 deficit original forecast = 4.72%; revised = 4.41%
  - B of A fiscal 2019 deficit: original = 4.69%; revised = 4.46%
  - Bill’s BASE scenario fiscal 2019 deficit: original = 4.73%; revised = 4.46%
  - 12-month deficit-to-GDP ratio: January = 4.39%; February = 4.48%; March = 4.18%; April = 4.40%; May = 4.69%; June = 4.37%; July = 4.53%; August = 4.47%; September (final for fiscal 2019) = 4.64%
Federal investment spending rose 2.9% in 2018; GS 2019 original forecast = 3.0%, revised = 3.4%; 2018 increase and expected 2019 increase boosted significantly by Tax Cuts and Jobs Act of 2017 and lifting of congressional spending caps in 2018; after 2020, annual increases are expected to decrease substantially.
Federal investment spending grew at an annual rate of 5.2% in the first half of 2019, but is expected to slow during the remainder of the year as the benefits of the Tax Cuts and Jobs Act wane. President Trump submitted to Congress in March a fiscal 2020 budget proposal for $4.75 trillion, which Congress ignored. In late July Congress passed legislation which lifted spending caps for fiscal years 2020 and 2021, resulting in a 3.8% increase in discretionary spending is fiscal 2020 which was higher than CBO’s assumption of 2.5%; the legislation also suspended the federal debt ceiling until July 31, 2021, which will push the actual effective debt of the debt ceiling until after the 2020 presidential election, assuming no recession occurs in the next few months. Congress passed a continuing resolution to fund fiscal year 2020 through November 21, 2019; either another continuing resolution will be required then, or appropriation bills will need to be passed to avoid the possibility of a government shutdown after November 21st.
2. **Rest of the World: September Assessment**: Global economic activity, which peaked in mid-2018, continues to slow in early 2019 ("+" indicates growth above potential or improving trend; "-" indicates growth below potential or worsening trend). The OECD global leading indicator index continued to decline at the end of 2018, driven by Europe, the U.S., and particularly China.

- OECD global leading economic activity indicator peaked at 101.17 in November 2017 and has declined steadily since then:
  
  December 2018 = 99.85; January = 99.72; February = 99.61; March = 99.49; April = 99.38; May = 99.27; June = 99.16; July = 99.06; August = 98.96 (lowest level since March 2013)

- GS’s global current activity indicator (CAI, which is a proxy for real GDP growth) was 3.1% in December 2018, below the potential growth rate of 3.5% and the expected 2019 global growth rate of 3.5% to 3.7%

- Global January CAI = 3.1%; February = 3.2%; March = 3.3%; April = 2.9%; May = 2.9%; June = 2.4%; July = 2.6%; August 2.7%; September = 2.8%

- CAI for major advanced economies was 1.7% in December 2018, and was decelerating, but still above the potential growth rate of 1.4%

  - January major advanced economies CAI = 1.2%; February and March = 1.4%; April = 1.5%; May = 1.1%; June = 0.7%; July-September = 0.9%

- CAI for emerging markets (which includes China) was 4.2% in December 2018, and was decelerating and below the potential growth rate of 5.1%

  - January emerging markets CAI = 4.4%, February = 4.7%; March = 4.8%; April = 4.0%; May = 4.3%; June = 4.1%; August = 3.9%; September = 4.1%

- Economic activity slowed in Europe during Q1 to 1.8% and slowed further in Q2 to 0.8%, and is forecast to decline to 0.7% in Q3

- JP Morgan Global Manufacturing PMI decelerating – peak: December 2017 = 54.4; January = 50.8; February and March 2019 = 50.6; April = 50.4; May = 49.8; June = 49.4 (contraction – declining new orders, exports and employment); July = 49.3 (lowest since October 2012); August = 49.5; September 49.7

  - The mood at the Davos World Economic Forum in late January was “subdued, cautious and apprehensive; Fareed Zakaria commented: “There is no great global political crisis, yet people speak in worried
tones about the state of democracy, open societies and the international order;” globalization has given way to a new era of sluggishness, or “slowbalization,” which will lead to stronger ties to regional blocs as supply chains seek sources closer to home; mounting debt in developed countries could lead to financial panic; increasing social and political division risks economic calamity; growing discomfort with corporate influence over society, particularly Big Tech; it seems unlikely that the downbeat mood has change much as the year has progressed.

✓ B of A has concluded that policy shocks (trade war, Brexit, U.S government shutdown, French yellow jackets, etc.) over the past year have depressed confidence and growth expectations and reduced capital spending, which leads to a self-fulfilling outcome of slower growth.

✓ Growth in global trade decelerated during 2018 to 1.7%, deceleration is continuing in 2019 – the WTO expect global trade to increase 1.2% in 2019, the worst outcome since a substantial decline in 2009.

- **Global growth** is likely to slow from 3.8% in 2018 to 3.5% to 3.7% in 2019. Global economic momentum decelerated in the last few months of 2018 and this should carry over into 2019. However, downside risks, such as U.S. trade policies and an emerging global monetary tightening cycle, and, of course the risks of political turmoil in Europe, the Middle East, Korea, and possibly elsewhere could contribute to even slower growth.

✓ GS 2019 global growth original forecast = 3.6%; **revised** = 3.4%

✓ B of A 2019 global growth original forecast = 3.6%; **revised** = 3.2%

(developed economies lowered from 2.0% to 1.8%; emerging economies reduced from 4.6% to 4.2%)

✓ 2019 Q2 annualized rate of global real GDP growth = 3.4%

✓ IMF 2019 global growth original forecast = 3.7%; **revised** = 3.2%

✓ JP Morgan Global Manufacturing Index: December = 51.4; January = 50.8, February and March = 50.6%; April = 50.4; May = 49.8 (contraction – declining new orders, exports and employment); June = 49.4; July = 49.3; August = 49.5; September 49.7

✓ GS estimates that the trade war will reduce global growth by 0.4% in Q3 and Q4 with lessening impacts in 2020

- **Global inflation** is expected to fall from 3.3% in 2018 to 2.8% in 2019, reflecting slowing global growth.

✓ B of A original forecast = 3.0%; **revised** = 3.1%
- **European growth** will slow to 1.4% (B of A) to 1.6% (GS) from 2018’s 1.8% pace. Tighter monetary policy and political uncertainty pose downside risk to growth.
  - B of A original forecast = 1.4%; **revised** = 1.1%
  - GS original forecast = 1.6%; **revised** = 1.0%
  - Euro area GDP annual growth rate: 2019 Q1 = 1.8%; Q2 = 0.8% and 1.2% over the past four quarters
  - GS expects second half growth to fall to 0.5% annual rate and Germany to be in recession; B of A expects second half growth to fall to 0.7%
  - Euro area CAI = 1.4% in December, and was decelerating, but well above potential growth of 1.0%
  - January Euro area CAI = 0.9%; February and March = 1.0%; April = 0.8%; May = 0.9%; June = 0.8%; August = 0.4%, below potential growth rate
  - Manufacturing activity in the Eurozone contracted during February – May with Germany experiencing a large decline in orders, exports and output; Euro area manufacturing index: February = 49.3; March = 47.5; April = 47.9; May = 47.7; June = 47.6; July = 46.5; August = 47.0; September = 45.7 (recession level and weakest since October 2012)
  - While the manufacturing sector is in recession, services are holding up; services index: February = 52.8; March = 52.7; August = 53.5; September = 52.0
  - Industrial production fell -0.4% in July and was -2.0% below July 2018
  - Retail spending remains relatively strong, rising 2.1% since July 2018
  - IMF and OECD Euro area original real GDP growth forecasts for 2019 = 1.9%; IMF revised = 1.3%; EC’s revised 2019 GDP forecast = 1.3%
  - Europe’s strict limits on government deficit spending may give way to fiscal stimulus if the economy continues to weaken
  - Italy’s GDP declined in both Q3 and Q4 2018, qualifying for a technical recession;
  - industrial production declined 5.4% during 2018 with most of the decline concentrated in the production of consumer goods%; industrial production rose 1.0% QoQ in Q1, but fell 1.0% in March and 0.7% in April
  - January CAI = -0.8%; February = -0.9%; March = -0.4%; April = -0.3%; May = 0.0%; June = -0.7%;
- **GS original** 2019 GDP forecast = -0.3% GDP; B of A **original** 2019 forecast = 0.2%, **revised** = 0.1%; IMF **revised** 2019 forecast = 0.1%
- manufacturing PMI is contracting – April = 49.1, May = 49.7; services PMI is weakening – April = 50.4, May = 50.0
- **Germany’s GDP:** 2018 Q3 = -0.2%, 2018 Q4 = 0.0%, 2019 Q1 = 1.6%
  - January CAI = 0.6%; February = 1.0%; March = 0.4%; April = 0.1%; May and June = -0.1%
  - B of A 2019 GDP **original** forecast = 1.0%, **revised** = 0.6%; GS = 0.7%; IMF **original** = 0.8%, **revised** = 0.7%
- Germany’s manufacturing index plummeted to a recession level of 44.7 in March and 44.5 in April and continued to contract in May, June and July; August = 43.5; September = 41.4 (worst level since June 2009)
- **France’s manufacturing index:** February = 51.5, March = 49.8, August = 51.1, September = 50.3; services index: February = 50.2, March = 48.7;
  + B of A 2019 GDP **original** forecast = 1.1%, **revised** = 1.2%; IMF **revised** forecast = 1.3%; preliminary evidence indicates that President Macron’s structural reforms may be having a beneficial impact on French economic activity
  + B of A 2019 GDP **original** forecast for **Spain** = 2.0%; **revised** = 2.2%; IMF **revised** forecast = 2.3%
- WTO authorized U.S. on October 2nd to impose $7.5 billion in retaliatory tariffs on European products; tariffs will be implemented on October 18th and include 10% on civilian aircraft and 25% on agricultural and manufacturing goods
- **European total inflation** in 2019 will decline from 1.7% in 2018 to 1.0% in 2019 (B of A), reflecting falling energy
  = 1.0%
  ✓ prices and slowing economic growth: **core inflation** will ebb slightly lower from 1.0% to 0.9%; both measures will remain considerably below the ECB’s 2.0% target.
  ✓ + **Core inflation stuck at 1.0% but risks are to the downside; May = 1.0%; July and August = 0.9%; September** B of A **original total inflation forecast = 1.0%; revised = 1.2%**
  + **Total inflation:** August = 1.0%; September = 0.85%
  ✓ **GS core inflation forecast = 0.9%; total inflation = 1.3%**
  ✓ **Long-term inflation expectations:** June 18th = 1.21%
**European financial markets** should be volatile, reflecting rising political uncertainty, tighter monetary policy and financial conditions, and slowing economic growth.

- Tracking the U.S., volatility moderated in European financial markets in Q1, rose in May, fell in June and early July and rose in late July and early August and fell in September
- Concerned about slowing EU growth, ECB eased monetary policy in early March by extending long-term liquidity facilities to banks and indicating no change in negative interest-rate policy during 2019; the market response was tepid and bank stock prices declined; the ECB liberalized and reduced the cost of liquidity loans to members and extended its no rate increase guidance to mid-2020 at its June meeting; realistically the ECB has little left in its toolkit to stimulate economic activity; the ECB at its September meeting cut interest rates more deeply into negative territory, recommenced QE and indicated it would continue as long as needed (a vocal minority opposed these actions); Draghi called upon EU governments to step up fiscal stimulus, implying that monetary policy has done about all it can to shore up the weakening EU economy
- Yields on German 10-year bunds continue to decline and were -0.65% on August 16th

**European political dysfunction, populism and nationalism** will continue to build in many countries.

- Populism and nationalism continue to grow in force gradually but centrist, pro-European Union parties continue to hold power
- French yellow jackets activism has faded, although it has not disappeared
- European Parliament elections in May benefited parties on the left and right but did not materially change EU policy
- Italy’s governing coalition of the right-wing League and anti-establishment Five Star Movement collapsed in August as the League filed a “no confidence” motion in parliament in an attempt to force new elections; however, the Five Star Movement was able to form a new government with other parties and prevent new elections in which the populist League would probably have gained; thus populism remains on the rise in Italy but has been blocked from exercising political power for the time being
According to Stratfor, European politics has entered a period of fragmentation with mainstream centrist parties losing ground to new competitors on the left and right.

In Spain, no party won a majority in the April 28th elections, but the Socialist Party improved its position by winning 123 of 350 seats in Parliament; overall election results showed growing political polarization and party fragmentation.

**U.K. growth** is expected to be relatively stable in a range of 1.2% (B of A) to 1.5% (GS and IMF) in 2019 compared to 1.2% to 1.3% in 2018; Brexit and political disarray are downside risks.

- CAI = 0.8% in December 2018 and was decelerating; potential growth = 1.3%
- CAI = 0.7% in January; February = 1.0%; March = 0.6%; April = 1.4%; May = 0.6%; June = -0.3%
- 2018 Q4 GDP growth was 0.2% (0.8% annualized), which was weaker than expected; without inventory building, growth would have been even weaker
  - B of A original 2019 GDP forecast = 1.2%; revised = 1.3%
  - GS original 2019 GDP forecast = 1.5%; revised = 1.1%
- 2019 Q1 GDP increased 2.3% annualized, but the strong performance was caused by inventory stockpiling and strong consumer spending, neither of which are likely to be sustained during the remainder of 2019; Q2 GDP growth was -0.9%; Q3 growth is expected to be 1.6%
- BOE decreased its 2019 GDP forecast from 1.7% to 1.2%; IMF’s revised 2019 forecast = 1.3%
- The EU extended the Brexit deadline from March 29th to October 31st; this extended uncertainty about the parameters of the eventual deal or no deal and the uncertainty has weighed on U.K. economic activity; Boris Johnson replaced Theresa May as Prime Minister in July which increased the odds of a “no-deal” Brexit; negotiations have been stuck over the future of Northern Ireland, but a deal may be worked out prior to the October 31st deadline (Ireland’s Prime Minister and Boris Johnson issued a joint statement on October 10th saying they could see a “pathway to a deal” to resolve the Irish problem); if not, an extension seems probable and the possibility remains that the U.K. will hold new parliamentary elections if that occurs.
China’s GDP growth is expected to slow to a range of 6.1% (B of A); 6.2% (GS) and 6.3% (OECD) in 2019 from 6.6% in 2018; risks are to the downside as China’s economy transitions from industrial to consumer emphasis, as President Xi continues to emphasize the goal of a “better quality life” over GDP growth, and as global growth slows and the U.S. pursues restrictive trade and technology policies.

- China’s official 2019 GDP growth target is a range of 6.0 to 6.5%
- IMF raised its 2019 GDP growth forecast from 6.2% to 6.3% in early April but lowered it back to 6.2% in July
- B of A 2019 GDP forecast = 6.1%; GS original forecast = 6.2%, revised = 6.1%; Q1 = 5.7%; Q2 = 6.6%; B of A expects growth to decelerate to 5.1% in Q3 and Q4; GS expects annualized growth in Q3 = 5.6% and Q4 = 5.8%
- CAI = 5.5% in December 2018 and was decelerating; potential growth = 6.1%; CAI = 5.5% in January; February = 6.0%; March = 6.7%; April = 5.8%; May = 5.9%; June = 5.6%
- 2019 Q1 YoY growth = 6.4%; Q2 YoY = 6.2%
- July and August data were weaker; industrial production slowed from 4.8% in July to 4.4% in August (weakest since February 2002); capital expenditures are also slowing (+5.5% in July), although corporate profits are expected to improve
- Caixin China General Manufacturing PMI: July = 49.9; August = 50.4; September = 51.4 (weak but improving trend)

- Housing sales remain strong and continue to provide support to economic growth, but equipment investment growth is negative and infrastructure investment growth is about 3%
- Land sales are slowing which reduces revenue to fund infrastructure development, but this source of funding is declining in importance
- Fiscal and monetary policy adjustments are intended to stabilize economic growth, not stimulate it; Premier Li Keqiang said on March 5th that the government would respond to the growth slowdown by cutting taxes, easing burdens on the private sector and giving markets a bigger role
- New fiscal stimulus – tax cuts and infrastructure investment – expected to amount to 3% of GDP ($370 billion); however, tax cuts will benefit only a small percentage of the population; the benefits of lower taxes will be offset by stricter enforcement
People’s Bank of China easing credit availability through a bond swap facility
Regulatory policy is aimed at preventing cash hoarding at state owned enterprises which has been limiting credit availability at private businesses
Credit growth has reaccelerated
Shanghai stock index rose 30% in the first quarter and was up 31% on April 17th; Shenzhen was up 41% at its peak on April 17th, reflecting improving liquidity, as credit growth reaccelerated to an annual rate of 10.6% in January, optimism about a trade deal with the U.S., and expectations that China’s growth will reaccelerate during 2019; however, since mid-April the Shenzhen stock index declined 16% as it became clear that a trade deal between the U.S. and China might not occur

- China’s leadership will continue implementing economic reforms gradually; financial and political stability will be maintained.
  - Regulation of unconventional credit products and environmental issues continues despite negative impacts on growth; monetary and fiscal policy adjustments are designed to offset these negative effects – the PBoC removed a policy reference to deleveraging in February

- Japan’s growth is expect to improve modestly from 0.7% in 2018 to a range of 0.9% (GS and IMF) to 1.1% (B of A) in 2019; total inflation is expected to fall from 1.1% (B of A) in 2018 to 0.4% in 2019 (B of A); core inflation is expected to rise from 0.4% in 2018 (GS) to 0.8% in 2018 (GS).
  + B of A original forecast = 1.1%; revised = 0.9%
  + GS original forecast = 0.9%; revised = 1.0%
  + IMF revised forecast = 0.9%
- CAI = 1.2% in December 2018, slightly above the potential growth rate of 0.9%; January CAI = 1.0%; February = 0.1%; March = -0.5%; April = 1.3%; May = 0.1%; June = -0.6%
- 2019 Q1 GDP = 2.2% and Q2 = 1.3%, stronger than expected given Japan’s exposure to China’s growth slowdown, but this may reflect in part strong growth in consumption to limit the impact of the anticipated increase in the value added tax in October; growth is expected to be negative in the second half of 2019
  + Employment was strong and nominal income increased 3.2% and part-time wages increased 2.6% during 2018, however, declining
corporate profits is contributing to smaller wage gains in 2019; consumer and small business confidence is trending lower; office vacancy rates continue to fall; capital spending rose a strong 5.7% in 2018 and growth accelerated in 2018 Q4

✓ Measures of economic activity, other than GDP, have slowed substantially so far in 2019
✓ Machine tool orders plunged 42% in June from the 2018 peak, but improved a little in September
✓ Slowing global growth is depressing manufacturing and industrial production, which fell -1.2% in August and is down -4.7 over past year
✓ Corporate profits fell 22.1% in 2018 Q3 and Q4 from the 2018 Q2 level, but have stabilized in 2019 and may improve somewhat in spite of the weak economy
✓ Manufacturing activity is declining: May = 49.8; June = 49.3; July = 49.4; August = 49.3; September = 48.9
✓ Job openings slowed substantially during 2018 and were up only 0.5% in January 2019 over January 2018 – slowing job openings have been preceded past recessions; measures of wage growth have weakened during 2019; however, employment remains very strong, rising 1.0% over the past year; the unemployment rate dipped to a 27-year of 2.2% in August
✓ Government’s August assessment: “worsening”
✓ Odds of recession starting in 2019 are increasing; GS August probability = 37%
✓ Value Added Tax was raised from 18% to 20% in October and could adversely impact consumer spending and assure recession
✓ Trade tensions between Japan and South Korea are elevated but economic consequences are uncertain
✓ 2019 inflation forecast = 0.5%; core inflation = 0.5% in June, 0.6% in July and August; total inflation was 0.5% in August
✓ Monetary policy has been on hold but the BoJ is reviewing monetary policy and may initiate easier conditions at its October meeting

- **India** should continue to experience relatively strong real GDP growth in a range of to 7.0% to 7.5% in 2019. A potential downside risk in 2019 is the defeat of Prime Minister Modi in parliamentary elections.
  ✓ CAI = 6.8% in December 2018; potential growth rate = 7.2%
  - CAI = 6.7% in January; February = 6.6%; March = 6.5%; April = 3.4%; May = 6.2%; June = 6.5%
- GS 2019 GDP forecast = 7.5%; revised = 6.0%; B of A = original 7.4%, revised = 6.2%
- Prime Minister Modi’s BJP party won a resounding Parliamentary election victory
- In response to slowing growth, Prime Minister Modi cut the corporate tax rate in September from 30% to 22%

- **Emerging market countries, including China**, should experience slower growth of 4.8% in 2019 compared to 4.9% (B of A) in 2018.
  - B of A original forecast = 4.8%; revised = 4.2%; IMF revised forecast = 4.1%
  - CAI = 4.2% in December 2018 and was decelerating; potential growth = 5.1%
  - CAI = 4.4% in January; February = 4.7%; March = 4.8%; April = 4.0%; May = 4.3%; June = 4.1%
  - The IHS Markit Emerging Markets Manufacturing Index moved into contraction territory in June = 49.9 (new orders contracted; output and exports stagnated); but momentum since then has improved: July = 50.1; August = 50.4; September = 51.0
  - CAI = 1.7 % in December 2018 compared to potential growth = 2.2%

- **Brazil** will benefit from improved political stability; Brazilian growth is expected to improve from 1.2% (GS) to 1.5% (B of A) in 2018 to 2.6% (GS) to 3.5% (B of A) in 2019
  - CAI = 3.8% in January; February = 3.9%; March = 1.1%; April = 2.6%; May = 1.2%; June = 0.1%
  - B of A original GDP forecast = 3.5%; revised = 0.7%
  - GS original GDP forecast = 2.6%; revised = 1.0%
  - IMF revised forecast = 0.8%
  - In September the central bank cut interest rates to a record low of 5.5%; financial conditions are easing, which should help prop up Brazil’s weak economy

- **Russia** will continue to grow well below potential in 2019; growth is expected to range from 1.5% (OECD) to 1.8% (GS) compared to potential growth of 3.3%.
  - GS original GDP forecast = 1.8%; revised = 1.3%
  - B of A GDP original forecast = 1.7%; revised = 1.2%
  - IMF revised forecast = 1.2%
  - CAI = 2.4% in December 2018
- CAI = 2.1% in January; February = 1.1%; March = 2.6%; April = 1.1%; May = 0.3%; June = -0.2%

- **Venezuela’s** economy continues to implode; regime change is unlikely, however, unless the military intervenes.
  + The political situation continues to deteriorate but Maduro remains in power with the support of the military, even though many nations including the U.S., do not recognize Maduro as the legitimate president; as time passes, the economy continues its plunge; oil exports have dwindled to a trickle
  + The U.S. imposed oil sanctions with the intent to expedite regime change; initially the impact of sanctions has fallen most heavily on the general populace and to date has been unsuccessful in forcing regime change

- **Saudi Arabia** needs high oil prices to balance its budget
  - Slowing global growth has depressed oil demand and weakened prices; the attack on Saudi oil facilities, which reportedly temporarily reduced oil production by 5.7 million barrels daily, had no lasting impact on global oil prices, which continue to be depressed by slowing global growth
3. **U.S. Risks** – stated in the negative relative to the forecast; “+” risk realized; “-“ risk not realized

- **U.S. real GDP growth** falls short or exceeds expectations; falling short is the more serious risk as this is likely to happen only if recession occurs.
  - **Risk realized**, Q1 GDP grew 3.1%, which was above the expected overall 2019 growth rate, but was inflated by unsustainable growth in inventories and net exports; Q2 growth of 2.0% was lower, but growth in private domestic GDP, which eliminates the effects of inventories, net exports and government, was a much stronger 2.7%; full year growth is expected to be slightly below beginning of the year lower bound of expectations; it should still be slightly above long-term potential

- **GDP positive output gap** rises less than expected or turns negative; this is likely to happen only if recession occurs.
  - **Risk not realized**, positive output gap rose from .55% to .71% in Q1 and .77% in Q2, but is on track to be within the original forecast range of .9% to 1.1%

- **U.S. productivity** falls below the bottom end of the forecast range.
  - **Risk not realized**, Q1 and Q2 productivity growth was stronger than expected, raising the likelihood that productivity in 2019 will exceed the forecast range of 1.2% to 1.4%; the revised forecast is 1.8% to 1.9%

- **U.S. employment growth** is slower or faster than expected; slower growth is the more serious risk as this is likely to happen only if recession occurs.
  - **Risk realized**, average monthly payroll employment growth and average monthly household employment growth over the first nine months of 2019 was below the forecast range; BLS indicated in August that the annual benchmarking, to be reported in February 2020, will subtract 501,000 payroll jobs over the period April to December 2018; it is likely that the downward adjustment will carry over into the 2019 payroll employment data because average monthly payroll employment is running about 16,000 monthly during 2019 above average household employment gains, which are never revised; the two different employment measures often differ, sometimes considerably, from month to month, but over time,
payroll gains are only modestly higher than household employment gains

✓ The trend of strong monthly payroll employment gains, which is above the natural rate of growth in the labor force, has been possible because the participation rate has increased bringing more people into the labor force; this trend is not likely to be sustained (the participation rate ticked down in March and April, was stable in May, and rose slightly in June, July, August and September)

- Employment participation rate falls below the bottom of the forecast range rather than remaining relatively stable or rising modestly.
  - Risk not realized, Participation was above the upper end of the projected range in January, February, August and September, reflecting re-entry of people into the labor force who had either been discouraged or disinterested; the participation rate was above the top end of the forecast range in March, August and September, but solidly within the forecast range in April, May, and June; the average YTD is near the top end of the forecast range

- U.S. unemployment rate rises above the forecast range; this is likely only if recession occurs.
  - Risk not realized, YTD the average unemployment rate is slightly above the forecast range because of the unexpected increase in the participation rate; however, the unemployment rate was within the forecast range in September

- U.S. hourly wage rate growth is lower or higher than the forecast range; lower wage growth is the more serious risk.
  - Risk not realized, wage growth has been accelerating steadily and moved above the bottom end of the forecast range in June; wage growth is expected to continue rising during the remainder of 2019 and be well within the forecast range by the end of the year

- Nominal U.S. consumer disposable income increases less or more than expected; a less than expected increase is the more serious risk.
  - Risk not realized, disposable income growth began the year well above the forecast range, but has decelerated steadily during the year and moved under the top end of the range in June
- **Nominal U.S. consumer spending** increases less or more than expected; a less than expected increase is the more serious risk.
  - **Risk not realized**, consumer spending growth began the year above the forecast range, but has decelerated steadily during the year and moved below the top end of the range in June

- **Auto sales** are considerably less than expected.
  - **Risk not realized**, auto sales were expected to decline in 2019 and through September that expectation is unfolding; the 12-month moving average rate of growth has decelerated from 2.8% in May 2018 to +0.0% in September 2019

- **Retail sales growth** is lower than expected.
  - **Risk not realized**, 12-month moving average rate of growth decelerated from 6.1% in July 2018 to 1.7% in February, but has trended up to 3.8% in August 2019, which is above the 3.1% 2018 rate of growth

- **Measures of consumer confidence** drop substantially.
  - **Risk not realized**, confidence measures have oscillated a little over the course of 2019 but are not materially different from December 2018 levels

- **Consumer saving rate** rises or falls more than expected; a higher than expected saving rate is the greater risk because that is likely only in the event of recession.
  + **Risk realized due to substantial data revisions, which raised personal income and saving**, the saving rate for the first eight months of 2019 was above the forecast range and is likely to remain so during the remainder of the year

- **U.S. stock prices** fall more than or rise more than the forecast range.
  + **Risk realized**, stock prices rose strongly in January, February and March and hit a new high at the end of April; prices weakened in May but recovered in June and hit yet another all-time high on July 3rd: prices weakened in August as investors’ worried about slowing global growth and the consequences of the escalation in the trade war with China; stock prices recovered in September and were near yet another all-time high in early October
• **U.S. business activity** contracts or expands more than expected; contraction is the more serious risk.
  ? Risk partially realized, growth in manufacturing activity has decelerated during the year and contracted in August, but growth in services remains strong

• **Industrial production** rises less than expected.
  + Risk realized, through August industrial production was slightly lower than in December

• **Capacity utilization** falls.
  + Risk realized, capacity utilization was lower in August than in December

• **U.S. private business investment** does not improve as much as or more than expected; falling short of expectations is the more serious risk.
  + Risk realized, business investment was weak in the first half of 2019; trade uncertainty and slowing global growth will probably continue to depress business investment growth during the remainder of 2019 to a level below the bottom end of the forecast range

• **Growth rates in U.S. residential housing investment and housing starts** are less than or more than expected; below expectations is the more serious risk.
  - Risk not realized, housing investment declined in the first half of 2019; housing starts also declined in the first half of 2019; both measures were within the forecast range; activity might improve during the remainder of 2019 as affordability improves in response to lower interest rates and smaller increases in home prices, but both measures are still likely to be negative for the year and within the original forecast range

• **U.S. residential housing price increases** are stronger than or less than expected; stronger than expected price growth would be an indication of price speculation, while slower than expected price growth would most likely be caused by recession or deteriorating consumer confidence.
  - Risk not realized, as expected, price increases have decelerated over the first seven months of 2019 and are within the forecast range; further deceleration is likely over the remainder of the year
• **U.S. trade deficit** does not widen as much as expected.
  - **Risk not realized**, trade deficit over the first eight months of 2019 was slightly above the bottom end of the forecast range

• **Value of the dollar** falls rather than remaining stable or rising modestly.
  - **Risk not realized**, trade-weighted value of the dollar has been relatively stable, increasing 0.7% YTD through September

• **Oil prices** rise above or fall below the expected range; prices below the forecast range is the greater concern because it would be indicative of global recession.
  + **Risk realized**, prices moved slightly above the top of the forecast range in March – July and September, but were at the top end of the range in August and early October; prices have averaged slightly above the top end of the forecast range over the first nine months of the year; slowing global growth and the China-Iran oil deal are likely to keep prices near the top end of the forecast range for the remainder of the year

• **U.S. monetary policy** tightens more than 50 basis points, spawns financial market uncertainty and contributes to global financial instability.
  + **Risk realized**, but not because the FOMC has tightened policy; slowing global growth and trade war anxieties forced the FOMC to cut rates in July and September, but the market expects one to two additional cuts during the remainder of 2019 to ward off the possibility of recession; in effect, the FOMC is “behind the curve” and monetary policy is too tight in the market’s judgment

  ✓ The market expects one more cut in the federal funds rate by the end of the year and two to three additional cuts in 2020 and 2021

  ✓ Early in 2019 there was discussion that the FOMC might revise monetary policy to assure inflation averages 2.0% over the cycle, which could result in no increases in the federal funds rate for an extended time; this is no longer an item of discussion as events have rendered this theoretical discussion moot; increasingly it looks like the FOMC will not be able to push inflation up to 2% after the likely upcoming temporary inflation boost from tariffs passes; it is possible that the FOMC may replace its 2% target with a range that brackets 2%

  ✓ FOMC ended balance sheet shrinkage at the beginning of August 2019; however, liquidity remained tight while the U.S. Treasury
replenished its cash reserves following the suspension of the binding debt ceiling in late July; a liquidity squeeze in the repo market in September forced the Fed to initiate temporary open market operations to support the repo market; on October 11th the Fed announced that it would pursue a policy of “organic” growth in bank reserves and would continue to support the repo market at least through January

- **Financial conditions** tighten and cause financial market volatility.
  - **Risk not realized**, conditions tightened slightly in July and August on concerns about weakening global growth, trade policy, an inverted yield curve and fear of recession; however, conditions eased slightly more recently and are not materially different from average financial conditions YTD

- **U.S. inflation** falls or rises more than expected.
  - **Risk realized**, core inflation measures have been weaker than expected; core CPI and CPE inflation have been well below the bottom end of the forecast range so far in 2019; both measures of inflation are expected to rise during the remainder of the year as tariffs boost inflation temporarily but might not reach the bottom end of the forecast range; of increasing concern is the collapse of inflation expectations with the yield on Treasury Inflation Protected Securities falling to 1.78% which translates to 1.48% when converted to the CPE inflation measure

- **U.S. long-term interest rates** fall or rise more than expected.
  - **Risk realized;** the yield curve was inverted from May until October 11th and the inversion worsened substantially in July and August, even though the FOMC cut the federal funds rate by 25 basis points; even though market anxieties have diminished during September and October, the yield on the 10-year Treasury Note is slightly below the lower end of the forecast range

- **U.S. fiscal policy** is less expansionary than expected due to political uncertainty and congressional paralysis.
  - **Risk not realized**, partial government shutdown had a small transitory negative impact on Q1, which was made up in Q2; according to CBO’s updated projections, government spending will be somewhat lower in fiscal 2019 than originally expected, but tax
revenues will also be lower; Congress passed legislation in late July that lifted spending caps and will result in greater spending in fiscal 2020 than previously expected

- **State and local investment spending** increases less than expected; this would be indicative of slower than expected growth or recession and falling tax revenues.
  - Risk not realized, spending increased more than expected in the first half of 2019 but is likely to be within the forecast range for the entire year

- **Federal budget deficit** increases more than expected.
  - Risk not realized, tariff revenues, reduced disaster recovery expenses, lower foreign military spending were offset by lower tax revenues; the fiscal 2019 deficit was 4.64%, solidly within the forecast range (the final percentage may deviate somewhat depending upon Q3 nominal GDP)
4. **Global Risks** – stated in the negative relative to the forecast; “+” risk realized; “-” risk not realized

- **Rising pessimism**
  - 30% of business leaders expect global growth to slow in 2019 a six-fold increase from 2018
  - January and February global data supported this expectation; however growth stabilized in March; nonetheless, 2019 global growth forecasts have been reduced; March data improved slightly and hopes were high that Chinese stimulus would reverse slowing global growth; however, Chinese stimulus at best has been modest
  - The escalation in the U.S.-China trade war continues to have negative consequences for world trade and global growth
  - Global economic activity continued to slow during Q2 and Q3; GS’s CAI for many countries fell below potential; growth in the volume of global trade is expected to be 1.2% in 2019, the weakest since the Great Recession year of 2009

- **Global risks to monitor in 2019** *(Note: a majority of the global risks listed below are in the process of being realized)*
  + U.S.-China trade war – will it be resolved amicably? Negotiations failed in early May, but Presidents Trump and Xi agreed in late June to resume talks; however, talks quickly failed again and the trade war escalated in July; once again talks resumed in September and President Trump announced a phase 1 agreement on October 11th but China only said that progress was occurring; expectations for significant progress remain low; Presidents Trump and Xi will meet at the G20 meeting in November, which could serve as a platform for jointly announcing a trade deal
  + Brexit – will exit occur without a deal or the exit date be delayed? Exit date was delayed to October 31st; in the meantime, uncertainty over the outcome has contributed to substantial deceleration in the U.K. economy which contracted in Q2; Boris Johnson, known as a “hard Brexiter,” succeeded Theresa May as Prime Minister, and was expected to try to leave the EU with “No Deal;” however, Parliament blocked Johnson’s plans by passing a law requiring the prime minister to seek an extension to the negotiation deadline if a deal could not be worked out by October 31st; the North Ireland border has been a sticking point; on October 10th the Irish Prime Minister and Johnson announced that they could see a “pathway to a deal;”

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while this might portend a deal, many outcomes are still possible, including an extension of the negotiating deadline and elections for a new U.K. Parliament

☑ Japan’s consumption tax increase – will implementation be delayed or offset with fiscal stimulus? The tax was implemented as scheduled on October 1st. It was accompanied by fiscal stimulus measures aimed at moderating the negative consequences; economic activity has been deteriorating and the probability of recession is growing; the consumption tax could add to downside pressures; growth was relatively strong during the first half of 2019, but may reflect an acceleration in consumer spending in advance of the increase in the consumption tax; growth is expected to be negligible in the second half of 2019

☑ Will oil shocks occur? – six-month waivers on Iran oil exports expired in May; while the price of oil rose in early 2019, strong U.S. and Saudi production offset shortfalls in production from Iran and Venezuela and has kept a lid on prices; slowing global growth has contributed to lower oil prices by depressing demand; a military confrontation between the U.S. and Iran over the downing of a U.S. drone was averted, but the risk of a U.S.-Iran military confrontation remains; in mid-September an attack on Saudi oil facilities temporarily reduced production by 5.7 million barrels per day; prices instantly spiked by more than 10%; however, the impact dissipated quickly as global demand continued to slow and the Saudi’s were able to restore production; conflict in Libya could adversely impact global oil supplies

☑ Political turmoil – India’s parliamentary elections (May), European parliament elections (May), U.S. government shutdown potential – the U.S. government shutdown was resolved in January; India elections resulted in Prime Minister Modi’s party gaining a solid majority in parliament; EU parliamentary elections, as expected, benefited parties on the right and left at the expense of those in the political center, but not to an extent sufficient to alter the existing balance of power; Italy averted new elections that might have strengthened the position of the euroskeptic right wing League party by stitching together a new government

☑ Financial shocks that morph into political shocks – Italy tops the list, but U.S.-China trade war is also a candidate – the U.S. – China trade war has escalated and odds for a significant negotiated settlement appear to be low, notwithstanding President Trump’s phase 1
agreement announcement; tariffs will boost inflation somewhat in the U.S. in coming months and slow investment activity; U.S. financial markets expect the Fed to reduce interest rates further to offset negative trade impacts on economic growth; slowing global trade has been especially hard on Germany; China’s growth is slowing.

✓ Inability of monetary policy to respond to recession, particularly in Europe and Japan – growth in the EU is slowing more than expected and remains weak in Japan; monetary policy has been ineffective in both regions in lifting growth and inflation; the ECB announced additional monetary stimulus in September and Japan is expected to do likewise in October, but there is substantial doubt that additional monetary stimulus will have much effect.

+ Chinese policy intervention has limited impact in reversing decelerating growth with knock on adverse impacts on global growth. Data indicate that policy stimulus has had some benefit in slowing deceleration in Chinese growth; the escalation of U.S.-China tariffs on trade is a downside risk; Q2 growth in China slowed to the lower end of the forecast range and is expected to decelerate further in Q3 and Q4; significant Chinese stimulus is increasingly unlikely, but selective policy measures are likely; policy makers appear to understand that slower growth is a byproduct of the transition to a more consumer-driven economy and is a necessary outcome to assure economic and social stability in the long run; China’s current account surplus has vanished and its reserves are off $1 trillion, which have depressed China’s belt and road investment initiative in emerging markets countries.

- **Global GDP growth** slows more than expected.
  + Risk realized: the managing director of the IMF, Christine Lagarde (now president of the ECB), warned that the global economy “is growing more slowly than we had anticipated” and cited trade tensions, financial tightening, Brexit uncertainty, and slowing growth in China; “When there are too many clouds it takes just one lightening bolt to start the storm”

- **Global trade** declines as the U.S. and other countries pursue protectionist policies.
  + Risk realized: trade growth is decelerating in the U.S. and globally and this is depressing overall economic growth; however, trade
protectionism has largely been confined to U.S. initiatives and direct foreign responses to those initiatives; global trade is expected to grow 1.2% in 2019, the slowest rate since the decline in the Great Recession year of 2009

- **European growth** slows more than expected.
  + B of A expects growth to slow to 1.1% or less; GS expects growth to slow to 1.0%
  + Italy’s GDP declined in both Q3 and Q4 2018, qualifying for a technical recession, but growth rebounded in Q1; industrial production declined 5.4% during 2018; more recent data indicate stagnant economic activity
  ✓ Europe’s export-heavy economy is especially susceptible to slowing global growth and trade restrictions; recent underperformance of Germany’s economy, which is perilously close to recession, is indicative of this risk; Germany’s GDP fell -0.1% in Q2 directly as a consequence of weaker exports; the industrial sector is in deep recession, but the services sector is stable, supported by low unemployment
  + ECB eased monetary policy modestly in early March and expanded liquidity access for banks in June, but with negative interest rates, there’s little it can effectively do to stimulate economic activity; indicative of these risks, bank stock prices continue to plumb new lows; further aggressive monetary easing was implemented in September, which included a 10 basis point cut in the ECB’s interest rate to -0.5% and renewed QE with no announced end date, in an attempt to head off recession in the euro area
  ✓ The European economy would be adversely impacted if the U.S. imposes tariffs on cars and automobile parts; on October 2nd the WTO ruled that the U.S. could impose $7.5 billion in retaliatory tariffs on European goods; the U.S. will implement a 10% tariff on civilian aircraft and a 25% tariff on agricultural and manufacturing goods on October 18th

- **Europe** financial conditions tighten more than expected, financial market volatility escalates and the ECB’s monetary policy is relatively ineffectual.
  + Risk realized to a moderate extent; along with other global financial markets, financial conditions eased slightly in January and February, but volatility increased in May in sympathy with renewed volatility in U.S. financial markets but financial conditions tightened to a greater
extent in Europe than in the U.S.; following the U.S. lead, financial conditions eased again in June and July, but matters deteriorated in August, but eased again in September reflecting favorable political developments in the U.K. and Italy and additional ECB monetary policy easing

- End of ECB balance sheet expansion comes at a time when growth is decelerating; ECB announced in September that it will resume asset purchases and continue purchases as long as necessary to achieve its policy goals and lowered interest rates more deeply into negative territory

- ECB eased bank liquidity risks by extending the maturity date of the policy of providing long-term liquidity lending to banks and by liberalizing the financial terms of liquidity loans

- Negative interest rates continue to depress bank profits and are contributing to declining business lending and slowing economic activity; the ECB has little in the way of policy tools to combat slowing growth and declining inflation; negative interest rates are eroding the financial ability of insurance companies and pension funds to meet beneficiary obligations – the consequences are not yet severe, but are accumulating steadily

- **Europe** political instability and social unrest rises more than expected threatening survival of the Eurozone and the European Union.

  - **May elections for the European Parliament could exacerbate growing political fragmentation in the EU** – although parties on the left and right won seats in the May elections at the expense of centrist parties, for now the status quo remains intact

  - **Slowing economic growth will contribute to deepening political discord** – this is a risk with a long fuse, but a potential EU recession could accelerate the timing when this risk becomes consequential; brewing political crises in Italy and the U.K. have been contained for the time being

  - **Dislike for EC Brussels technocrats and economic recession could create a politically unstable climate in Italy that leads to a euro crisis and poses existential risk to the EU** – risk has not been realized, but it hasn’t gone away either and may depend upon how long the current government can stay in power

  - **Political instability in Italy increased in August after the right-wing League asked for a general election, which in effect would end its governing coalition with the anti-establishment Five Star Movement;**
Italy’s prime minister resigned on August 20th formalizing a government crisis; parties other than the League formed a new government to avoid a new election and the possible outcome, as polls indicated, that the League would benefit handsomely in a new election at the expense of other parties; the new euro-friendly government will be seeking a compromise from the European Commission to endorse a deficit budget which is not compliant with EU rules by the October 15th deadline; both will have incentive to avoid a renewed political crisis in Italy over this issue.

- **UK** political instability escalates leading to new parliamentary elections and worse than expected economic performance.
  
  - Risk not realized; but the political status quo is in turmoil; Prime Minister May failed repeatedly to get parliament to agree to an exit plan from the EU; Boris Johnson, a Brexit hardliner, replaced May as head the Conservative Party, and automatically became Prime Minister on July 23rd; Brexit deadline extended to October 31st; political fragmentation in the U.K. is an increasing threat and appears to be weighing negatively on economic activity; a no deal stance on the part of Johnson led Parliament to rebel and pass a law requiring the prime minister to seek an extension to the negotiation deadline if a deal could not be negotiated in time; the Irish Prime Minister and Johnson announced on October 10th that they had agreed on a “pathway to a deal”
  
  + Brexit party won a plurality of votes in the UK elections for the EU parliament, which could lead to repercussions in the increasingly fragile internal UK political arena; the situation remains fluid; the ousting of 21 members from the Conservative Party and the possibility of Parliamentary elections later this year could result in a realignment of traditional parties; in a new twist, the recent agreement between Johnson and the Irish Prime Minister is likely to alienate 10 Northern Ireland MPS who have supported the Conservative Party

- **China’s growth** slows more than expected.
  
  - China’s year over year growth slowed to 6.2% in Q2, but this was above China’s policy target of achieving growth in 2019 of at least 6.0%; forecasters generally expect that this objective will be met; however, the trade war and slowing global growth have increased this risk; the annualized Q3 and Q4 growth rates are expected to be
slightly under 6%, but the year over year growth rate should still meet the 6% policy objective

✓ Analysts had expected growth to strengthen in the second half of 2019 as policy intervention gained traction, which assumed policies would be effective, which is not a certainty; however, the trade war with the U.S. appears to be having an adverse impact – growth in both imports and exports has turned negative

• **China’s trade war with the U.S.** worsens and adversely impacts global growth.
  + **Risk realized:** no agreement was reached in the Spring and both countries increased tariffs and extended them to a larger basket of goods; Presidents Trump and Xi agreed to resume negotiations in June, which quickly failed, resulting in additional tariffs and retaliatory measures; in September the two countries agreed to resume talks but with a more limited agenda; on October 11th President Trump announced a phase 1 deal, but the Chinese merely stated that progress was occurring
  ✓ Chinese stock markets rose sharply in the first quarter, reflecting improved access to credit, optimism about a trade deal with the U.S., and expectations for reacceleration in growth and rose 31% by April 17th (Shanghai Composite Index); however, when the trade negotiations with the U.S. stalled and then collapsed, the stock market declined 13% by May 9th, although gains are still a positive for the year

• **China’s and U.S. global leadership confrontation** cold-war sparring could adversely affect global growth
  + **Risk realized:** China’s growth is slowing and this is adversely impacting many Asian countries and also Germany’s export dependent economy; forecasts of global growth have been reduced
  ✓ policy aims to reduce dependence on the U.S. dollar by broadening acceptance of the renminbi as a global transactions and settlement currency
  ✓ China and the U.S. are engaged in a race to dominate technology development; China is overly dependent on the U.S. dominated semiconductor market and will seek to build its own independent capability
Japan’s economic growth slows more than expected.

- Risk not realized: growth was expected to be weak and so far expectations have been realized; several negative factors bear watching: trade war and China’s growth slowdown are depressing corporate earnings, financial conditions are tight; growth has slowed sharply, although top line GDP growth has been boosted by an acceleration in consumer spending in anticipation of the October consumption tax hike; the consumption tax was raised on October 1st but was accompanied by other initiatives intended to dampen negative consequences

Emerging economies – a strong dollar leads to serious difficulties especially for countries with large amounts of dollar-denominated debt.

- Venezuela’s political crisis continues to deepen and declining oil production could negatively impact global oil prices; risk not realized because weakening global growth has reduced oil demand more than the hit to supply caused by Venezuelan sanctions
- Turkey’s economy contracted in 2018 Q3 and Q4, a rule of thumb for recession; the threat of political turmoil is rising but is unlikely to have much of a global impact; Turkey’s invasion of the Kurd-controlled area in Syria is likely to precipitate significant economic sanctions, which could have further negative consequences for an already weak Turkish economy
- GDP growth in emerging economies is below potential and had been gradually decelerating, although data for August and September indicate that matters might be stabilizing; U.S. trade policies will have both short-term and long-term negative effects; in the short-term growth will slow as trade is depressed by tariffs; in the long-term growth could be impacted significantly and adversely if corporations invest in relocating supply chains to domestic sites
- India moved in August to end Kashmir’s autonomy, which will heighten tensions with Pakistan; Prime Minister Modi cut the corporate tax rate in September from 30% to 22% in an attempt to shore up weakening economic growth
- Argentina’s financial markets crashed in early August; to date there has been no visible global consequences

Severe and, of course, unexpected natural disasters occur, which negatively impact global growth.

- Risk not realized
• Global trade war threatens global economic growth
  + U.S. – China negotiations failed in May and both countries increased tariffs; talks resumed in late June and delayed imposition of additional tariffs; however, talks quickly failed and both countries escalated retaliatory policies; talks resumed once again in September but with a more limited agenda and lower expectations for significant favorable results; President Trump announced a phase 1 deal on October 11th but Chinese negotiators simply stated that progress had occurred; it is possible that a limited deal may be reached and announced when Presidents Trump and Xi meet at the G20 meeting in November
  - The possibility that the U.S. might impose tariffs on imports of autos and auto parts, which would impact Europe, Japan and Korea in particular, remains – the Trump Administration has delayed a decision until late 2019; however, the U.S. will impose tariffs on other European imports on October 18th in response to a WTO decision
  + President Trump’s short-lived threat to impose tariffs on goods imported from Mexico was withdrawn, but could resurface later, particularly if Trump judges the threat to be beneficial to his re-election chances; this non-event, however, increased uncertainty
  + It is becoming clearer as time passes that uncertainty is as much of a negative factor on global growth as the imposition of actual tariffs

• New Risks
  ✓ Following collapse of U.S.-North Korea denuclearization summit with U.S. President Trump, North Korea has resumed intercontinental ballistic missile testing, which have duly been reported, but little attention has been paid to this intentional sabre rattling
  ✓ Potential for conflict with Iran which could disrupt global oil supplies; for a moment in time following the downing of a U.S. drone it appeared that this risk would be realized, but the threat was averted by President Trump’s decision not to retaliate; however Iran’s decision to continue development of nuclear weapons, the U.S. tightening of economic sanctions, and Iran’s seizure of oil tankers in the Persian Gulf, assures that tensions will remain high and could lead to military action
  ✓ Pro-democracy demonstrations in Hong Kong could lead to China’s intervention; if this occurred, it would probably trigger a series of events that could severely impact global growth; because the
consequences of intervention would be severe for China as well as the rest of the world, the probability of intervention is low, but the situation bears watching.

- Turkey’s invasions of Kurdish lands in Syria adds further to the complexity and risks inherent in the Middle East.