

Our Perspectives

Commentary on Economic and Regulatory Policies Affecting Financial Services Companies

The Longbrake Letter¹ Assessment of the 2018 Outlook

By Bill Longbrake
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October/November Outlook Summary: Above potential economic growth continues to be a global theme as global and world economies are finally benefiting from years of easy monetary policy. Momentum is powerful and is currently self-reinforcing. Practically all economies are growing above potential and slack has already disappeared or is disappearing rapidly. Recent global data have been a bit softer than expected, and signs are emerging that global growth has peaked and has begun to slow gradually.

In the case of the U.S., unemployment is significantly below the natural rate, but, according to the Congressional Budget Office, a small amount of slack remained in overall economic potential output at the beginning of 2018. Enormous fiscal stimulus embedded in the “Tax Cuts and Jobs Act,” disaster relief spending, and substantial increases in defense and discretionary spending caps has lifted growth substantially above potential in 2018 and this is likely to continue well into 2019. When an economy operates well above its potential, it risks overheating and that triggers upward pressures on prices and accelerates the buildup of imbalances in the economy. We are in the mature phase of the business cycle and the added stimulus will continue to propel the economy higher in coming months.

Best to enjoy the good times now because we know from history that strong economic momentum, when the economy is operating above full capacity, eventually leads to recession and correction of the imbalances that built up during the euphoric period of strong growth. Recession risks will escalate by 2020. Fiscal policy will add about 1.0 percent to growth in both 2018 and 2019, but this reverses to a 0.4% to 0.5% drag in 2020, unless Congress boosts spending. Whether recession occurs within that time frame will depend upon how rapidly and how much

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the Federal Reserve raises interest rates. But, it will also depend upon future political and market developments which are difficult to foresee from the present with any degree of certainty. The recent abrupt stock market drop is an example of how quickly sentiment can change and why forecasting recession timing is a fools errand.

Assessment of Outlook – 2018 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 2018 U.S. and global economic outlook and risks to the outlook are listed below. As events unfold during 2018, 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 “√”.

2018 is shaping up to be a very good year economically in the U.S. and better than average globally. Economic growth accelerated in all parts of the world during 2017 and momentum has carried over into 2018. In addition, the passage of the “Tax Cuts and Jobs Act” in late 2017 is providing strong fiscal stimulus in the U.S. which should carry over into 2019.

However, the U.S. economy is now operating at full capacity and will exceed full capacity in coming months. Many global economies are approaching full capacity. As time passes, strong, above trend momentum in economic activity, will result in a buildup in imbalances. Optimism and favorable feedback loops will contribute to growth momentum in 2018, and this should carry over into 2019, but this will also contribute to the buildup of larger and more worrisome imbalances as time passes. Thus, the potential consequences of risks will build during 2018. Realization of risks is not likely to occur this year. Past experience suggests that positive momentum could persist well into 2019 and possibly longer, with the consequence that the eventual and inevitable correction of large imbalances could be very painful.

Forecasting accuracy, which is always difficult, becomes much more so when the economy is strong and above the long-term sustainable trend level, which is the situation in which the U.S. economy finds itself currently. 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. The timing of onset, however, depends upon human psychology. And, when human psychology is highly positive, as it is currently, it tends to feed upon itself and sustain momentum, often for longer than seems possible.

1. U.S. – October/November Assessment: U.S. stock markets took off like a rocket blasting off in **January**. The S&P 500 set new records on 14 of 21 trading days and increased 5.6%. Prices soared on other classes of risk assets, such as a 10% increase in oil prices. Conversely, bond prices plunged; the 10-year Treasury note yield rose 32 basis points to 2.72% as investors responded to strong growth momentum and increased concern about the threat of rising inflation stemming from an overheated economy.

As **February** began, fear of an overheating economy, potential increases in inflation, but perhaps most importantly, a short squeeze on inverse volatility products, clobbered the stock market and by the end of February the S&P 500 average was up only 1.5 percent, while 10-year Treasury bond yields continued to rise to 2.87 percent.

As **March** began, fears of a bear market in stocks subsided, but volatility remained elevated. Importantly, however, confidence was not adversely affected by increased volatility. Indeed, consumer and business confidence remained ebullient and moved higher to levels reminiscent of the late 1990s during the technology boom.

During **April** and **early May**, volatility ebbed a little bit in the stock market and the 10-year Treasury rate continued its upward crawl, flirting with 3.00 percent. Q1 real GDP was weak, but stronger than expected. Forecasters remained very confident that GDP growth in 2018 would be very strong and well above potential. Inflation was a little stronger than originally expected in Q1 2018. Both the manufacturing and services purchasing managers indices turned down slightly in April, but were still at cyclically high levels.

Economic data reported in **June** were a bit firmer as the economy benefited from the full force of tax cuts and strong employment gains. Consumer spending was very strong during the second quarter after an exceptionally weak first quarter.

Economic data reported in **July, August and September** continued to be very strong and consumer and business confidence reached multi-year highs. Q2 real GDP was up 4.1%, subsequently revised to 4.2%. Employment gains continued to surpass growth in the labor force, resulting in further tightening in labor markets and the lowest unemployment rate in decades. Consumer spending was very strong during the second quarter after an exceptionally weak first quarter. However, some signs of a peak in the economic cycle began to appear. Housing price gains began to decelerate and residential construction slowed as higher

interest rates began to bite. Car sales slowed a bit and lenders reported they were tightening standards for credit cards. On the international front, currency challenges plagued Argentina, Turkey, and South Africa, but global financial markets did not flinch.

While economic momentum continues to be very strong and optimism is at a multi-decade peak, a few signs began emerging in **October** and **November** that suggest the cyclical growth peak has passed. Globally, momentum has slowed in several parts of the world, especially including Europe and China. Challenges in some emerging markets nations are growing. The U.S. stock market and along with it global stock markets, apparently spooked by a bond market sell off after hawkish comments by Fed Chair, Jerome Powell, fell sharply in early October, but began to recover in early November. The possibility of recession still appears to be many months away, unless the recent stock market correction extends into a bear market and damages confidence severely and results in extremely tight financial conditions. Such an outcome seems premature given that fiscal stimulus is still pouring into the U.S. economy. The initial selling pressure abated and the stock market settled into a lower trading range by early November, reflecting slowing revenue growth and increasing labor and materials costs, but also due to additional liquidity provided by share buybacks following reporting of third quarter earnings.

- ✓ **Several measures of the labor market indicate exceptional tightness; for the sixth consecutive month the number of jobs openings exceeded the number of unemployed workers**
- ✓ **Small businesses cited the quality of labor as the single most important concern for the 9th consecutive month**
- ✓ **Perhaps signaling that growth momentum may be at a peak, a net of 34% of small businesses said that this is a “good time to expand” in May and August, which was an all-time high in the 45-year history of the survey, the percentage slipped slightly to 33% in September**
- ✓ **The Conference Board’s index of leading indicators is up 7.0% over the past 12 months through September, which is supposed to signal continued strong economic growth; the recent decline in stock prices will negatively impact future values of this index**
- ✓ **95.1% of manufacturers felt positive in Q2 about the outlook for their companies; this was the highest level in the 20-year history of this survey – the previous all-time high of 94.6% was recorded in Q4 2017**
- ✓ **The National Federation of Independent Businesses Optimism Index set an all-time high in the 35-year history of this survey in August and**

- was only modestly lower in September; capital spending plans were the highest since 2007 in August, but retreated a little in September, and inventory investment plans were the strongest since 2005, reflecting inventory depletion because of strong orders (note – replenishment of inventories assures manufacturing will remain strong for a while, but the decline in new orders in September portends a slowdown in production in a few months)**
- ✓ The three-month moving average of the Chicago Fed National Activity Index slowed from .20 in June to .02 in July, rebounded to .27 in August, and slowed to .17 in September: a positive value of this index indicates the economy is expanding faster than the long-term trend level
 - ✓ One of B of A's recession probability models is signaling a 26% probability that a recession will occur within the next 12 months compared to 10% a year ago, but an alternative model says the probability is 10%; B of A believes the risk of a boom-bust scenario is rising
 - ✓ Consumer confidence measures are near or above previous cyclical peaks; however, the Business Roundtable index of CEO confidence has turned down – perhaps business executives are concerned that the best of times has already passed
 - ✓ Revenue growth at S&P 500 companies has slowed to a still strong 8.0% year over year rate
 - ✓ B of A expects the U.S. – China trade war to persist following U.S. mid-term elections and estimates that tariffs have already depressed U.S. stock prices by 6.3%
- **2018 real GDP Y/Y growth projections range from 2.3% to 2.8%. The FOMC's central tendency Q4/Q4 projections range from 2.2% to 2.6%. (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 upside because of federal tax cuts and spending increases, robust optimism and strong momentum in global economic activity.**
- ✓ **2018 and 2019 real GDP forecasts were revised upwards to reflect passage of the federal budget resolution, which raised spending caps for fiscal years 2018 and 2019; the revised forecast range for 2018 is 2.7% to 3.0% compared to the original forecast range of 2.3% to 2.8%**

- + Q1 2018 real GDP = 2.2%, Q2 = 4.2%; Q3 advance estimate = 3.5%, (GS “Preliminary” estimate = 3.6%, based on stronger inventory accumulation and weaker consumer spending; B of A = 3.4%)
- ✓ GS’s U.S. Current Activity Indicator (CAI) declined in March and further in April but bounced back in May; it remains above GS’s forecast real GDP growth of 2.92% for 2018 and well above GS’s long-term potential level of 1.75%: December CAI = 4.0%; January = 3.7%; February = 4.5%; March = 3.6%; April 3.1%; May = 3.6%; June = 3.8%; July = 3.8%; August = 3.6%; September = 3.7 %; October = 3.1%; preliminary November 16th = 3.0% (CAI is a proxy for real GDP growth)
- ✓ B of A’s revised 2018 forecast is 2.92% and GS’s is 2.90%; my revised “BASE” scenario forecast is 2.69% and my “Strong Growth” scenario is 2.70%
- ✓ Forecasts for real GDP growth in 2018 Q4: B of A = 2.7%, GS = 2.5%
- ✓ FOMC’s revised 2018 Q4/Q4 central tendency range is 3.0%-3.2%; the range of this projection was raised by 0.4% at the March FOMC meeting and the low end of the range was raised by an additional 0.1% at the June FOMC meeting and another 0.3% at the September FOMC meeting; the high end of the range was raised by an additional 0.2% at the September meeting
- **Real GDP output gap**, which disappeared during 2017, will become positive, which means the economy will overheat during 2018. By the end of 2018 the positive output gap should be in a range of 0.7% to 1.1 %. (CBO will revise its estimates of potential real GDP growth, probably in February 2018 and again during the summer of 2018, which will change the forecast of the end of the year output gap.)
 - ✓ CBO revised potential real GDP assumptions in April and increased its estimate of the Q4 2017 output gap to -0.72%
 - ✓ BEA revised historical GDP data, which lowered the Q4 2017 output gap to -71%
 - ✓ Based upon CBO’s estimate of potential real GDP and revised Q4 2017 real GDP, the output gap at the end of 2017 was -0.7% rather than 0.0%, which revises the original forecast range from 0.7% to 1.1% to 0.0% to 0.4%
 - + My revised 2018 forecast output gap is 0.2% to 0.3%, indicating an economy operating slightly above full capacity
 - + Q1 2018 output gap = -.49%; Q2 = -.21%; Q3 = +.08%; Q4 forecast = +.16%
- **Potential structural rate of real GDP growth** will remain well below actual real GDP growth during 2018 in a range of 1.5% to 1.7%. Long-term potential real GDP growth will edge up in coming years to between 1.7% and 1.9%.

- ✓ CBO revised its assumptions in April and increased its estimate of potential real GDP in 2017 from 1.54% to 1.65% and its 2018 estimate from 1.66% to 1.87%
- + My estimate of potential growth during 2018 has increased to 1.96%
- Productivity should rise during 2018 from approximately 1.2% in 2017 to a range of 1.3% to 1.5% as growth improves and investment increases; it will fall well short of the historical 2.1% average.
 - ✓ BEA revised historical data in July which reduced 2017 productivity: original = 1.31% Y/Y, revised = 1.13% Y/Y (original = 1.23% Q4/Q4, revised = 0.98%)
 - + 2018 productivity Y/Y: Q1 = 1.12%, Q2 = 1.15%, Q3 = 1.12%; (Q1/Q1 = 0.95%, Q2/Q2 = 1.28, Q3/Q3 = 1.27%)
 - + Current 2018 forecast is 1.3% Y/Y
- Payroll and household employment growth should slow during 2018 because employment is above its long-term natural level and 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 2018, payroll and household employment growth should average between 140,000 and 180,000 per month during 2018.
 - ✓ Payroll employment data for the past two years was benchmarked in January which raised total payroll employment by 230,000; average monthly employment increased from 186,667 to 195,333 in 2016 and from 171,250 to 182,333 in 2017
 - ✓ Employment growth has been much stronger than expected so far in 2018; employment now greatly exceeds its full employment non-inflationary level
 - Payroll employment increased an average of 212,500 monthly over the first ten months of 2018
 - Household employment increased an average of 254,100 monthly over the first ten months of 2018
 - Conference Board's difference between jobs plentiful and hard to get expanded to 32.7% (the highest ever recorded in this survey) in October compared to 32.5% in September (previous record high); 30.0% in August (previous record high); 28.0% in July; 25.1% in June; 26.5% in May; 22.9% in April, 23.8 in March, 24.7% in February, 20.9% in January, and 20.3% in December
 - Evercore ISI employee placement (average of temporary and permanent) index is very strong and has been rising (upward pressure above 50; downward pressure below 50): December = 55.4; January = 54.9; February = 57.5; March and April = 59.0; May = 60.9;

June = 61.3; July = 61.1; August = 61.8; September = 60.8; October = 62.9; November 16th = 64.9 (record high)

- **Employment participation** should remain relatively constant during 2018 in a range of 62.55% to 62.85%, as strong employment growth offsets the longer-term declining trend in participation due to demographically-embedded retirements of baby boomers.
 - ✓ December 2017 participation rate = 62.71%
 - + January 2018 participation rate = 62.74%; February soared to 63.02%; March was a still high 62.92%, which is why the unemployment rate had not fallen even though employment growth was exceptionally strong; but April fell to 62.78% and May fell farther to 62.74%, which contributed to the decline in the unemployment rate in April and May; June = 62.93% and July = 62.92%; August and September = 62.69%; October = 62.91%
- **Unemployment rate** should edge down slightly from 4.1% to between 3.5% and 3.9%.
 - + January unemployment rate = 4.1%; February = 4.1%; March = 4.1%; April = 3.9%; May = 3.8%; June = 4.0%; July = 3.9%; August = 3.9%; September and October = 3.7%
- **Hourly wage** growth, reported by BLS for all employees and non-supervisory and production workers, should edge up slightly during 2018 to a range of 2.6% to 3.0%.
 - ✓ Q4 2017 employment cost index (ECI) for wages and salaries = 2.61%
 - + 2018 ECI: Q1 = 2.74%; Q2 = 2.73%; Q3 = 2.94%
 - ✓ December 2017 12-month moving average hourly wage rate for non-supervisory and production workers was revised down from 2.35% to 2.33%
 - + 12-month moving average hourly wage rate for non-supervisory and production workers is edging up, and moved into the forecast range in September: January = 2.34%; February = 2.35%; March = 2.38%; April = 2.41%; May = 2.44%; June = 2.48%; July = 2.53%; August = 2.58%; September = 2.60%; October = 2.68%
 - ✓ December 2017 12-month moving average hourly wage rate for all employees was revised down from 2.57% to 2.54%
 - + 12-month moving average hourly wage rate for all employees is edging up and moved into the forecast range in May: January = 2.57%; February = 2.56%; March = 2.57%; April = 2.58%; May = 2.60%; June = 2.63%; July = 2.65%; August = 2.68%; September = 2.68%; October = 2.75%

- ✓ **Wage growth is expected to continue to rise gradually as upward pressure from tight labor markets overwhelms downward pressure from changes in demographic composition, i.e., retirement of Baby Boomers**
- + Evercore ISI employee pricing power (average of temporary and permanent workers) index has been very strong and rising (upward pressure above 50; downward pressure below 50): December = 64.8; January = 64.0; February = 67.2; March = 67.1; April = 66.8; May = 67.9; June = 68.1; July = 68.1; August = 68.1; September = 68.4; October = 68.3; November 16th = 68.6
- + GS's wage tracker has risen during 2018 from 2.1% in December to 2.9% in September and October; GS's wage survey tracker hit a cycle high 3.3% in August, September, and October
- ? The Atlanta Federal Reserve wage tracker declined to 2.9% in December, its lowest level in a year, but has moved up steadily during 2018: January = 3.0%; February = 2.9%; March = 3.3%; April = 3.3%; May = 3.2%; June = 3.2%; July = 3.3%; August = 3.5%; September = 3.5%; October = 3.7%
- + 18 states and 20 cities boosted the minimum wage rate at the beginning of 2018
- **Nominal consumer disposable income** growth, measured on a Y/Y basis should increase during 2018 because of strong employment growth, rising wage rates and tax cuts; growth should be in a range of 4.0% to 5.0%.
 - ✓ BEA revised historical data in July which increased substantially growth in income and saving
 - ✓ Growth in disposable income in 2017: original = 2.9%; revised = 4.4%
 - + Disposable income rose 4.9% Y/Y through September
 - **Disposable income is forecast to increase 5.2% in 2018**
- **Nominal consumer spending** growth on the Y/Y basis should remain strong during 2018 because of strong employment growth, rising wage rates, tax cuts, easier access to credit and high levels of optimism; growth should be in a range of 3.5% to 4.5%.
 - ✓ BEA revised historical data in July which slightly reduced spending
 - ✓ Growth in consumer spending in 2017: original = 4.6%; revised = 4.4%
 - **Consumer spending rose 4.9% Y/Y through September**
 - **Consumer spending is forecast to increase 5.0% in 2018**
 - + Auto sales were 17.2 million in 2017; 17.1 million annualized in January; 16.9 million in February; 17.2 million in March (boosted artificially by day count), April, May and June; 16.7 million in ;July;

- and August; 17.4 million in September (boosted by hurricane) and 17.5 million in October (B of A expects auto sales to decrease from a high of 17.5 million in 2016 to 13.0 million in 2021); the quarterly average Y/Y growth rate slide from -0.3% in December to -1.5% in October; Y/Y growth peaked in May at 2.4% and has weakened since then, falling to -1.5% in October**
- + Retail sales grew a weak 0.3% in 2018 Q1 bringing down the annual growth rate from 5.4% to 5.2% -- Q1 weakness was temporary due to delayed tax refunds; retail sales rebounded in Q2, rising 1.6%; the Y/Y growth rate rose to 5.8% in Q2; retail sales grew 0.9% in Q3, lowering the Y/Y growth rate in Q3 to 4.1%; retail sales rose 0.9% in October, raising the Y/Y growth rate to 4.4%; notwithstanding the weaker y/y Q3 growth, strong employment growth, rising wage rates, and tax cuts should result in strong retail sales growth over the next several months
 - **Consumer confidence** in 2018 should be relatively stable near the cyclically high levels experienced in 2017.
 - ✓ Reflecting tax cuts and strong stock market gains, consumer confidence has been at multi-year highs during 2018
 - Conference Board = 123.1 in December 2017; January = 124.3; February = 130.0 (18-year high); March = 127.0; April = 125.6; May = 128.8; June = 126.4; July = 127.9; August = 134.7; September 135.3; October = 137.9 (highest level since 2000)
 - University of Michigan = 95.9 in December 2017; January = 95.7; February = 99.7; March = 101.4 (14-year high); April = 98.8; May = 98.0; June = 98.2; July = 97.9; August = 96.2; September = 100.1; October = 98.6; preliminary November = 98.3
 - Bloomberg = 53.5 in December 2017; January = 54.6; February = 56.2; March = 56.8; April = 58.1 (17-year high, followed by higher highs in more recent months); May = 55.2; June = 57.6; July = 59.0; August = 58.6; September = 61.2; October = 60.1; November 10th = 60.5
 - Evercore ISI = 53.8 in December 2017 and has been relatively stable during 2018 in the vicinity of 56.0, although some slippage may be emerging: January = 54.1; February = 55.4; March = 55.8; April = 56.2; May = 56.1; June = 56.0; July = 56.1; August = 55.6; September and October = 55.8; November 16th = 55.5
 - **Consumer credit growth** will remain relatively strong during 2018; growth should match or slightly exceed what occurred in 2017.
 - Total consumer credit rose 5.1% in 2017; credit growth has slowed during 2018, driven by substantial deceleration in revolving credit

- growth; the trend in the growth rate of non-revolving credit has been flat: January = 5.1%; February = 5.0%; March = 4.8%; April = 4.7%; May, June, July and August = 4.6%; September = 4.7%**
- Revolving credit rose 5.9% in 2017; January = 5.9%; February = 5.8%; March = 5.4%; April = 5.0%; May = 4.8%; June = 4.7%; July = 4.6%; August = 4.4%; September = 4.1%; growth deceleration is inconsistent with increasing disposable income growth – the cause of this anomaly can be traced to personal income tax cuts
 - + Non-revolving credit rose 4.8% in 2017; January = 4.8%; February = 4.7%; March, April, May = 4.6%; June = 4.5%; July = 4.6%; August = 4.7%; September = 4.9%
 - ✓ Delinquency rates on auto loans have been trending higher since 2016
 - + According to the Federal Reserve's October 2018 Senior Loan Officer Survey covering Q3, credit standards for auto and credit card loans did not change; demand was unchanged
 - Credit standards for residential loans were eased during Q3, but remain at the tight end of the 2005-18 range; demand continued to weaken; FICO scores continue to drift upward, either indicating improving consumer finances or tighter lending underwriting standards
- **Household personal saving rate** will rise slightly as growth in disposable income exceeds growth in consumer spending; historically, a good portion of tax cuts has been saved initially rather than being spent; the saving rate should improve to a range of 3.50% to 4.25%.
 - ✓ BEA revised historical saving data in July which raised the saving rate substantially: 2017 original rate = 3.4%; revised rate = 6.7%
 - + At the beginning of the year the saving rate was high, but dropped during the year as growth in consumer spending accelerated: January saving rate = 7.0%; February = 7.4%; March = 7.2%; April = 6.9%; May = 6.8%; June = 6.7%; July = 6.5%; August = 6.4%; September = 6.2%; 12-month average = 6.7%
 - **Stock prices**, as measured by the S&P 500 average, should be between 10% higher or 10% lower: on the downside reflecting pressure on profits margins from rising labor costs and higher short-term interest rates and, perhaps fading speculative momentum in an overextended market; on the upside reflecting growth friendly fiscal policy; U.S. stock prices are probably overvalued as 2018 commences, but price momentum is strong and appears to be self-reinforcing for a while longer.

- + Through November 16th, S&P 500 stock prices have increased 2.3% during 2018
- ✓ 2017 Q4 annualized S&P 500 operating earnings = \$135, up 21% from 2016; 2018 Q1 earnings are up 27% from a year ago to \$146, propelled by a cut in the federal corporate income rate from 35% to 21%, which has added \$9 to \$10; 2018 Q2 annualized earnings = \$155; Q3 = \$169; forecast 2018 earnings = \$163, up 23% from 2017; 2019 forecast = \$178, up 10% from 2018
- **Business activity** will remain strong with both the PMI manufacturing and service indices averaging above 50.
 - + December manufacturing PMI = 59.3; the index has remained strong in 2018: January = 59.1; February = 60.8 (highest level since May 2004); March = 59.3; April = 57.3; May = 58.7; June = 60.2; July = 58.1; August = 61.3; September = 59.8; October = 57.7
 - + December services PMI = 56.0; this index has been very strong: January = 59.9; February = 59.5; March = 58.8; April = 56.8; May = 58.6; June = 59.1; July = 55.7; August = 58.5; September = 61.6 (highest level in current cycle); October = 60.3
 - + December NFIB optimism index = 104.9; the index has remained at a very high level during 2018 at a high level: January = 106.9; February = 107.6; March = 104.7; April = 104.8; May = 107.8; June = 107.2; July = 107.9; August 108.8 (highest ever – previous all-time high was 108.0 in 1983); September = 107.9; October = 107.4
 - + December GS analyst index = 70.0; the index was relatively stable during the first three months of 2018, fell sharply in April, but rose again to match the December level in August: January = 72.7; February 68.0; March = 70.4; April = 60.0; May = 65.3; June = 68.3; July = 61.4; August and September = 69.8; October 60.6 (still strong, but with large decreases in orders, sales and shipments)
 - + Industrial production was 105.4 in December; it has strengthened during 2018: January = 105.4; February = 105.9; March = 106.4; April = 107.7; May = 106.8; June = 107.5; July = 107.9; August = 108.8; September = 109.0; October = 109.1 (weaker than expected)
 - + Manufacturing output increased 3.5% year over year in September, the strongest rate of increase since 2012
 - Capacity utilization has edged higher during 2018 but remains below the level of 80.0%, typically considered to stimulate business investment spending: December capacity utilization = 77.3%; January = 77.0%; February = 77.2%; March = 77.5%; April = 78.2%;

- May = 77.5%; June = 77.8%; July = 78.0%; August = 78.5%;
September and October = 78.4%**
- ✓ 2018 Q3 manufacturers' survey = 92.5% somewhat or very positive about business prospects; Q2 = 95.1%, which was the highest in 20-year history of the survey; 4-quarter average = 93.9%, an exceptionally high level
 - + Auto production increased 20% Q1 2018 compared to Q4 2017, declined 14% in Q2 2018, but is forecast to rise 30% in the third quarter; production is up 12% over the past year, which is not sustainable given weak car sales
 - **Business investment** inflation-adjusted spending growth should increase because of strong demand and favorable tax incentives; growth in 2018 should be well above the long-term trend level in a range of 4.5% to 5.5%.
 - ✓ BEA revised historical business investment data in July which raised growth: 2017 original growth = 4.7%; revised growth = 5.3%
 - Business investment grew at annual rate of 6.9% during the first three quarters of 2018
 - ✓ GS 2018 business investment growth forecast original = 4.5%; revised = 6.6%
 - + GS's capital expenditures tracker accelerated sharply in 2018 to a high of 10.2% in August, but slowed in September, averaging 8.7% over Q3, and slowing to approximately 8% in October; the strength of this indicator reflects strong global growth and domestic tax cuts
 - ✓ B of A 2018 business investment growth forecast original = 6.0%; revised = 6.6%
 - ✓ Bill's combined business and residential 2018 investment growth forecast "BASE" scenario original = 5.2%, revised = 5.4%; Bill's "STRONG GROWTH" scenario original = 5.9%, revised = 5.5%
 - + Evercore ISI capital goods index (acceleration above 50; deceleration below 50) was 61.0 in December; it has gotten stronger during 2018, but might have peaked in June and July: January = 62.0; February = 64.7; March = 66.3; April = 67.9; May = 68.0; June = 67.5; July = 67.4; August = 66.3; September = 66.0; October = 66.6; November 16th = 65.1
 - + December NFIB net percentage planning to increase capital spending = 27%; plans increased during the first several months of 2018, have subsided slightly since August: January = 29%; February = 29%; March = 26%; April = 29%; May = 30%; June = 29%; July = 30%; August = 33%; September and October = 30%

- + December NFIB percentage reporting making capital outlays = 61%; actual outlays have been relatively steady during 2018: January = 61%; February = 66%; March = 58%; April = 61%; May = 62%; June = 59%; July = 58%; August = 56%; September = 60%; October = 59%
- **Business credit** growth should continue to expand near levels experienced in 2018 to expand, but credit spreads should begin to widen; the impact of new tax provisions which will reduce the attractiveness of debt financing is uncertain, but could contribute to a slight slowing in business credit growth.
 - + The October 2018 Federal Reserve Senior Loan Officer Survey, covering 2018 Q3, indicated that credit standards were easier for commercial and industrial loans; demand was weaker, compared to Q2
 - Credit standards were unchanged for commercial real estate loans, but demand weakened
 - Credit standards for commercial and industrial loans at the easier end of the 2005-18 range; but credit standards for commercial real estate loans are at the tighter end
 - Residential investment growth was -2.9% over the first three quarters of 2018
 - ✓ BEA revised historical residential investment data in July, which raised growth: 2017 original growth = 1.8%; revised growth = 3.3%
 - ✓ Original GS 2018 forecast investment growth = 4.2%; revised forecast = 0.0%
 - ✓ Original B of A 2018 forecast investment growth = 2.2%; revised = -0.1%
 - ✓ Original GS 2018 forecast housing starts growth = 4.0%; revised = 5.6%
 - ✓ Original B of A 2018 forecast housing starts growth = 5.6%; revised = 4.1%
 - ? 2017 growth in housing starts = 2.8%; starts up 6.0% over first nine months of 2018 compared to first nine months of 2017, 12-month moving average up 4.7% in September (single family up 6.0%; multi-family up 1.8%)
 - ✓ Bill's "BASE" scenario 2018 growth in housing starts: original = 3.2%; revised = 3.9%
 - ✓ Housing starts were depressed in September by Hurricane Florence
 - ✓ New home sales slowed in September to the lowest level since December 2016

- ✓ Growth in housing investment has slowed in 2018 because affordability has been adversely impacted by faster growth in home prices than in incomes and higher mortgage rates
- + Evercore ISI homebuilder index peaked in the spring and has softened since then, probably reflecting higher interest rates (expansion above 50; contraction below 50): the index was 58.0 in December; January = 58.4; February = 61.3; March = 61.9; April = 62.2; May = 62.0; June = 59.5; July = 56.8; August = 55.6; September = 55.3; October = 54.3; November 16th = 51.8
- NAHB housing index was 74 in December; it has weakened in 2018, and nosedived in November: January = 72; February = 71; March = 70; April = 68; May = 70; June = 68; July = 68; August = 67; September = 67; October = 68; November = 60 (expansion above 50)
- New household formation fell from 1.44 million in 2017 Q4 to 1.06 million in 2018 Q1, rebounded to 1.67 million in Q2, and continued to increase strongly in Q3; new household formation has averaged a relatively weak annual growth of 1.18 million over the past 20 quarters but has improved from 1.14 million in Q2
- + Homeownership is rebounding a little, rising to 64.5% in Q2 2018
- + The University of Michigan consumer survey found that a net 15.0% felt in April that this is a good time to buy a home; this is the highest percentage in several decades and reflects high levels of consumer optimism generally; however, this optimism is not passing through to new home construction or higher home sales
- Residential housing prices should rise more slowly in 2018 in a range of 3% to 5%.
 - Case-Shiller growth in national housing prices began to slow in May 2018, primarily due to higher mortgage rates: (12-month change) December = 6.3%; January = 6.3%; February, March and April = 6.5%; May = 6.4%; June = 6.2%; July = 6.0%; August = 5.5%
 - FHFA 2017 Q4 growth in national housing prices (12-month change) = 6.8%; 2018 Q1 = 6.9%; Q2 = 6.5%
 - ✓ FHFA housing price index was 11.1% above its long-term trend in Q4 2017, 12.1% above in 2018 Q1, and 12.3% above in 2018 Q2 compared to a trough of -7.8% below trend in Q1 2012
 - + B of A revised forecast for 2018 = 4.5; GS revised forecast for 2018 = 5.0%
- Trade deficit should rise more rapidly in 2018 in a range of -3.0% to -3.5%.
 - ✓ Data revisions reduced the 2017 trade deficit by approximately 0.1%

- Increasingly it looks like the trade deficit in 2018 will be near or slightly below the bottom end of the forecast range: December 2017 trade deficit = -2.79%; January = -2.78%; February = 2.84%; March - 2.85%; April = -2.80%; May = -2.78%; June = -2.78%; July = -2.78%; August = 2.82%; September = 2.87%
- The **dollar's value** on a trade-weighted basis should continue its recent moderate decline due to stronger global economic growth.
 - ✓ December major country trade-weighted dollar value = 88.75, down - 7.0% in 2017
 - + Higher U.S. interest rates and tariffs have resulted in a slightly stronger dollar as 2018 has progressed: Trade-weighted dollar declined YTD -2.7% in January; YTD -3.4% in February; YTD -2.8% in March; YTD in April -2.7%; YTD in May -0.1%; YTD 1.1% in June; YTD 1.5% in July; YTD 1.9% in August; YTD 1.4% in September; YTD 2.3% in October
- **Oil prices** are likely return to the long-term range of \$40 to \$55 that balances global supply and demand because abundant and flexible supply in the U.S. will constrain prices if global demand accelerates; however, strong global growth, OPEC production controls and speculative trading will cause oil prices to exceed this range during much of the year and perhaps for the entire year.
 - ✓ West Texas crude oil prices per barrel averaged \$58 in December 2017
 - + Oil prices averaged \$64 per barrel (January); \$62 (February); \$63 (March); \$66 (April); \$70 (May); \$67 (June); \$70 (July); \$68 (August); \$70 (September); \$70 (October); \$60 November; \$66.78 YTD through November 16th
 - Strong global demand, OPEC production controls, faltering production in Venezuela, and renewed sanctions on Iran collectively could drive oil prices well above \$70 per barrel over the remainder of the year; however, increased oil production in Russia and Saudi Arabia and slowing global growth could keep the lid prices
- **Monetary policy** – the Federal Reserve will raise the federal funds rate three to four times during 2017 in 25 basis point increments.
 - + As expected, the FOMC raised rates 25 basis points at its March, June and September meetings; the FOMC is expected to raise the federal funds rate by 25 basis points at its December meeting
 - ✓ For most of 2018 financial conditions have been favorable and stable and have not been impacted adversely by higher interest rates, thus

- moderating the impact of tighter monetary policy; however, financial conditions tightened in October, reflecting stock market volatility**
- ✓ **M2 money supply growth was 4.1% in October and has been declining**
- **Total inflation** measures (CPI and CPE) will rise early in 2018 but then move lower later in the year as the impacts of the recent rise in energy prices falls out of the indices: CPI will rise 1.8% to 2.1% and CPE will rise 1.6% to 1.9%.
 - ✓ **Total CPI rose 2.10% in 2017**
 - ✓ **Higher than expected total inflation measures in 2018 are primarily the result of unexpected increases in oil prices**
 - **Total CPI January = 2.14%; February = 2.26%; March = 2.36%; April = 2.43%; May = 2.72%; June = 2.80%; July = 2.89%; August = 2.68%; September = 2.27%; October = 2.53%; total CPI inflation is likely to slow by the end of the year to a level slightly higher than the top end of the original forecast range as the impact of the surge in energy prices several months ago fades from the annual rate of change calculation**
 - ✓ **Total CPE rose 1.81% in 2017**
 - + **Total CPE January = 1.75%; February = 1.85%; March = 2.07%; April = 2.05%; May = 2.25%; June = 2.28%; July = 2.35%; August = 2.22%; September = 1.99%; total CPE inflation is likely to slow by the end of the year to a level slightly higher than the top end of the original forecast range as the impact of the surge in energy prices several months ago fades from the annual rate of change calculation**
 - **GS total CPE original forecast for 2018 = 1.7%; revised = 2.1%**
 - **B of A total CPE original forecast for 2018 = 1.9%; revised forecast = 2.0%**
 - **Bill's original total CPE forecast "BASE" scenario = 1.9%; revised = 2.4%; Bill's original "STRONG GROWTH" scenario = 1.9%; revised = 2.4%**
 - + **The University of Michigan consumer sentiment survey indicated that Inflation expectations 5-10 years ahead rose from 2.4% in December to 2.5% in January, February, March, April and May, and 2.6% in June; 2.5% in July and August; 2.4% in September; 2.6% in October**
 - + **Market long-term inflation expectations, based on Treasury Inflation Protected Securities linked to the total CPI index = 2.16% on November 1st – CPE equivalent is approximately 1.86%; this measure has been relatively stable rising only 10 basis points since the beginning of 2018**

- **Core PCE inflation** will rise from 2017's depressed level in a range of 1.7% to 1.9%, reflecting global disinflationary trends offset somewhat by overheating U.S. economic activity and employment.
 - ✓ **Core CPI rose 1.75% in 2017**
 - ✓ **Core CPI January = 1.85%; February = 1.86%; March = 2.11%; April = 2.12%; May = 2.21%; June = 2.23%; July = 2.33%; August = 2.19%; September = 2.17%; October = 2.15%, and should be relatively stable over the remainder of the year**
 - ✓ **Core CPE rose 1.64% in 2017**
 - + **Core CPE January = 1.63%; February = 1.66%; March = 1.96%; April = 1.89%; May = 1.98%; June = 1.95%; July = 2.03%; August = 1.96%; September = 1.97%, and is expected to be within a few basis points of 2.0% by the end of the year**
 - ✓ **Original GS core CPE forecast for 2018 = 1.7%; revised = 2.1%**
 - ✓ **Original B of A core CPE forecast for 2018 = 1.9%; revised forecast for 2018 = 2.0%**
 - ✓ **Bill's original core CPE 2018 forecasts for "BASE" and "STRONG GROWTH" scenarios = 1.9%; revised core CPE forecast for "BASE" and "STRONG GROWTH" scenarios = 2.1%**
- The **10-year Treasury rate** is likely to rise somewhat during 2018 and fluctuate during the year in a range between 2.25% and 3.00%. Faster than expected real GDP and employment growth would push the rate toward the top end of the range; greater than expected declines in inflation and/or heightened financial instability would push the rate toward the bottom end of the range.
 - ✓ **The 10-year Treasury Note yield was 2.40% on the last trading day of 2017**
 - **The 10-year Treasury Note yield was up 68 basis points as of November 16th to 3.08%**
- **Federal fiscal policy** involving tax cuts and spending increases will have a positive impact on real GDP growth during 2018, raising real GDP growth by approximately 0.3%.
 - **Tax cuts and spending increases are now expected to raise the level of GDP by 0.9% to 1.0% over 2018 and 2019, with more of the increase occurring in 2019**
 - ✓ **Federal government investment grew 0.7% in 2017**
 - ? **Federal government investment grew at an annual rate of 3.2% in the first three quarters of 2018 and is expected to increase by 2.8% in 2018**

- ✓ **GS 2018 original forecast federal government investment growth = 4.1%; revised = 2.8%**
- ✓ **GS original combined federal and state and local 2018 investment growth forecast = 1.9%; revised = 1.8%**
- ✓ **B of A original combined federal and state and local 2018 investment growth forecast = 0.8%; revised = 1.7%**
- ✓ **Bill's original combined federal and state and local 2018 investment growth forecast “BASE” and “STRONG GROWTH” scenarios = 1.4%; revised = 1.7%**
- **State and local investment spending** growth will remain subdued below a growth rate of 1.0%, which will be well below the long-term trend.
 - ✓ **State and local investment shrank -0.5% in 2017**
 - **State and local investment grew at an annual rate of 2.0% in the first three quarters of 2018**
 - ✓ **GS's original 2018 forecast state and local investment growth = 0.6%; revised = 1.2%**
 - ? **Evercore ISI state tax revenues index has been rising in 2018 except for February and March (accelerating above 50; decelerating below 50): December = 56.5; January = 58.8; February = 50.3; March = 49.8; April = 59.6; May = 59.8; June = 61.3; July = 56.5; August = 60.4; September = 64.1 (highest level since mid-2007); October 60.5**
- The **deficit** as a percentage of nominal GDP will increase from fiscal year 2017's level of 3.41% to a range of 3.75% to 4.25%. Stronger than expected growth would push the deficit toward the lower end of the range. Because the full effects of the “Tax Cuts and Jobs Act” will impact only approximately half of fiscal year 2018, significant negative consequences for the size of the federal deficit will not occur until fiscal 2019.
 - ✓ **GS original fiscal 2018 forecast federal budget deficit = 3.7%; revised = 4.1%**
 - ✓ **B of A original fiscal 2018 forecast federal budget deficit = 3.9%; revised = 4.1%**
 - ✓ **Bill's original fiscal 2018 deficit forecast “BASE” and “STRONG GROWTH” scenarios = 3.6%; revised = 4.1%**
 - + **The 12-month budget deficit was 3.43% in December; January = 3.41%; February = 3.52%; March = 3.68%; April = 3.46%; May = 3.75%; June = 3.67%; July = 3.79%; August = 4.31%, but the fiscal year deficit was 3.77%, near the low end of the forecast range, partly because net revenue in September of \$119 billion was stronger than expected, but also resulted from a one-time shift in the timing of payments, which, without that change, would have resulted in a**

deficit of \$826 billion versus the actual fiscal year 2018 deficit of \$779 billion, according to CBO, which would have raised the deficit-to-GDP ratio to 4.00% in the middle of the forecast range

- ✓ **The 12- month budget deficit was 3.95% in October and is forecast to rise to 4.86% in fiscal year 2019**

2. **Rest of the World: September/October Assessment:** Global economic activity continued to be very strong in the first and second quarters of 2018, led by developed economies with strong passthrough benefits to emerging markets; growth is now slowing but remains above the full potential growth rate, nearly all global economies are growing faster than potential, which is not sustainable over the longer run. 2018 growth forecasts for most countries were raised during the first half of 2018. Recent data reports have been softer than expected in Europe and China, indicating that the global growth rate has peaked. A stronger dollar and increasing scarcity of dollar liquidity is putting stress on emerging markets.
- ✓ GS's global current activity indicator (CAI) was 5.1% December, the highest level in seven years, CAI peaked at 5.2% in both January and February, but since then has been trending down: March = 4.6%, April = 4.8%, May = 4.4%, June, July and August = 4.2%, September = 3.9%, October = 3.6%; however, all monthly readings during 2018 have exceeded potential global growth of 3.5%
 - ✓ CAI for major advanced economies accelerated from 1.5% in mid-2017 to 3.8% in December; it slipped slightly to 3.6% in January, rebounded to 3.9% in February, and fell to 3.0% in March, 2.9% in April, 3.0% in May and June, 2.9% in July, 3.0% in August, 2.8% in September, and 2.5% in October -- this is not sustainable in the long run because the potential growth rate is 1.3%, but positive feedback loops are likely to sustain momentum for the next several months
 - ✓ CAI for emerging markets accelerated from 4.3% at the beginning of 2017 to 6.2% in December and 6.7% in January; but since then has been slowing to 6.5% in February, 6.0% in March, 6.4% in April, 5.5% in May, 5.2% in June, July, and August, 4.7% in September, and 4.5% in October; September and October were below the potential growth rate of 5.1%
 - ✓ Global financial conditions have tightened since the beginning of the year and are nearly as tight now as during the early 2017 spike accompanying the China growth scare
 - ✓ Wage pressures are building in most all countries and particularly in Europe, Canada and Japan
 - ✓ The JP Morgan Global Manufacturing PMI was 54.5 in December, which was the highest level since February 2011 during the initial recovery from the Great Recession; this index edged down to 54.4 in January, 54.1 in February, 53.3 in March, 53.5 in April, and 53.1 in

May, 53.0 in June, 52.7 in July, 52.6 in August, 52.2 in September, 52.1 in October, signaling a gradual loss of momentum in global manufacturing activity

- **Global growth** is likely to improve to 3.8% in 2018 from 3.7% in 2017. This is a considerable improvement from slower growth in recent years. Global economic momentum built in the last few months of 2017 and this should carry over into 2018. However, downside risks, such as U.S. trade policies and an emerging global monetary tightening cycle, and, of course the low probability risks of significant eruption of political turmoil in the Middle East and Korea, are lurking in the background. These risks are not expected to dampen growth momentum in 2018, but prudence argues for monitoring them closely.
 - + **Global growth was in a range of 3.7% (IMF) to 3.8% (B of A) in 2017; forecasts for 2018 originally were higher: but the IMF recently lowered its original forecast of 3.9% to 3.7%, GS lowered its original forecast of 4.1% to 3.8% and B of A lowered its original forecast of 3.9% to 3.8%; OECD recently cut its 2018 global growth forecast by 0.1%**
 - ✓ **Global economic momentum built in the last few months of 2017 and this carried over into early 2018; as recent data reports indicate, global growth has peaked and a modest deceleration is underway**
- **Global inflation** is expected to rise from 2.7% in 2017 to 3.0% in 2018, reflecting strong economic growth and shrinking or closed output gaps.
 - + **Global inflation was in a range of 2.8% (B of A) to 3.1% (IMF) in 2017; the forecast for 2018 has been raised to a range of 3.2% (B of A) to 3.3% (IMF)**
- **European growth** will be positive but will slow to 1.4% (GS) to 2.0% (B of A) from 2017's stronger than expect pace. The potential for tighter monetary policy poses downside risk to growth
 - **2017 Euro area growth = 2.5% (GS), 2.5% (B of A); GS's revised 2018 forecast raised growth from 1.4% to 1.9%; B of A's revised 2018 forecast lowered growth from 2.0% to 1.9%; current ECB growth forecast for 2018 is 2.0%; current IMF forecast is 2.0%**
 - ✓ **Eurozone Y/Y growth slowed from 2.8% in Q4 2017 to 2.4% in Q1 2018 and 2.1% in Q2; further slowing appears likely during the remainder of 2018, as monetary accommodation moderates**
 - + **Euro Area CAI has slowed considerably in 2018: January = 4.1%; February = 3.7%; March = 2.9%; April = 2.6%; May and June = 2.7%;**

July = 2.5%; August and September = 2.3%; October = 1.9%; all above potential growth of 1.0%

- **European total inflation** in 2018 will remain stable at 1.5%, the same level as in 2017, but **core inflation** will rise from 0.9% to 1.1%; both measures will remain considerably below the ECB's 2.0% target.
 - **2017 total inflation = 1.5%; 2018 forecast has edged up to 1.9% (B of A) and 1.7% (ECB and IMF); total inflation = 2.2% in October**
 - + **2017 core inflation = 1.0%; 2018 forecast is 1.0% (GS and B of A); ECB's forecast = 1.1%; core inflation = 1.1% in October**
- **European financial markets** should be relatively stable, as long as economic growth remains solid; some volatility could occur depending upon the outcome of the Italian elections.
 - + **Early in 2018 volatility increased temporarily in concert with U.S. stock market volatility; volatility increased again temporarily when Italy formed a populist government; interest rates have risen somewhat, but more so for southern European members, which, if sustained, will impede the impact of the ECB's monetary policy intended to raise the inflation rate; volatility again increased in October**
 - ✓ **The ECB dropped its easing bias for monetary policy; however, QE is expected to continue through December, with tapering occurring from September to December**
 - **European stock markets have had rough going in 2018 and have underperformed the U.S. stock markets; MSCI EMU index is down 8% in 2018; the boost from faster European growth, which has peaked, has been more than offset by a stronger euro and increasing political risk following the formation of a populist government in Italy and German Chancellor Merkel's decision to retire**
 - **Italian elections resulted in populist and fringe parties gaining at the expense of centrist parties; the populist right-wing League and populist left-wing Five Star parties formed a government; this has become a major negative for financial markets because the new government is euro-skeptical and plans to cut taxes and raise spending, which will exacerbate Italy's already high public-debt-to-GDP ratio; the European Commission rejected Italy's proposed budget because it would result in deficits above EU guidelines – Italy's coalition government has refused to adjust the budget, setting the stage for a potentially messy and risky confrontation; the risk of a euro crisis in coming months has risen**

- **European political dysfunction, populism and nationalism** should remain quiescent during 2018 as long as economic growth remains relatively strong. Countries to watch closely, however, Italy and Greece.
 - **Italian parliamentary elections decimated centrist parties and led to the formation of a populist, euro-skeptic government; populists also control the Hungarian and Polish governments**
 - + **Even though centrist parties emerged from last year's German elections greatly weakened, the resulting Grand Coalition government, forged by the Christian Democrats and the Social Democratic Party, will maintain a steady policy course, which will involve a shift from fiscal austerity to modest stimulus; however, centrist parties did poorly in recent German state elections; uncertainty escalated with Chancellor Merkel's decision to retire**
- **U.K. growth** is expected to decline to 1.0% to 1.1% in 2018 compared to 1.5% to 1.7% in 2017 as the consequences of Brexit develop.
 - ✓ **2017 growth was 1.8% (B of A); 1.7% (GS)**
 - **2018 growth forecasts have been revised higher as the U.K. benefits from strong global economic growth: GS = 1.3% and B of A = 1.2%; current IMF forecast = 1.1%; potential growth = 1.3%**
 - **U.K. CAI = 1.5% in January; February = 2.0%; March = 0.8%; April = 1.4%; May = 1.8%; June = 2.0%; July = 2.1%; August = 2.0%; September = 1.6%; October = 0.8%**
 - ✓ **2017 total inflation = 2.7% (B of A); 2018 forecast = 2.5% (B of A)**
 - ✓ **2017 core inflation = 2.4% (GS); 2018 forecast = 2.1% (GS); year over year core inflation = 1.9% in September**
- **China's GDP growth** is expected to be in a range of 6.3% (GS) to 6.6% (B of A) but risks are to the downside as President Xi emphasizes the goal of a "better quality life" over GDP growth.
 - ✓ **2017 growth 6.9% (B of A and GS)**
 - + **Revised 2018 growth forecasts: GS = 6.6%; B of A remains at 6.6%, but B of A expects the trade war to reduce China's growth rate to 6.1%; potential growth = 5.9%; China's official 2018 growth target = 6.5%; current IMF forecast = 6.6%**
 - ? **Data released during 2018 have been weaker than expected, including slower growth in fixed asset investment and a decline in property sales offset by stronger growth in real estate investment; 2018 Y/Y growth was above expectations at 6.8% in Q1, 6.7% in Q2; but slowed to 6.5% in Q3, annualized Q3 growth was approximately 6.0%**

- + **China's CAI has slowed during 2018: January = 7.3%; February = 7.2%; March = 6.7%; April = 7.9%; May = 7.1%; June = 7.2%; July = 6.8%; August = 6.7%; September = 6.4%; October = 5.9%**
- ✓ **Overall, China's growth is slowing gradually, which is consistent with a maturing economy, but downside risks have increased with the trade war; Evercore ISI's index of China Sales after surging during 2017 has rolled over in recent months and fell below 50 in early November**
- ✓ **China's stock market has fallen sharply in response to concerns about the impact of America tariffs on growth, reaching a four-year low in September**
- **China's leadership** will continue implementing **economic reforms** gradually; financial and political stability will be maintained.
 - + **Financial market regulation has curtailed growth in risky wealth management products; the short-term negative consequences for slower credit and economic growth have been offset partially through easier monetary policy**
 - + **Political stability has been assured by the elimination of presidential term limits and President Xi's reorganization of government ministries to expedite implementation of his policy agenda for environmental protection, financial risk control, and poverty alleviation**
- **Japan's** economic policies will continue to fall short of achieving the 2.0% inflation target; total inflation is expected to rise from 0.5% in 2017 to 1.0% in 2018; core inflation is expected to rise from 0.4% in 2017 to 0.6% in 2018. GDP growth will also continue to fall short of the policy target; implementation of market reforms will continue to weigh heavily on both growth and inflation.
 - ✓ **2017 growth = 1.7%**
 - + **2018 growth forecasts original = 1.6%; revised = 0.9% (B of A); original = 1.7%, revised = 0.9% (GS); current IMF forecast = 1.1%; potential growth = 0.9%**
 - **Contrary to forecasts and CAI, Japan's 2018 Q1 GDP was -0.6%, much worse than the forecast -0.1%; Q3 growth was -0.3% after a small gain in Q2; Y/Y growth in Q3 declined -0.4%; weak consumer and capital spending contributed to the surprise negative growth in Q1; however, employment has grown 3.0% over the past year and wages have grown 2.1%, which bodes well for stronger consumer spending in coming quarters**
 - + **Japan's economic activity has been above potential during 2018: CAI = 3.2% in January; February = 3.5%; March = 2.5%; April 4.0%; May =**

- 2.2%; June = 2.1%; July = 1.2%; August = 2.5%; September = 1.6%; October = 2.6%; November = 1.7%**
- ✓ **2017 total inflation = 0.5% (B of A)**
 - + **2018 forecast total inflation = 1.1% (B of A)**
 - ✓ **A survey of companies indicated that both employment and wages are likely to increase, boosting consumer spending growth (EvercoreISI)**
 - ✓ **2017 core inflation = 0.5% (GS)**
 - + **2018 revised forecast core inflation = 0.4% (GS) vs. 0.6% original**
 - + **Japan appears to have emerged at long last from its deflation trap; wages are rising, albeit slowly, women participation in the labor force is rising; and labor reforms to cut the length of the work week are taking hold**
 - **India** should continue to experience relatively strong real GDP growth in a range of to 7.0% to 8.0% in 2018.
 - ✓ **2017 growth = 6.3% (GS)**
 - + **2018 forecast growth = 7.6% original, 7.8% revised (GS); B of A = 7.6%; current IMF forecast = 7.3%; potential growth = 7.2%**
 - **As reflected by GS's CAI, India's economy appears to be losing a little momentum: CAI = 8.7% in January; February = 7.6%; March = 8.0%; April 7.1%; May = 7.2%; June = 6.7%; July = 6.3%; August = 7.2%; September = 6.5%; October = 6.9%**
 - ✓ **Parliamentary elections are due in 2019; Modi's Janata party is expected to win, but there are early signs that opposition parties are uniting, which could alter the expected outcome of the election**
 - **Emerging market countries, excluding China**, should experience better growth in 2018 than in 2017. Growth is expected to improve from 3.6% in 2017 to 3.9% in 2018.
 - ✓ **2017 growth = 3.7%, revised up from preliminary estimate of 3.6%**
 - + **2018 growth on track to = 3.8%**
 - ? **Argentina's and Turkey's financial and currency markets have performed poorly so far in 2018, which could be symptomatic of broader weakness in the structure of global financial markets; Argentina received IMF financial assistance; Turkey's Erdogan solidified his grip on the government in recent parliamentary elections, however, the Turkish economy is probably in recession and its currency crisis is likely to continue**
 - ? **Decreasing global dollar liquidity, as the Federal Reserve tightens monetary policy, has resulted in stress in those emerging market**

countries' financial markets, which are especially reliant on dollar funding

- **Brazil and Russia** will benefit from higher oil prices; Russian growth is expected to improve from 2.6% in 2017 to 3.0% in 2018; Brazilian growth is expected to improve from 0.6/1.0% in 2017 to 2.6% in 2018.
 - + **Brazil and Russia are benefiting from higher commodity and oil prices**
 - ✓ **Brazil's 2017 growth was 1.0%**
 - **Brazil's 2018 revised 2018 forecast growth is expected to be in a range of 1.5% (B of A) to 1.2% (GS); current IMF forecast = 1.4%; potential growth = 2.2%**
 - **Economic growth has decelerated in Brazil, but may improve with the election in October of a conservative president: CAI = 4.6% in January; February = 4.7%; March = 3.9%; April = 4.5%; May = 1.2%; June = -0.3%; July = 0.6%; August = 3.6%; September = 0.1%; October = 3.6%**
 - ✓ **Russia's 2017 growth = 1.5% (GS), revised down considerably from preliminary estimate**
 - **Russia's 2018 revised forecast growth = 2.0% (GS) and 1.5% (B of A); current IMF forecast = 1.7%; potential growth = 3.3%**
 - **Russia's economy has lost momentum in 2018 despite higher oil prices: Russia's CAI = 5.0% in January; February = 3.5%; March = 2.7%; April = 2.6%; May = 2.1%; June = 0.9%; July = 0.1%; August = 0.3%; September = 0.0%; October = -0.1%**
- Although the rise in oil prices might save **Venezuela** from default and bankruptcy in 2018, this seems to be the likely outcome.
 - + **As expected, economic conditions continue to deteriorate, it is surprising that Venezuela's government has been able avoid an existential crisis**
 - ✓ **Current IMF 2018 GDP forecast = -20.0%**
 - ✓ **Maduro won re-election in a “managed” election; economic sanctions continue to weaken the economy; Maduro’s grip on power will endure unless the military steps in**
 - ✓ **Inflation exceeds one million percent as the government prints virtually worthless money to pay its bills**

3. **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
 - + **Real GDP growth is expected to exceed the top end of the original forecast range for the full year**
 - **U.S. productivity** falls below the bottom end of the 1.3% to 1.5% range
 - **Productivity rose at an annual rate of 1.8% over the first three quarters of 2018, which was above the top end of the forecast range; however the revised forecast for the full year is near the bottom end of the original range**
 - **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
 - + **Employment growth has been very strong through October and should continue to benefit from tax cuts and increased federal spending during the remainder of 2018**
 - **Employment participation rate** falls below the bottom of the forecast range rather than remaining relatively stable or rising modestly
 - **Risk not realized; participation rates were above the forecast range in February, March, June, July, and October, but the participation rate was within the forecast range in January, April, May, August and September**
 - **U.S. hourly wage rate growth** is lower or higher than the forecast range of 2.6% to 3.0%; falling wage growth is the more serious risk
 - **Wage growth is rising and had reached the lower end of the forecast range by September and October; however, wage growth is not accelerating as rapidly as expected**
 - **U.S. unemployment rate** rises above the forecast range or falls below it
 - **Risk not realized**
 - **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; however, growth is likely to be slightly above the top end of the forecast range by year end**
 - **Nominal U.S. consumer spending** increases less or more than expected; a less than expected increase is the more serious risk
 - + **Risk realized; growth is on track to exceed the top end of the forecast range**

- **U.S. stock prices** fall more than or rise more than the expected range of -10% to +10%
 - **Risk not realized**
- **U.S. business activity** contracts or expands more than expected; contraction is the more serious risk
 - **Risk not realized, although activity has been on the strong side**
- **U.S. private business investment** does not improve as much as or more than expected; falling short of expectations is the more serious risk
 - + **Growth over the first three quarters of 2018 was above the forecast range; full year forecasts have been increased and exceed the top end of the original 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
 - + **Residential investment growth has been negative through the first three quarters of 2018 and is substantially below the bottom end of the forecast range**
 - **Starts are expected to be at the high end of the 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
 - + **Housing prices are rising faster than the top end of the forecast range, but the rate of increase is now slowing and the full year change in prices is expected to be near the top end of the forecast range**
- **U.S. trade deficit** does not widen as much as expected
 - **After being stable during much of 2018, the deficit began rising in September and October and could end the year near the bottom end of the forecast range**
- **Value of the dollar** rises rather than falling as expected and triggers a global dollar squeeze
 - + **Risk realized; the value of the dollar has increased slightly**
- **Oil prices** rise above or fall below the expected range; high oil prices is the greater concern because it would be indicative of unsustainable price speculation
 - + **Risk realized; the strength of the global economy and adverse impacts of geopolitical developments on supply make it likely that prices will end the year above the forecast range; however, prices**

softened considerably in October and November, but remained above the top end of the forecast range

- **U.S. monetary policy** tightens more than 75 to 100 basis points, spawns financial market uncertainty and contributes to global financial instability
 - **Three rate increases have occurred and a fourth is virtually certain in December**
- **Financial conditions** tighten and cause financial market volatility
 - **Risk not realized; volatility increased in October, but financial conditions increased only modestly; credit spreads remain tight**
- **U.S. inflation** falls or rises more than expected
 - + **Forecasts have been revised a bit higher, total inflation measures are modestly above the top of the forecast range, primarily due to higher oil prices but should move slightly lower over the remainder of the year; core inflation measures are likely to end the year slightly above the top end of the forecast range**
- **U.S. long-term interest rates** fall or rise more than expected
 - + **Risk realized, the 10-year Treasury yield is slightly above the top end of the forecast range**
- **U.S. fiscal policy** is more expansionary than expected due to larger than expected increases in spending
 - + **Risk realized; Congress increased spending caps**
- **Federal budget deficit** increases more than expected
 - **Risk not realized, fiscal year 2018 deficit was near the bottom end of the forecast range**
- **Global GDP growth** does not rise as fast as expected
 - + **Risk realized; growth has softened during the year and a slowing trend appears to be gaining momentum**
- **Global trade** declines as the U.S. and other countries pursue protectionist policies
 - **Risk not realized, but emerging U.S. trade policies could eventually slow growth in global trade; reciprocal tariffs will reduce trade between China and the U.S. substantially**
- **European growth** is considerably less than expected
 - **Risk not realized; growth close to forecast and above potential, but is softening**
- **ECB's** quantitative easing program is not successful in raising inflation
 - ✓ **Too soon to evaluate, but inflation remains below the ECB's 2.0% target despite above potential economic growth; core inflation is expected to be 1.0% in 2018 and rise only to 1.1% (GS) to 1.3% (B of A) in 2019; ECB expects core inflation to rise to 1.5% in 2019**

- **Europe** – financial market turmoil reemerges
 - + Formation of a euro-skeptic populist government in Italy has contributed to greater financial market volatility; European stock markets have been weak, perhaps in response to softening growth prospects and increasing political risk
- **Europe** – political instability and social unrest rises more than expected threatening survival of the Eurozone and the European Union
 - Risk not realized, but good economic times are masking deteriorating public support for further economic and political integration; Hungary, Poland and Italy are on a populist anti-EU course; centrist parties are weakening in Germany and increased political instability may develop with Chancellor Merkel's decision to retire
- **Chinese** leaders have difficulty implementing **economic reforms**
 - Risk not realized; financial reforms to limit wealth management products and control credit growth are proceeding; President Xi's reorganization of governmental agencies, which is intended to expedite implementation of environmental protection, financial risk control, and poverty alleviation policy priorities, are proceeding, but entail a risk of slowing economic growth more than expected
- **China's growth** slows more than expected
 - Risk not realized, but some softening appears to be emerging and could be exacerbated by U.S. tariffs on imports of Chinese goods
 - ✓ Escalating trade tensions with the U.S. pose a potential risk to growth; it is too early to predict how much damage U.S. tariffs will impose on Chinese growth, but B of A expects growth to be reduced by 0.5%
- **Japan** – Abenomics and monetary policy are unsuccessful in raising inflation to the 2 percent target
 - + Inflation continues to languish well below the 2% target; the Bank of Japan has abandoned the 2% target
- **Emerging economies** – a strong dollar leads to serious difficulties especially for countries with large amounts of dollar-denominated debt.
 - Risk not realized broadly, but stress has erupted in several emerging markets countries including Argentina, Turkey and South Africa
- Severe and, of course, unexpected **natural disasters** occur, which negatively impact global growth
 - Risk not realized, Hurricanes Florence and Michael have had only minor impacts on the U.S. economy
- Political instability in the **Middle East** causes a spike in oil prices

- + President Trump exited the Iran nuclear pact, which contributed to higher oil prices initially, but after rising sharply early in 2018 oil prices retreated in October and November, perhaps due to Saudi Arabia's intervention and to increase production; full-scale sanctions on Iranian oil exports took effect on November 5th, diplomatic fallout from the murder of Khashoggi by Saudi Arabian officials close to the crown prince does not appear to have had any impact on prices, instead oil prices have fallen
- + The conflict between Palestinians in Gaza and Israel escalated for a time, resulting in numerous civilian deaths, renewed tensions emerged in November
- North Korea threatens global political stability and potential nuclear war by persisting in testing nuclear devices and intercontinental ballistic missiles
 - Risk not realized; President Trump met with North Korea's leader in Singapore on June 12th; they agreed in concept to proceed with de-nuclearization of the Korean peninsula; this general promise was not accompanied by any specific details, so the only thing that has really changed is that the two countries have engaged in dialogue and that alone lessens the threat of nuclear war
- New Risk: Global trade war threatens global economic growth
 - + President Trump's imposition of steel and aluminum tariffs, termination of the proposed acquisition of Qualcomm by Broadcom, and other prospective trade actions
 - + The U.S. imposed tariffs on nearly all Chinese imports; China retaliated in kind but is at an apparent disadvantage because its exports to the U.S. exceed its imports; U.S. tariffs are generally aimed at encouraging China to change its self-serving trade policies and curtail intellectual property theft
 - + The possibility of an escalating global trade war remains a threat to global economic growth, but the Trump Administration seems to have backed off a global focus, while increasing pressure on China
 - + The Shanghai composite stock index has fallen 20% since the beginning of the year and reached a four-year low in September, reflecting in part rising trade tensions between China and the U.S. and in part slowing Chinese growth