4/28/2017

- There is a synchronized global economic growth story that began after Brexit last summer and continues globally in 2017. With the stabilization of energy prices and the continuing economic recovery with years of unconventional monetary support, the world is more encouraged.
- With this backdrop, the Trump victory released a lot of pent up frustration from income and wealth inequality, low productivity and low investments, lacking fiscal stimulus, to excessive regulations. Supporters and businesses are hopeful that the Trump Administration will deliver on, if not all, many of the promises made during the campaign. "Make America Great Again" can be interpreted as many ways as there are voters, and the future is filled with hope and expectations; good sentiments follow.
- The Trump effect has carried the market through the end of April with some evidence of running out of steam. From a seasonality standpoint, we are entering a traditionally more volatile and less well performing (for risk assets) period. From a politics standpoint, the easy actions (executive orders that do not need Congressional involvement) have been taken. Thus far, with the exception of the successful confirmation of Judge Neil Gorsuch, no significant policies have been implemented. With the failed attempt on repealing and replacing Obamacare (and the inability to get the bill to the floor for a vote the second time), the Trump Administration will now be tested in the budget, tax reform, and debt ceiling (through the possible government shut down threat) negotiation. Time is not on the Administration's side, and the proposed tax reform is so significant that many Republicans may not support.
- Backward looking or hard economic data so far tells a very different story than the soft forward looking data. Equity investors are excited about the future, and fixed income investors are worried about the lack of evidence. This gap is not sustainable, and we believe that the consumer and business sentiment will revise down significantly as the hard data slowly creeps upward in a continuingly healing economy.
- In the longer term (3 years on), the world and the U.S. still face the challenge of digitization/automation/robotics driven deflationary environment, a lack of a clear path to improve productivity that would improve income disparity and real wage growth, an aging population that limits real GDP growth along with significant debt overhang (may be even greater with new and significant fiscal borrowing) and repaying for the years of borrowing forward.
- Significant challenges remain when all major central banks begin a synchronized tapering and reverse from years of super accommodative monetary policies. The possibilities of policy mistakes and unintended consequences could be damaging to the global economy and financial markets.

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Time for Takeoff after Eight Years on the Runway?

There is a general sense of economic improvement in the U.S. and globally. The most often cited factors are the recovering of energy prices that contributed to reflation, the continuing advancements in the labor economy, and the expected positive policy changes in the U.S. The two 25 basis point hikes (December 2016 and March 2017) by the FOMC further gave confidence to the perception that the economy continues to gain strength and dialing back unconventional monetary policies is warranted and appropriate. Much of this is based on forward looking data and expectations.

Global Synchronized Expansion

According to the April 4th Markit JP Morgan Global Manufacturing & Services PMI[1] report[2], the rate of global economic expansion improved at the end of the first quarter. March saw growth of service sector activity regain some of the momentum lost in the prior month, while the rate of increase in manufacturing production stayed close to February's three-year high. The expansion was mostly broad-based by nation, with output rising across the US, the euro area, Japan, the UK and Russia. The eurozone led the upturn with its rate of growth accelerating to a near six-year high. Rates of increase in economic activity also strengthened in Japan, the UK and Russia. The slowdown in the US continued, with output growth sagging to a six-month low. Although the downturn in Brazil extended into its 25th consecutive month, the pace of contraction was the weakest during that sequence. March data signaled slightly slower rates of increase in both new orders received and job creation in the global economy. However, business sentiment remained positive and improved to a level in line with its long-run average.

Global Manufacturing & Services PMI™

50 = no change on prior month.

Index	Feb.	Mar.	+/–	Summary
Output	53.4	53.8	+	Expanding, faster rate
New Orders	53.8	53.6	–	Expanding, slower rate
Employment	52.0	51.8	–	Rising, slower rate
Input Prices	56.3	56.2	–	Rising, slower rate
Output Charges	51.7	52.0	+	Rising, faster rate
Backlogs	50.5	50.9	+	Rising, faster rate
Future Output	63.8	64.4	+	Positive, greater extent

The IMF/World Bank[3] released their World Economic Outlook (WEO) and the Global Financial Stability Report (GFSR). The WEO this year is more positive than in recent memory with the world growth projected to rise from 3.1% in 2016 to 3.5% this year and 3.6% in 2018. The following table summarizes the projected economic improvement for 2017 and 2018 after an anemic 2016 with Brazil and Russia both in negative territory. Although Latin America, the Middle East and Sub-Saharan Africa growth have revised down slightly from January 2017 projections, the upward growth adjustments are evident for most of the rest of the world.

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[1] Purchasing Managers' Index (PMI) data are based on monthly surveys of carefully selected companies. These provide an advance indication of what is really happening in the private sector economy by tracking variables such as output, new orders, stock levels, employment and prices across the manufacturing, construction, retail and service sectors.

[2] https://www.markiteconomics.com/Survey/PressRelease.mvc/eb0ab4fc46f74ced811c1e9e1afc4664

[3] http://www.imf.org/en/Publications/WEO/Issues/2017/04/04/world-economic-outlook-april-2017#

IMF WEO Projections		Projections		Change from January 2017		Change from Oct 2016	
	2016	2017	2018	2017	2018	2017	2018
World Output	3.1	3.5	4.6	0.1	0.0	0.1	0.0
Advance Economies	**1.7**	**2.0**	**2.0**	**0.1**	**0.0**	**0.2**	**0.2**
U.S.	1.6	2.3	2.5	0.0	0.0	0.1	0.4
Euro Area	1.7	1.7	1.6	0.1	0.0	0.2	0.0
Germany	1.8	1.6	1.5	0.1	0.0	0.2	0.1
France	1.2	1.4	1.6	0.1	0.0	0.1	0.0
Italy	0.9	0.8	0.8	0.1	0.0	(0.1)	(0.3)
Spain	3.2	2.6	2.1	0.3	0.0	0.4	0.2
Japan	1.0	1.2	0.6	0.4	0.1	0.6	0.1
UK	1.8	2.0	1.5	0.5	0.1	0.9	(0.2)
Canada	1.4	1.9	2.0	0.0	0.0	0.0	0.1
Other Advanced Economies	2.2	2.3	2.4	0.1	0.0	0.0	0.0
Emerging & Developing Economies	**4.1**	**4.5**	**4.8**	**0.0**	**0.0**	**(0.1)**	**0.0**
Russia	(0.2)	1.4	1.4	0.2	0.3	0.3	0.2
China	6.7	6.6	6.2	0.1	0.2	0.4	0.2
India	6.8	7.2	7.7	0.0	0.0	(0.4)	0.0
ASEAN-5	4.9	5.0	5.1	0.1	0.0	(0.1)	0.0
Emerging and Developing Europe	3.0	3.0	3.3	(0.1)	0.1	(0.1)	0.1
Latin America & the Caribbean	(1.0)	1.1	2.0	(0.1)	(0.1)	(0.5)	(0.2)
Brazil	(3.6)	0.2	1.7	0.0	0.2	(0.3)	0.2
Mexico	2.3	1.7	2.0	0.0	0.0	(0.6)	(0.6)
Middle East	3.9	2.6	3.4	(0.5)	(0.1)	(0.8)	(0.2)
Sub-Saharan Africa	1.4	2.6	3.5	(0.2)	(0.2)	(0.3)	(0.1)
Nigeria	(1.5)	0.8	1.9	0.0	(0.4)	0.2	0.3
South Africa	0.3	0.8	1.6	0.0	0.0	0.0	0.0

The WEO suggests the following conditions to justify its brighter outlook:

- The stronger-than-expected momentum that began in the second half of 2016 continues in 2017.
- Partial recovery in commodity prices contributed to the uptick in emerging markets and developing economies to include Russia.
- In developed economies, the projected growth is led by the U.S. based on the assumed fiscal policy easing and improving.
- Europe and Japan are experiencing a cyclical recovery in global manufacturing and trade.
- The stronger-than-expected policy support in China has contributed to the upward revision of its growth rates in 2017 and 2018.

The WEO also noted that global economic risks remain skewed to the downside especially during the medium term, primarily due to policy uncertainty or policy mistakes. The following potential factors are noted as downside contributors and are interconnected:

- An inward shift in policies, including towards protectionism, with lower global growth caused by reduced trade and cross-border investment flows
- A faster-than-expected pace of interest rate hikes in the United States, which could trigger a more rapid tightening in global financial conditions and a sharp dollar appreciation, with adverse repercussions for vulnerable economies
- An aggressive rollback of financial regulation, which could spur excessive risk taking and increase the likelihood of future financial crises
- Financial tightening in emerging market economies, made more likely by mounting vulnerabilities in China's financial system associated with fast credit growth and continued balance sheet weaknesses in other emerging market economies
- Adverse feedback loops among weak demand, low inflation, weak balance sheets, and anemic productivity growth in some advanced economies operating with high levels of excess capacity
- Noneconomic factors, including geopolitical tensions, domestic political discord, risks from weak governance and corruption, extreme weather events, and terrorism and security concerns

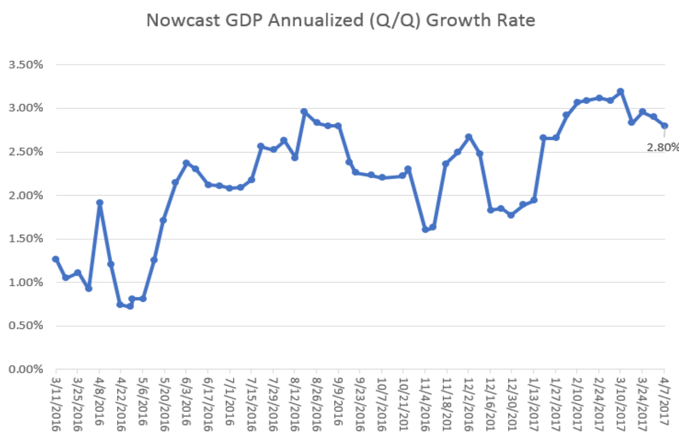
Even with the U.S. economy gaining steam and Europe undergoing a cyclical recovery, in the medium term, aging demographics and weak trend productivity are likely to restrain growth in developed economies. Among emerging market and developing economies, especially those commodity exporters, the continuing adjustment to lower commodity prices remains a key risk to short and medium term outlooks.

Further, in the medium term, the IMF projects the total factor productivity ("TFP", a.k.a. multi-factor productivity) growth to stay below the pace registered before the global financial crisis, especially in emerging market economies. TFP is a measure of economic performance that compares the amount of goods and services produced (output) to the amount of combined inputs used to produce those goods and services. Inputs can include labor, capital, energy, materials, and purchased services. Even in advanced economies, such as Europe, high levels of corporate debt and nonperforming bank loans have constrained investment in capital goods and intangible assets, slowing the pace of capital-embodied technological change. In fact, the boom-bust cycle increased the misallocation of capital which further contributed to slowing productivity growth. According to the Department of Labor's own calculation[4], TFP productivity in the private nonfarm business sector grew at an average annual percent rate of 0.9% from 1987 to 2016. For the 2007-2016 period, TFP grew 0.4% on average as combined inputs increased at an average annual rate of 1.0% and output increased at a 1.4% average annual rate. In the 2007-2016 period, annual labor productivity decelerated to 1.2% at an annual average rate, as compared to the 2.7% rate in the 2000-2007 period. Annual labor productivity growth can be viewed as the sum of three components: multifactor productivity growth, the contribution of capital intensity, and the contribution of shifts in labor composition.

[4] https://www.bls.gov/news.release/prod3.nr0.htm

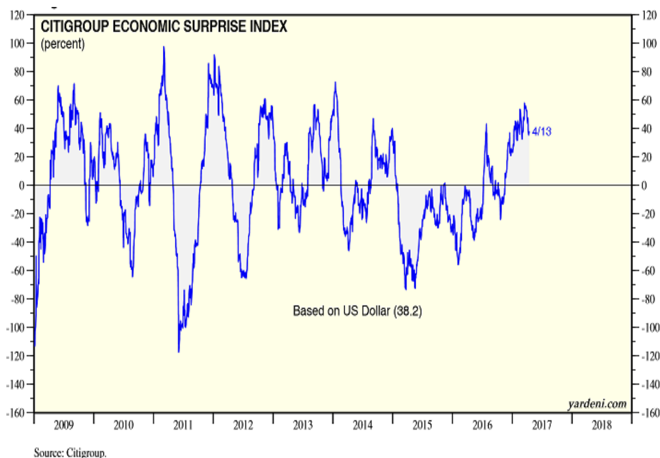
Looking Good Everywhere

Economic nowcasting intends to predict the present, the very near future and the very recent past. It uses timely monthly information in order to nowcast key economic variables. In April 2016, the New York Federal Reserve introduced "Nowcast", its version of economic forecasting for the U.S. GDP. Nowcast incorporates a wide range of macroeconomic data as it becomes available to evaluate their effects on current economic conditions. Nowcasts uses a large number of economic indicators, including many that are not included in Bureau of Economic Analysis for GDP (e.g. such as JOLTS job openings, permits, and regional manufacturing surveys and they are not considered hard or broad economic data) to extract the "common factor" which captures the bulk of the business cycle fluctuations in the economy. Nowcast uses these underlying activity factors to create GDP projections for specific calendar quarters. This is not likely to predict GDP in the most recent quarter as accurately as the Atlanta Fed GDPNow method, but it intends to predict the next quarter GDP, and provide a better idea about ongoing GDP growth now and in the immediate future. As of the end of March, Nowcast projects the GDP to be growing at an annualized (Q/Q) rate of 2.8%[5].



Almost all soft data (survey or forward looking data) have been showing strong signs of economic optimism since Trump's victory, even though the "Trump Effect" appears to have waned a bit.

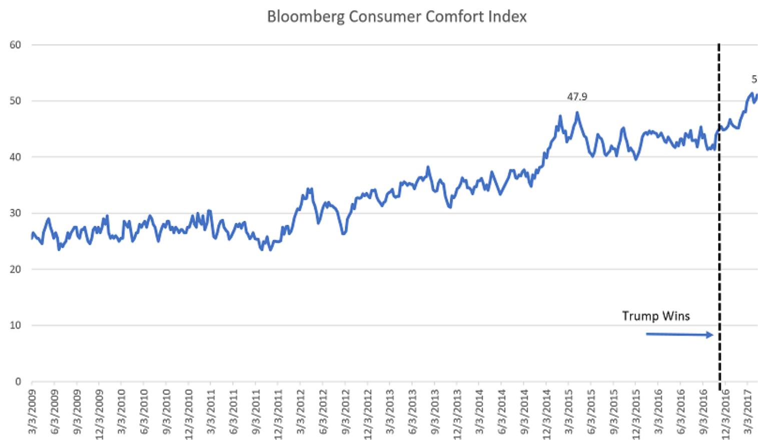
The Citigroup Economic Surprise Index (CESI)[6] tracks how economic data are faring relative to expectations. The index rises when economic data exceeds economists' consensus estimates, hence the "surprise", and falls when data comes in below estimates.



Although jagged, the Index is solidly moving upward since June last year and is above zero. This means that economic data have been more favorable than projected or anticipated since the middle of last year — a positive surprise. This index suggests the rate of change and the directionality of the economy are positive and often will reflect in the real economy in time.

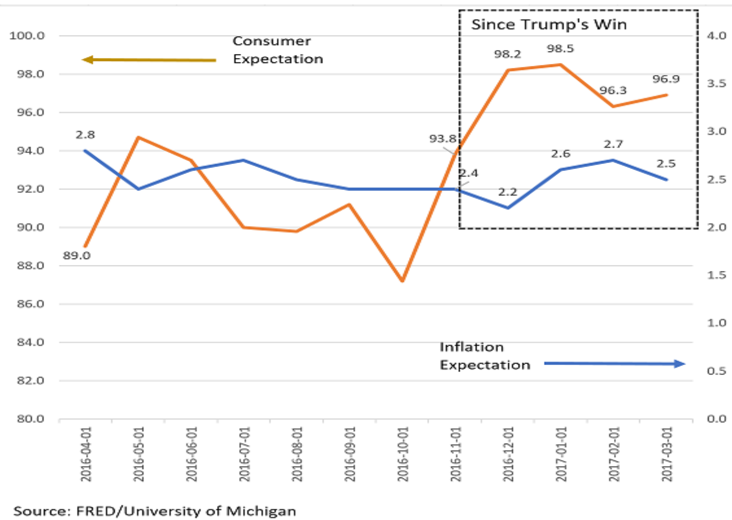
[5] https://www.newyorkfed.org/medialibrary/media/research/policy/nowcast/nowcast_2017_0331.pdf?la=en

[6] http://www.yardeni.com/pub/CITIGROUP.PDF



The Bloomberg's Consumer Comfort Index[7] measures Americans' perceptions on three important variables: the state of the economy, personal finances and whether it's a good time to buy needed goods or services. The data is based on telephone interviews with a random sample of about 250 consumers a week aged 18 or over and is based on a four-week moving average of 1,000 responses. The Index was up six times over the past seven weeks as of April 13th, and according to Bloomberg: the personal finance gauge is up from 58.9 to 60.1 and national economic sentiment is the highest since August 2001;.

The University of Michigan survey of Consumer Expectation and Inflation Expectation also shows encouraging signs. Telephone surveys are used to gather information on consumer expectations regarding the overall economy. Changes in consumer attitudes and expectations occur prior to action. These surveys intend to predict aggregate trends in consumer expenditures and the incurrence of debt and acquisition of financial assets. In the early April survey, the Current Economic Conditions Index reached its highest level since 2000. These indicators suggest continuing optimism and an upbeat assessment of the future U.S. economy and without serious inflation.

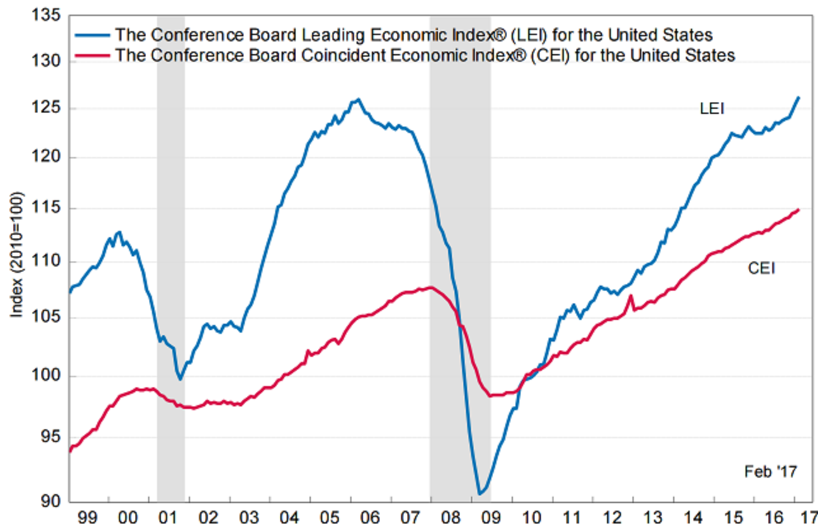


The Conference Board U.S. Leading Economic Index[8] is comprised of ten components:

- Average weekly hours, manufacturing
- Average weekly initial claims for unemployment insurance
- Manufacturers' new orders, consumer goods and materials
- ISM Index of New Orders
- Manufacturers' new orders, nondefense capital goods excluding aircraft orders

[7] https://www.investing.com/economic-calendar/bloomberg-consumer-comfort-index-381
[8] https://www.conference-board.org/data/bcicountry.cfm?cid=1

- Building permits, new private housing units
- Stock prices, 500 common stocks
- Leading Credit Index™
- Interest rate spread, 10-year Treasury bonds less federal funds
- Average consumer expectations for business conditions



Latest LEI Trough March 2009, Latest CEI Trough June 2009
Shaded areas represent recessions as determined by the NBER Business Cycle Dating Committee.
Source: The Conference Board

The latest release on March 17[9], shows that the LEI increased 0.6% each month in January and in February. After a six-month gain, the LEI is at its highest level in a decade. The Coincident Economic Index (CEI) increased by 0.3% in February after a 0.1% and 0.4% rise in the prior two months. CEI is a measure of the current economic conditions.

According to the SBA, the 28 million small businesses in America account for 54% of all U.S. sales and provide 55% of all jobs. The small business is a vital part of the U.S. economy. Since September last year, the National Federation of Independent Business (NFIB) surveys have shown a significant improvement in business sentiment.

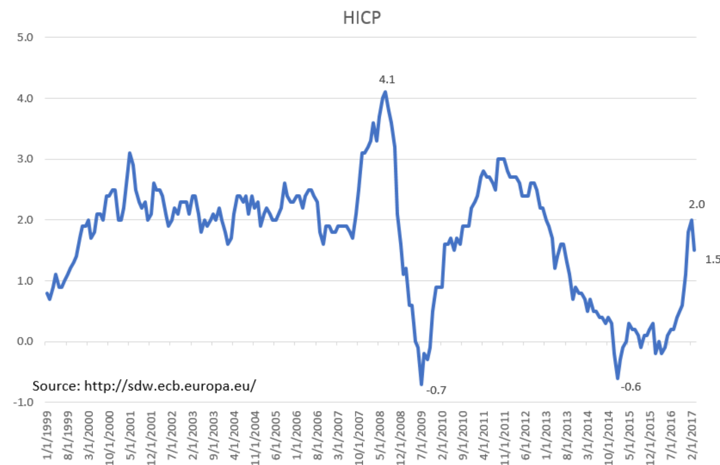
NFIB Small Business Economic Trends, SA

	Mar 17	Feb 17	Jan 17	Dec 16	Nov 16	Oct 16	Sep 16
Optimism index, 1986=100	104.7	105.3	105.9	105.8	98.4	94.9	94.1
Components, net %							
Plans to increase employment	16	15	18	16	15	10	10
Plans to make capital expenditures	29	26	27	29	24	27	27
Plans to increase inventories	2	3	2	4	4	2	-7
Expect economy to improve	46	47	48	50	12	-7	0
Expect real sales higher	18	26	29	31	11	1	4
Current inventory	-5	-2	-5	-3	-4	-4	-7
Current job openings	30	32	31	29	31	28	24
Expected credit conditions	-3	-3	-3	-6	-5	-6	-7
Now a good time to expand	22	22	25	23	11	9	7
Earnings trends	-9	-13	-12	-14	-20	-21	-20
Other, net %							
Plans to raise prices	20	20	21	24	19	15	18
Plans to raise compensation	18	17	18	20	15	19	14
Credit is harder to get	3	4	5	6	4	4	5

[9] https://www.conference-board.org/pdf_free/press/US%20LEI%20-%20Press%20Release%20MARCH%202017.pdf

According to NFIB, for the first quarter in 2017, the NIFB small business index averaged 105.3, compared with 99.7 in the final three months of 2016. This is consistent with GDP growth north of 5% at an annual rate in the first quarter. This is euphoria.

The March 2017 ECB staff macroeconomic projections stated that the euro area real GDP is expected to grow at the rate of 1.8%, 1.7% and 1.6% for 2017, 2018 and 2019 respectively. With the recent oil price recovery, the Harmonized Index of Consumer Prices – HICP (i.e. inflation rate) - is now projected at 1.7% this year and reaching the ECB aim of inflation rates of below, but close to, 2% over the medium term. The left table shows euro area inflation returning from the recent deflation period[10].



According to the Market Eurozone Retail PMI April 6th report[11] however, Eurozone retailers registered a decline in like-for-like sales during March, following a broad stagnation in the previous month. The headline Retail PMI dipped to 49.5 in March, from 49.9 in February, signaling a slight decline in sales.

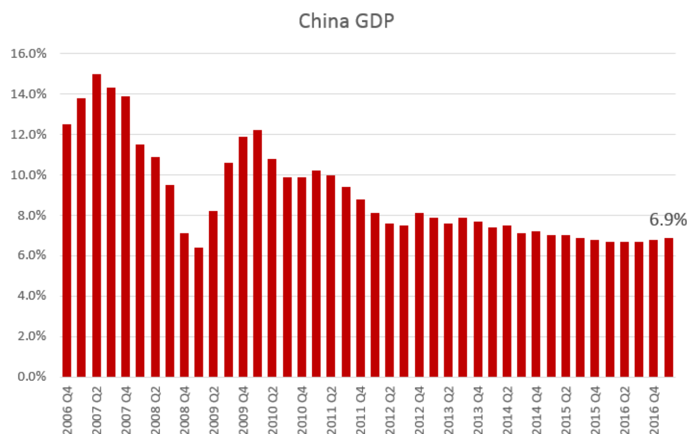
In contrast, the Markit Eurozone Composite PMI final data[12] released on the same day shows Eurozone output and new order growth accelerated to near six-year records in March, rounding off the best quarter for the currency union's economy since the second quarter of 2011. The final Index rose to a 71-month high of 56.4 in March, up from 56.0 in February, but below the flash estimate of 56.7. The index has signaled expansion in each of the past 45 months. Output growth was registered across the manufacturing and service sectors. Rates of expansion improved to near six-year highs in both cases, with the former outpacing the latter for the tenth successive month with Germany leading the way.

Countries ranked by output growth*: March

Germany	57.1 (flash: 57.0)	70-month high
Ireland	56.9	4-month low
Spain	56.8	2-month low
France	56.8 (flash: 57.6)	70-month high
Italy	54.2	2-month low

** Composite Output PMI against GDP comparisons for Germany, France, Italy and Spain are included on page 3 of this press release.*

[10] https://www.ecb.europa.eu/stats/macroeconomic_and_sectoral/hicp/html/inflation.en.html
[11] https://www.markiteconomics.com/Survey/PressRelease.mvc/9f6420da9e7b4719b540c82dba56b4d7
[12] https://www.markiteconomics.com/Survey/PressRelease.mvc/51aae008c6534fd79b28e3e3c6d509d9



China's National Bureau if Statistics reported that for the first quarter this year, China is growing at a rate of 6.9% which continues its upward performance from 6.7% in the third quarter 2016 to 2.8% in the fourth quarter. This is moving towards the upper range of last year's target between 6.5% to 7%. This is the first quarter-to-quarter economic acceleration in 7 years and is led by credit expansion, consumer spending, fixed asset investment and industrial output. In nominal terms, according to Bloomberg Intelligence, China expanded at an annual rate of 11.8%.

At the same time, China added 3.34 million jobs in the first quarter and bringing the unemployment rate to below 5% in major cities. Being the second largest economy, this gives global growth a shot of confidence even though its longer term sustainability remains questionable with the Chinese government lowering its annual target down to 6.5%

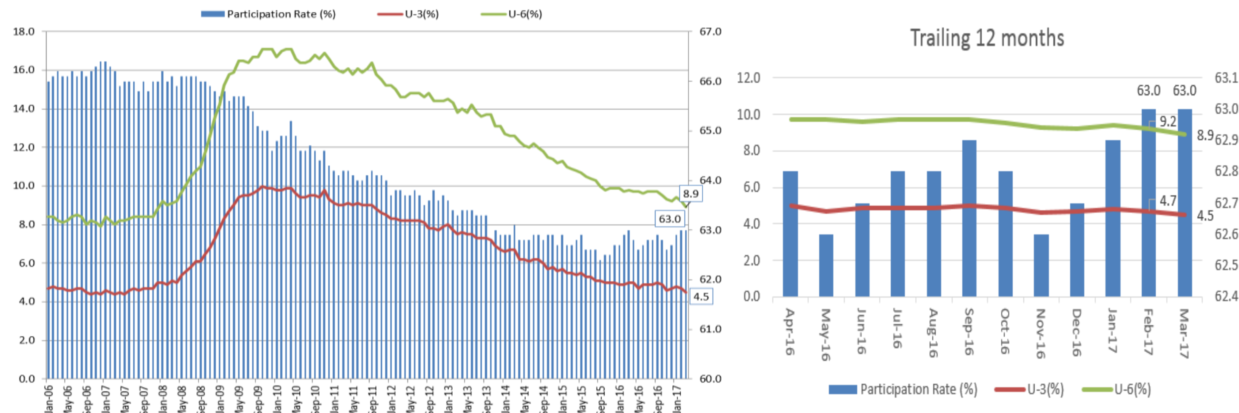
"Of" Course or "Off" Course

Relying on forward looking, survey-based sentiment data, the answer to the question "is the U.S. and the global economy finally entering the growth phase that we have been longing for?" would be "of course." In the U.S., since the Donald Trump victory, the market has been nothing less than upbeat. Not unlike the "3 arrows" in Abenomics, the U.S. is in need of the three arrows or accommodative monetary policy, expansionary fiscal policy and structural reform. Since 2009, monetary policy was the only game in town with no structural reform and restrictive fiscal policy (a form of austerity). Candidate Trump campaigned on Making America Great Again through significant spending on intrastructure (fiscal policy) and tax reform/tax cut and deregulation or rollback of Obama era regulations (structural reform). The anticipation and expectation of the injection of these two arrows gave rise to positive, forward looking, soft data. During the question and answer section of Chair Yellen's press conference for the FOMC March meeting, Chair Yellen acknowledged that consumer and business sentiment data have improved, but there is not yet evidence that sentiment has impacted spending decisions. Also, the timing, size and character of the new administration's fiscal policy changes remain uncertain. Since then, some of the forward looking soft data have retreated as President Trump's 100-day came and gone with no legislative wins to support voters' and markets' enthusiasm since the election. From the hard data thus far, it appears the soft data is a bit "off course".

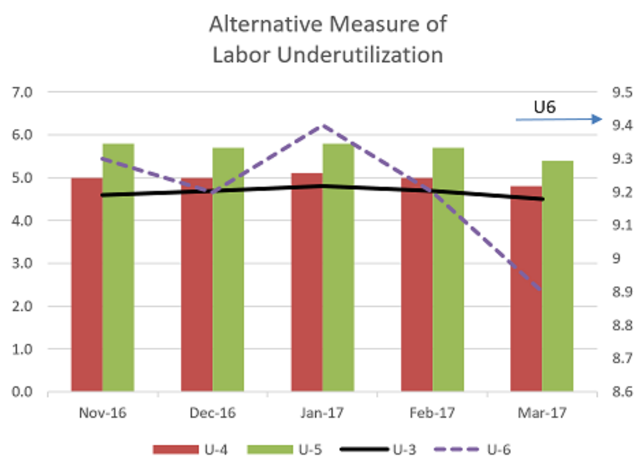
What does the hard data say?

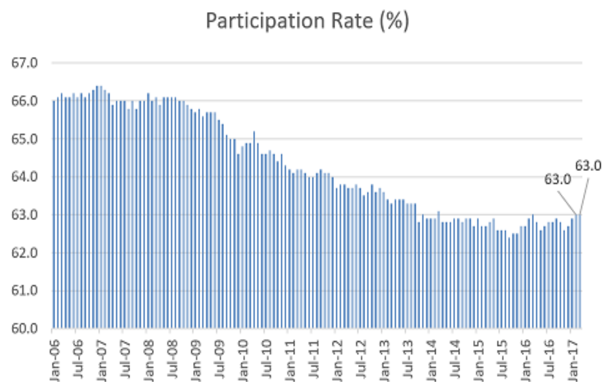
A) Employment

This continues to be a bright spot in the U.S. economy. The March Employment Situation from the Bureau of Labor Statistics (BLS) reported that the U3 unemployment rate declined to 4.5% from 4.7% in February. At the same time, the broadest unemployment rate, U6, has also declined from 9.2% in February to 8.9%.

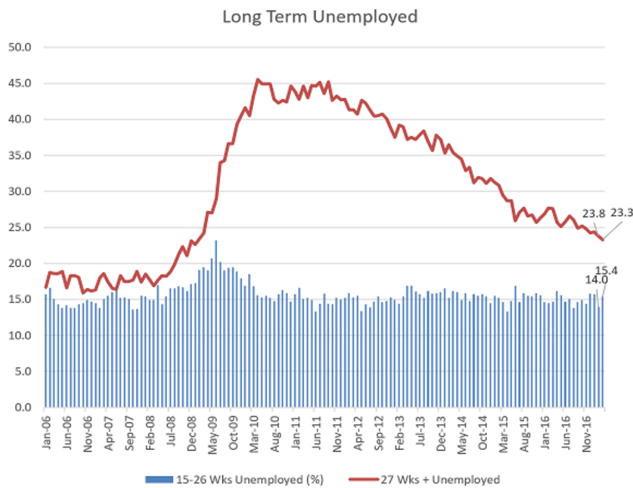


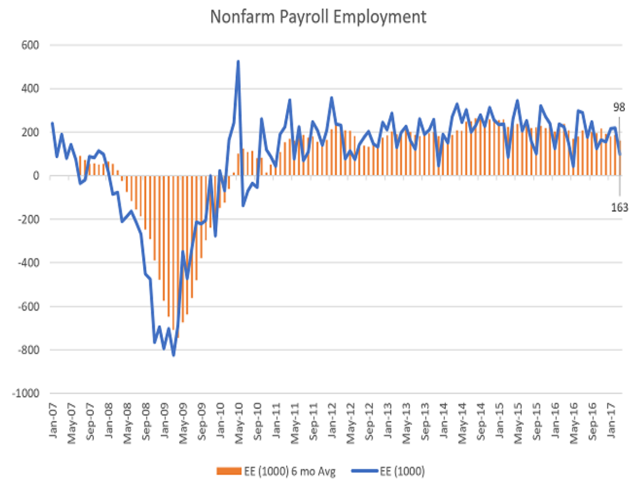
Labor Underutilization	Total Unemployed	Discouraged Workers	Marginally Attached	P/T For Economic Reasons
U-3	Include		Exclude	Exclude
U-4	Include	Include	Exclude	Exclude
U-5	Include	Include	Include	Exclude
U-6	Include	Include	Include	Include





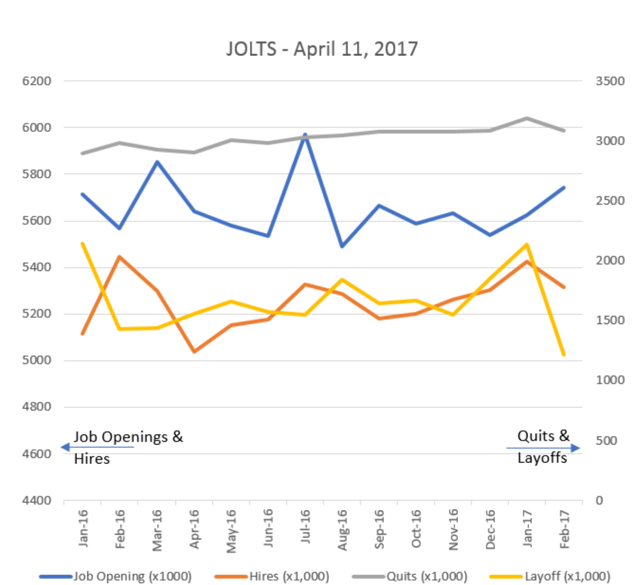
The labor participation remained at 63% and continues to be at a historically low level. The long-term unemployed also remains flat where people out of work moved for 27 weeks or longer is down a little from 23.8% to 23.3%; yet, the between 15 to 26 weeks out of work rate moved up from 14% to 15.4%.



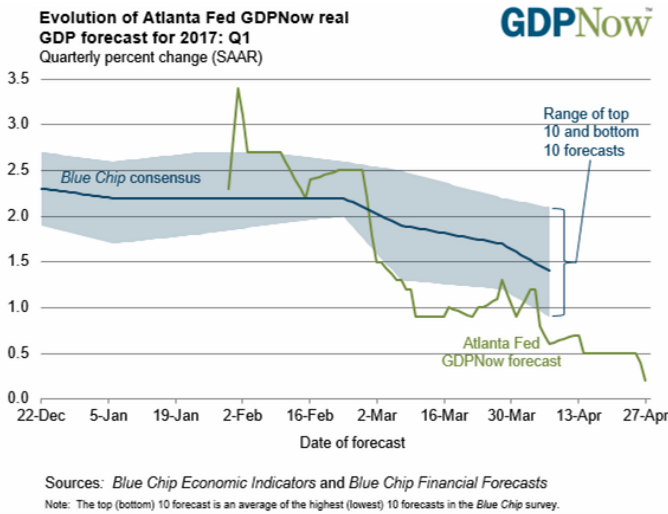


The latest total nonfarm payroll employment edged up by 98,000, slowest job creation since May last year. The 6-month average is a healthy 163,000 jobs. Since October 2010, the job market has continued to recover as the unemployment rate dropped. After 6 plus years of economic recovery and now expansion, the latest job creation may be signaling that the U.S. has reached or is near its Natural Rate of Unemployment.

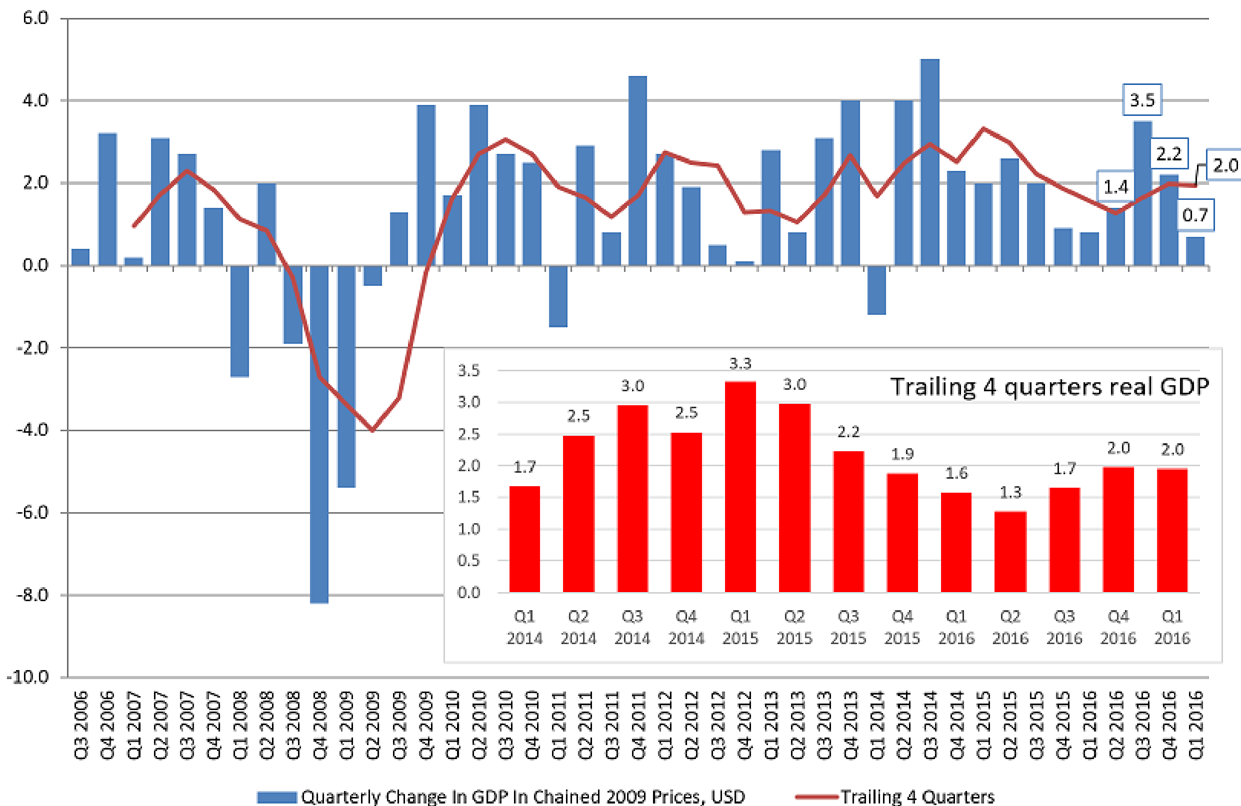
The BLS Job Openings and Labor Turnover Summary (JOLTS) is one of the factors on the FOMC monetary policy dashboard. The headline U3 unemployment number and the number of (net) new jobs created are important data, but JOLTS offers a more nuanced look at the labor economy. The report is a key barometer of economic conditions, measuring job postings in different sectors, and the number of hires and layoffs. The February data was released recently and shows little to no change. The Quit Rate is important since most workers are less willing to quit if the economy and the job prospect is not positive. This rate has not changed. The Job Opening rate has improved a bit in February while the Hire Rate has declined. This may mean that there is a lag, and it takes time to move from a position being open to a position being filled. One positive indicator is the drop in the Layoff Rate. The JOLTS data suggests that the improved sentiment has not been reflected in the real economy yet.



B) GDP

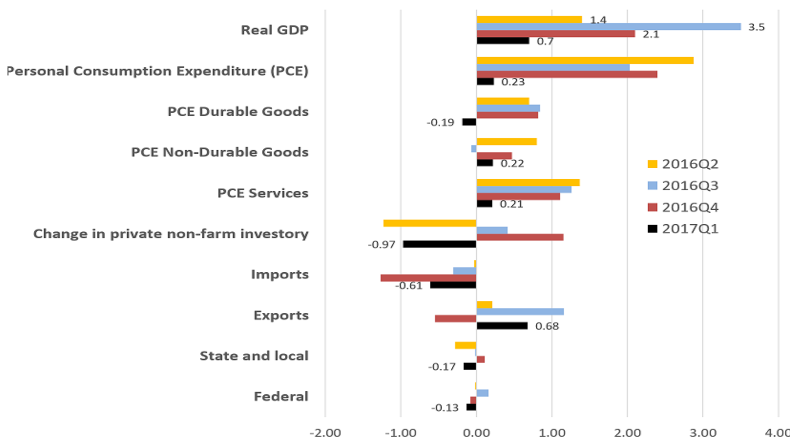


So, what about the real economy? The Federal Reserve of Atlanta GDPNow is a proprietary nowcasting model that intends to track the U.S. GDP for the trailing quarter in real time. The idea is to inform, on a real-time basis, before the Bureau of Economic Analysis (BEA) announces the rate for the prior quarter. As of April 27th, the expected rate is 0.2%[13]. This projected a much weaker first quarter GDP growth rate than the New York Federal Reserve Nowcast model at 2.8%. This difference is the use of additional soft data that is not part of the BEA dataset for estimating U.S. GDP quarterly. Although Nowcasting may be more reflective of the sentiment of the moment, it is less reflective of the trailing economy. The challenge is that sentiment changes and sentiment may not be translated into hard data in full in the future. On April 28th, the BES announced its advance estimate for the first quarter GDP, and it came in at 0.7%, closer to the GDPNow estimate.



[13] https://www.frbatlanta.org/cqer/research/gdpnow.aspx?panel=1

According to the news release[14], the anemic real GDP in the first quarter reflects a deceleration in PCE and downturns in private inventory investment and in state and local government spending. The deceleration of the economy was due to reduction in personal consumption expenditure or consumers and private inventory investment[15].



Simply put, the first quarter shows that consumers consumed less, manufacturers made fewer goods and sold out of inventory, while federal, state and local government spent less. The drop in consumer spending may be temporary. With wages and employment stable to increasing and with tax refunds in April, second quarter consumer spending is expected to move back up. One area of encouragement is capital expenditure. This has been the missing ingredient, along with fiscal (government) spending during this economic cycle. The BEA News Release shows that non-residential fixed investment is on the rise. The increase is broad to include both structures and equipment. This is partially due to a recovery of the energy sector of the economy.

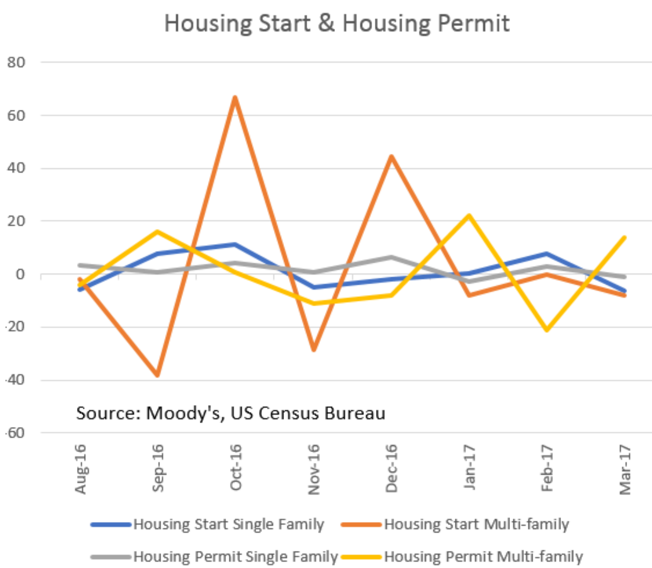
	2015				2016				2017
	I	II	III	IV	I	II	III	IV	I
Fixed investment	**0.61**	**0.70**	**0.92**	**–0.03**	**–0.15**	**–0.18**	**0.02**	**0.46**	**1.62**
Nonresidential	0.18	0.21	0.49	–0.43	–0.44	0.12	0.18	0.11	1.12
Structures	–0.39	–0.07	–0.12	–0.45	0.00	–0.06	0.30	–0.05	0.55
Equipment	0.54	–0.02	0.53	–0.16	–0.59	–0.17	–0.26	0.11	0.49
Information processing equipment	0.00	–0.09	0.40	0.02	–0.05	–0.09	0.15	0.07	0.23
Computers and peripheral equipment	–0.08	0.06	0.05	–0.13	0.02	0.05	–0.02	–0.04	0.05
Other	0.08	–0.15	0.35	0.15	–0.07	–0.13	0.17	0.11	0.18
Industrial equipment	0.01	0.15	–0.06	0.12	–0.05	0.11	–0.03	0.06	0.15
Transportation equipment	0.46	–0.02	0.26	–0.11	–0.23	–0.09	–0.29	–0.02	0.06
Other equipment	0.07	–0.06	–0.07	–0.19	–0.26	–0.11	–0.08	0.00	0.06
Intellectual property products	0.03	0.31	0.08	0.18	0.15	0.35	0.13	0.05	0.08
Software	0.15	0.11	–0.02	0.06	0.13	0.08	0.12	0.02	0.08
Research and development	–0.13	0.18	0.08	0.11	0.02	0.28	–0.03	0.02	0.01
Entertainment, literary, and artistic originals	0.02	0.02	0.02	0.01	–0.01	–0.01	0.04	0.02	–0.01

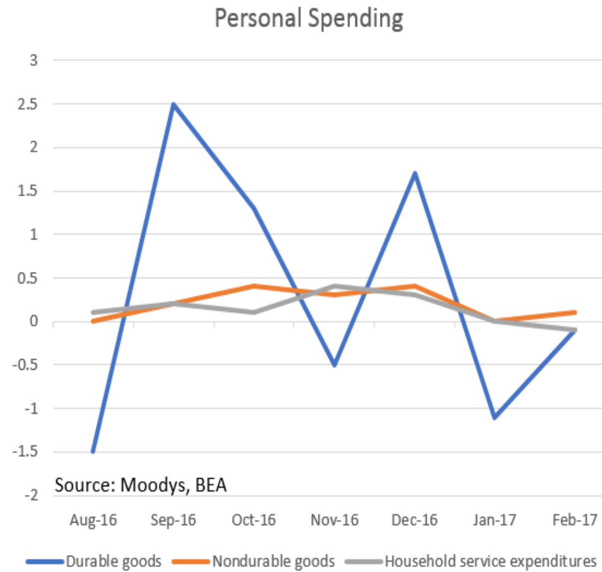
[14] https://www.bea.gov/newsreleases/national/gdp/gdpnewsrelease.htm

[15] https://www.bea.gov/national/pdf/NIPAhandbookch7.pdf Change in private inventories (CIPI), or inventory investment, is a measure of the value of the change in the physical volume of the inventories—additions less withdrawals—that businesses maintain to support their production and distribution activities. Inventories are maintained by business in order to facilitate the production and distribution of goods or services. The items held in inventory may be in the form of goods ready for sale (finished goods), of goods undergoing production (work in process), or of goods acquired for use in the production process (materials and supplies). In measuring the level of GDP, the change in, not the level of, inventories provides the appropriate measure of the flow of economic activity that is consistent with that measured by the other GDP components. A positive CIPI indicates that total production (GDP) exceeded the sum of the final sales components of GDP in the current period and that the excess production was added to inventories. A negative CIPI indicates that final sales exceeded production in the current period and that the excess sales were filled by drawing down inventories. CIPI is valued in the average prices for the period because units move in and out of inventories continuously over the course of the period.

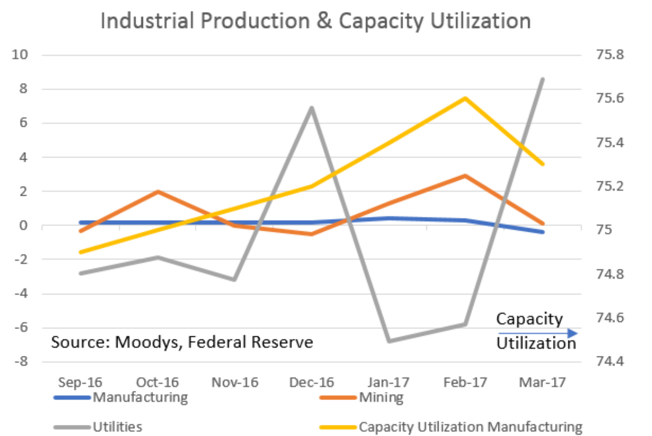
C) Consumer & Manufacturing Data

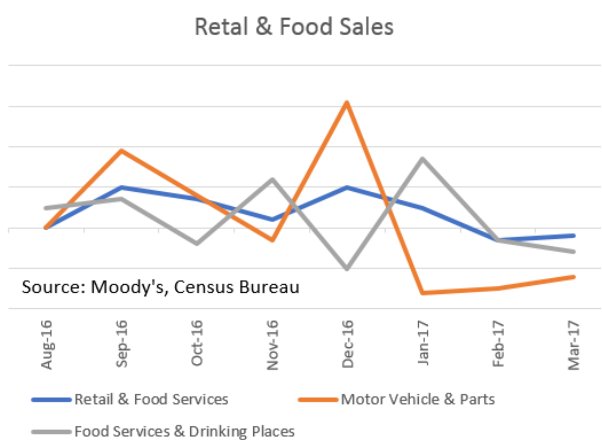
Here are a few hard data from the U.S. Census Bureau that show the state of the economy:





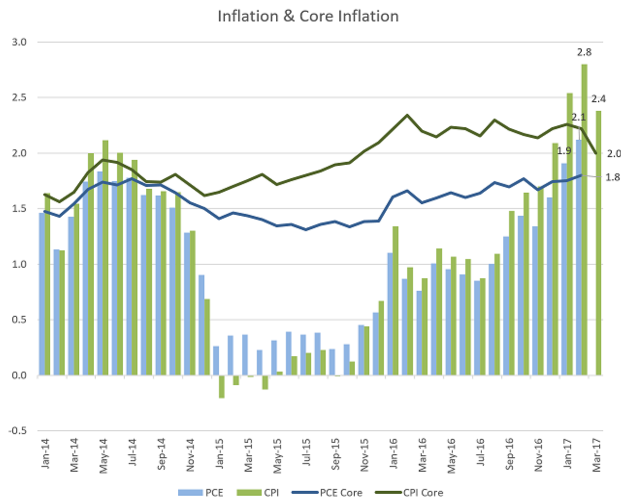
Housing starts in both single family homes and multi-family units have declined along with housing permits for single family homes. The only bright spot is in housing permit applications for multi-unit housing. In the case of overall personal spending, the aggregate inflation adjusted (real) data shows a drop in both January and February after 4-months of increases.





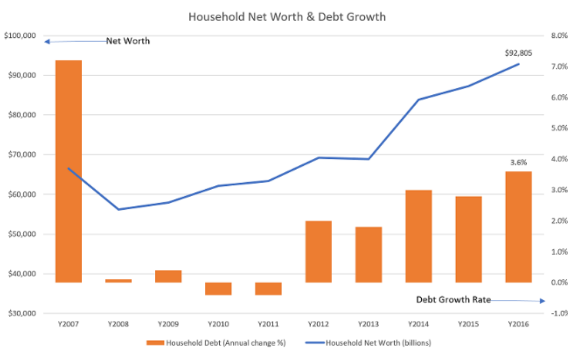
Overall retail sales were weak in March showing a -0,2% retreat while February retail sales were revised down from a +0.1% to a -0.3%. Auto sales was a major drag on sales. Meanwhile, industrial production increased by 0.5% is essentially flat and is helped by the 8.6% rebound in utilities as we reversed from a warm February. Excluding utilities, manufacturing in general seems to have rolled over and decelerated a bit. All these data confirm the slow GDP for the first quarter.

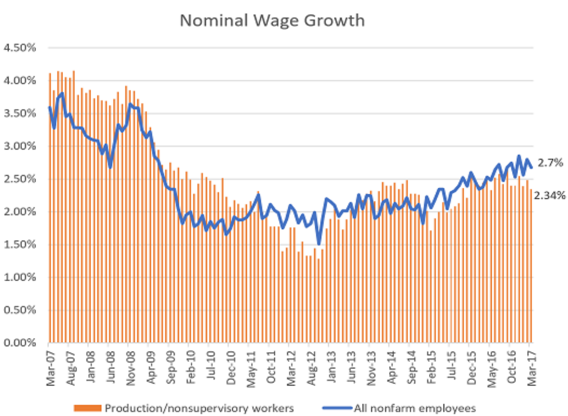
D) Inflation



According the March BLS CPI Summary[16], CPI decreased by 0.3% while the 12 month rate was +2.4%. The core CPI decreased by 0.1% with a 12 month reading of 2.0%. This is the first reduction since February 2016. The February PCE was at 2.1% with core PCE at 1.9%. BLS noted that the March negative print is caused by declines in several indexes, including those for "wireless telephone services, used cars and trucks, new vehicles, and apparel." Although energy is up 10.9% for the 12-month period, it was -3,2% for the month of March. Energy commodities, gasoline and fuel oil continue their February trend. Although a one month surprise miss does not necessarily generate a new trend from the popular reflation narrative, disappointing CPI is supported by other hard data that suggest a moderating rather than an accelerating economy going into the second quarter.

The 70%

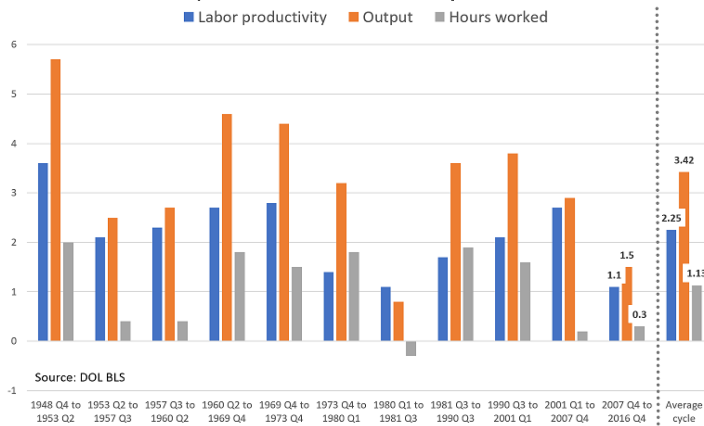




Personal consumption represents almost 70% of the $19 trillion U.S. economy, thus the condition of the consumer is important. According to the Federal Reserve March 9, 2017, Statistical Release[17], the net worth of households and nonprofits rose to the highest level at $92.8 trillion during the fourth quarter 2016. Household debt increased at an annual rate of 3.8% in the fourth quarter of 2016. Consumer credit grew 6.2%, while mortgage debt (excluding charge-offs) grew 3.1% at an annual rate. Although headline unemployment (U3) rate continues its descend, and signs of labor slack disappearing, real wages remain depressed. According to BLS, nominal wage growth was 2.34% year-over-year in March this year. At the annualized CPI at 2% in March, the real wage is barely growing. Wages are related to productivity, and labor productivity has been one of the biggest challenges in the post financial crisis world.

[16] https://www.bls.gov/news.release/cpi.nr0.htm
[17] https://www.federalreserve.gov/releases/z1/current/z1.pdf

As discussed in the TFP section earlier, global productivity has been below average. Labor productivity is a measure of economic performance that informs us of the amount of goods and services produced (i.e. output) for the labor hours used in producing those goods and services. Productivity increases when more goods and services are produced per hour of labor. The left chart[18] compares the current economic cycle productivity, output and hours worked with the past 10 cycles. With the exception of the 1980-1981 cycle, we are experiencing the lowest productivity growth since WWII. Factors that contribute to the persistent low productivity continue to be debated among economist and policymakers. Regardless, wages will not likely increase in a meaningful manner until we can improve labor productivity. Nonetheless, with more people employed (albeit at stagnant wages) and the economy continues to recover and expand (albeit at the New Normal rate), the direction of the change is a positive factor towards stability which ultimately encourages consumer to consume.



Debt Ceiling & Budget — Let the games begin!

On November 2, 2015, President Barack Obama signed the "Bipartisan Budget Act" which included a section entitled "Temporary Extension of Public Debt Limit." This provided a temporary freeze on imposing a limit on the federal debt to end on March 15, 2017. On March 8th, Treasury Secretary Steven Mnuchin in his letter[19] to House Speaker Paul Ryan stated that the "Bipartisan Budget Act of 2015 suspended the statutory debt limit through Wednesday, March 15, 2017. Beginning on Thursday, March 16, 2017, the outstanding debt of the United States will be at the statutory limit. At that time, Treasury anticipates that it will need to start taking certain extraordinary measures in order to temporarily prevent the United States from defaulting on its obligations." According to the October 1, 2015 Congressional Research report[20], The Debt Limit: History and Recent Increases, Congress has modified the debt limit 14 times since 2001.

"*If the U.S. Treasury were precluded from borrowing due to a binding debt limit in times when federal outlays outpaced revenues, the government would no longer meet all of its legal obligations in a timely manner. If the limit prevents the Treasury from issuing new debt to manage short-term cash flows or to finance an annual deficit, the government may be unable to obtain the cash needed to pay its bills or it may be unable to invest the surpluses of designated government accounts (federal trust funds) in federal debt as generally required*

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[18] https://www.bls.gov/opub/btn/volume-6/below-trend-the-us-productivity-slowdown-since-the-great-recession.htm
[19] https://www.treasury.gov/initiatives/Documents/DL_SLGS_20170308_Ryan.pdf
[20] https://fas.org/sgp/crs/misc/RL31967.pdf

by law. In either case, the Treasury is left in a bind; the law requires that the government's legal obligations be paid, but the debt limit may prevent it from issuing the debt that would allow it to do so on time. Among other consequences, a sustained inability to pay obligations on time could hinder the U.S. Treasury's ability to borrow on advantageous terms in the future. The Government Accountability Office has also concluded that delays in debt limit increases could lead to "serious negative consequences for the Treasury market and increase borrowing costs." A delay in interest payments on Treasury securities would trigger a default and risk serious negative repercussions for economies and financial markets around the world. Default might be avoided in such situations by delaying other types of federal payments and transfers. A government that delays payment of an obligation, in effect, borrows from vendors, contractors, beneficiaries, state and local governments, or employees who are not paid on time. In some cases, delaying payments incurs interest penalties under some statutes such as the Prompt Payment Act, which directs the government to pay interest penalties to contractors if it does not pay them by the required payment date, and the Internal Revenue Code, which requires the government to pay interest penalties if tax refunds are delayed beyond a certain date."

On March 15th, the temporary extension expired, and now the federal government is not able to raise more debt until the ceiling is raised once more.
Separately, lawmakers passed a stop-gap spending bill last December to fund federal agencies through midnight of April 28th[21]. Congress needs to reach a bipartisan compromise on new legislation to avoid a government shutdown through fiscal 2017[22], which ends on September 30th. There should be no doubt that the Congress will pass a short-term measure to keep the government funded for a few days or weeks past the April 28th deadline to give themselves more time to negotiate. This process is complicated by the Trump Administration's demand to be included in the stop gap measure 1) $1.4 billion to begin building "that wall" along the Mexican board estimated at a total cost of $21 billion, 2) $18 billion cut in domestic programs, 3) defund Planned Parenthood, 4) stop federal grants to "sanctuary cities" by states, and 5) $30 billion for defense and combat operations. Many of these conditions are not supported by the Democrats, and both sides understand that any spending bill cannot be done by the Republicans alone. There is a series of "possible" government shut down scenarios. The base case is that the Congress will pass a series of short-term measures to buy more time or to kick the can down the road to avoid a shut down. But the unpredictable Trump Administration with a self-proclaimed mandate to "drain the swamp" and to disrupt the status quo is the wild card in an already politically charged environment. On Monday, April 24, President Trump suggested that he is open to the idea to delay his secure funding for building the wall along the U.S.-Mexico border even as he continues to push in that direction in his campaign style speeches to his supporters.

[21] http://appropriations.house.gov/news/documentsingle.aspx?DocumentID=394665
[22] http://www.crfb.org/blogs/appropriations-watch-fy-2017

On March 24th, House Speaker Paul Ryan pulled the American Health Care Act (AHCA) to repeal and replace Obamacare since the Republicans did not have enough votes for the measure. AHCA would repeal Obamacare subsidies that are tied to income and premiums. It would also significantly curtail federal support for Medicaid and allow states to require able-bodied adults to work. After 2020, states that expanded Medicaid would no longer receive enhanced federal funding to cover low-income. The Congressional Budget Office estimated the AHCA would reduce federal deficits by $337 billion over the next ten years. President Trump is now again attempting to reintroduce a repeal and replace Obamacare legislation in another effort to take the savings from killing Obamacare to offset his tax reform and fiscal spending agenda. On April 28th, House Majority Leader, Kevin McCarthy, announced that there would be no vote to repeal and replace Obamacare originally expected to be on the 29th. It is highly unlikely that the repeal and replace effort will be successful.
On April 26th, the Trump Administration announced tax reform[23] for individual and business tax payers – the 2017 Tax Reform for Economic Growth and American Jobs[24]

- Replace the current 7 tax brackets to 3: 10%, 25% and 35%
- Double standard deduction thereby eliminating taxes for the first $24,000 of income
- Repeal alternative Minimum Tax (AMT), the 3.8% Obamacare tax and the Federal estate transfer tax
- Preserve current favorable tax treatment for home ownership, charitable giving and retirement savings while removing many deductions
- No tax on company's foreign profits and a special one-time program to allow companies to bring their cash back to the U.S.
- Lowering company tax rate to 15% from 35%

The Committee for a Responsible Federal Budget said the plan would probably lead to a loss in government revenue by roughly $5.5 trillion over 10 years. This proposed list of tax reform measures is likely a non-starter even within the Republican Party. One thing is certain, the proposed reforms will not be revenue neutral and will sharply increase the nation's deficit if enacted. Any of these policy issues, challenges and proposals on their own would require substantial negotiation, debate and politicking that it is increasingly unlikely that any of structural reforms promised by candidate Trump will become reality in 2017. As this reality sinks in, investors will adjust their sentiment and revise their expectation.

U.S. Monetary Policy

The March FOMC meeting rate hike was FOMC's "stealing a base" event. FOMC has maintained that it is data dependent and based on the data presented during the March meeting, there was no significant changes to the economy that warranted an interest rate increase. The Fed wants to normalize rates at a faster pace than the once a year rise in 2015 and 2016 as core inflation continues to move towards the 2% target and the unemployment rate is at or close to NAIRU. The FOMC is more confident now about the meeting the 2%

[23] https://www.whitehouse.gov/blog/2017/04/26/president-trump-proposed-massive-tax-cut-heres-what-you-need-know
[24] http://www.washington.edu/federalrelations/files/2017/04/WHfactsheet04262017.pdf

inflation target. In Chair Yellen's March 15th press release, she stated that the Committee will carefully monitor actual and expected inflation developments relative to its "symmetric" inflation goal. This means that after years of undershooting the inflation target even with unconventional monetary policies, we will likely experience an overshooting of inflation above the 2% target. This signals that the FOMC will continue to remain accommodative and will not likely reach its neutral interest rate quickly. The Fed recognizes that the new neutral rate is likely to be lower than the neutral rate of the past.

Neil Kashkari, President of the Minneapolis Fed, the only dissenter, stated that "recent data had not pointed to further progress on the Committee's dual objectives and thus had not provided a compelling case to firm monetary policy at this meeting."

The expected ongoing strength in the U.S. economy warrants gradual increases in the federal funds rate over the next few years to a lower neutral rate[25], which is expected to remain below levels that prevailed in previous decades. The FOMC projects the federal funds rate at 1.4% by yearend (i.e. 2 more rate hikes this year), 2.1% by yearend 2018 (i.e. 3 rate hikes next year) and 3% by the yearend 2019 (i.e. 3 to 4 more rate hikes). The economic outlook is highly uncertain, and changes in fiscal and other policies could potentially affect the outlook.

March is one of the four meetings where the FOMC releases their Summary of Economic Projections and discloses their member's projected appropriate monetary policy path forward (i.e. the dot plot). The following table summarizes the position of the 17 members for the most recent two Economic Projection releases (i.e. December 2016 and March 2017 meetings).

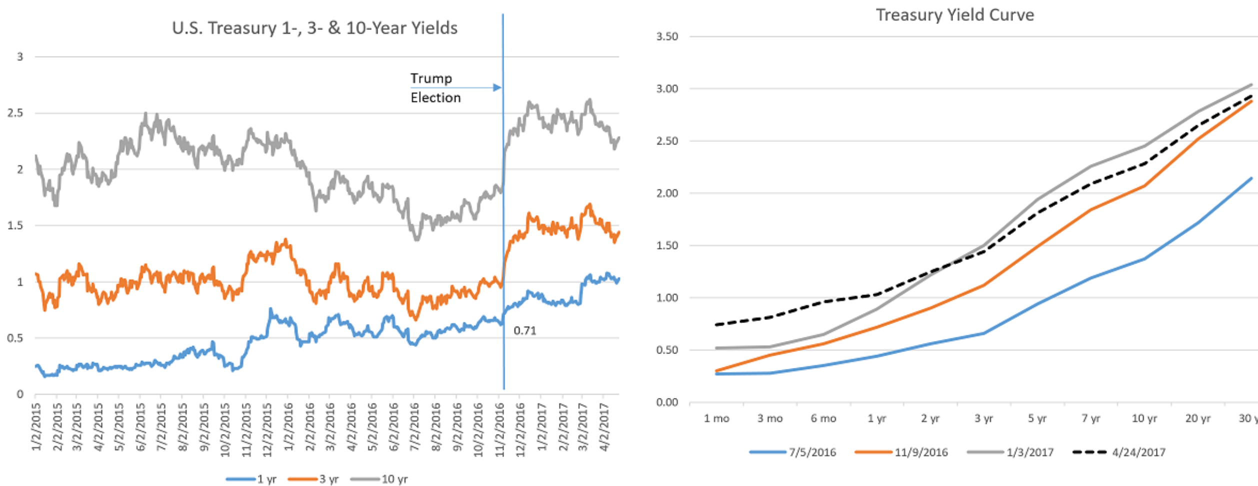
	Y2017		Y2018		Y2019		Longer run	
	16-Dec	17-Mar	16-Dec	17-Mar	16-Dec	17-Mar	16-Dec	17-Mar
3.875					1	2		
3.750							1	1
3.625					1			
3.500							1	1
3.375			1	1				
3.250			1	1	2	2		
3.125					2	3		
3.000			1	1	2	2	7	8
2.875				1	2	3		
2.750							6	5
2.625			2	1	3	2		
2.500							1	1
2.375			2	3	2	2		
2.250								
2.125	1	1	3	6	1			
2.000								
1.875			5	1				
1.750	1							
1.625	3	4	1	1				
1.500								
1.375	6	9						
1.250								
1.125	4	1						
1.000								
0.875	2	2	1	1	1	1		

The left table shows the range of projections for the average federal fund rates through 2019 and in the "longer run". Although the range of projection for each year has remained unchanged, there is a clear sign that more voting members are moving toward a higher rate regime (the darker color within each band). For example, the March meeting shows that there is a clear movement toward a higher rate by the end of 2017. Three more members projected the rate to be at 1.375 and one more at 1.625 rate. This trend is also true for 2018 and 2019. Further, the "longer run" neutral rate appears to be steady at or around 3%. Assuming the long-term projection of inflation remains at or around 2%, this means the FOMC is expecting a real neutral rate to be at 1%.

According to the meeting minutes, the FOMC has an extensive discussion regarding its balance sheet normalization. The members reaffirmed the approach to balance sheet

[25] The interest rate that is neither expansionary nor contractionary and keeps the economy operating on an even kneel

normalization expressed in the Committee's Policy Normalization Principles and Plans announced in September 2014. FOMC survey data shows that market participants saw a change in the FOMC's policy of reinvesting principal payments on its securities holdings as most likely to be announced in late 2017 or the first half of 2018. Most market participants anticipated that, once a change to reinvestment policy was announced, reinvestments would most likely be phased out rather than stopped all at once. Our base case is for the FOMC to raise rates two more times this year as we do not believe that the forward looking soft data will be fully materialized to significantly improve the economy and increase inflation. However, if the FOMC decides to test the impact of a change in reinvestment policy, such a move would replace at least one interest rate hike since the change exert similar financial condition tightening effect.
Since Donald Trump's victory in November, the U.S. treasury yields have spiked from the low set post-Brexit. However, more recently, the market is demonstrating some doubt as to the timing or the ability the Trump Administration has in fulfilling Donald Trump's campaign promises. Yields have come down since the recent highs even though rates remain elevated as compared to the low reached on July 5, 2016.

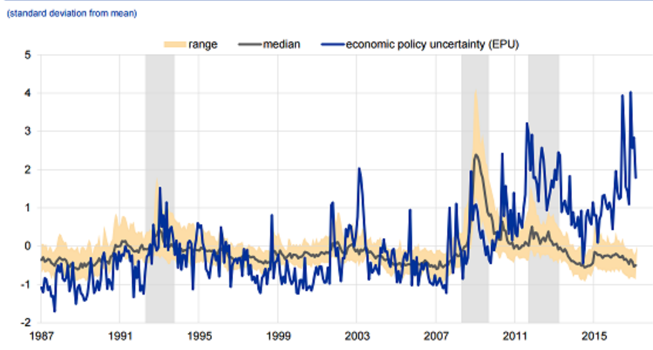


Since the 10-year reached 2.62% reached on March 13th, it has retreated. We expect the curve to continue to flatten with the short end of the yield curve moving in locked step with FOMC rate increases and the longer end rates range bound. As of April 28th, the 10-year treasury is yielding at 2.29%, just 5 bp above the 2.24% yield on January 4, 2016, or 22bp above 2.07% yield the day after the election. Central bank policies affect and are affected by other central bank policies as interest rates impact currency, trade, growth, inflation and finance.

The Old World

Unlike the FOMC, ECB has a single mandate - to maintain price stability of the Eurosystem. On January 19th, ECB President, Mario Draghi, announced holding interest rates unchanged and affirmed to expect the key ECB interest rates to remain at present or lower levels for an extended period of time and well past the horizon of the net asset purchases. However, ECB will only continue its asset purchase program at the monthly pace of €80 billion until the end of March 2017 and starting April 2017, the net asset purchases are intended to continue at a

monthly pace of €60 billion until the end of December 2017 or beyond, if necessary. Although President Draghi denies that lowering the pace is not tampering, the economic projection appears to support such an action. The March 2017 ECB staff macroeconomic projections[26] states that real GDP rose by 0.4% in the fourth quarter of 2016 with real GDP expected to grow by 1.8% in 2017, by 1.7% in 2018 and by 1.6% in 2019. The recovery appears to be broad based both across sectors and countries with robust private consumption and a positive contribution from investment. A number of favorable factors are expected to continue to support domestic demand, underpinned by the ECB's very accommodative monetary policy stance. Euro area exports are also projected to strengthen supported by an expected recovery in global trade and the past weakening of the exchange rate of the euro. Of course, downside factors remain. The outcome of Brexit and the Trump presidency contribute to policy uncertainty. Economic uncertainty can affect household purchase decisions and reduce banks' willingness to lend. Yet, escalation of economic policy uncertainty is not reflected, thus far, in the financial and economic factors. For now, private consumption growth, nominal disposable income growth, favorable bank lending considerations and the super accommodative monetary policies remain robust for euroarea growth. In its April meeting, the ECB kept its main rate at 0% and deposit facility at -0.4% while European economic confidence continues to shoot higher. At the same time, EU's statistic bureau reported that the annual rate of core inflation had shot up from 0.7% in March to 1.2% this month while the headline rate of inflation rose from 1.5% to 1.9% over the same period. ECB is beginning to feel the pressure to taper and to normalize rates.



Land of the Rising Sun

On April 27th, Bank of Japan (BOJ) announced[27] that it maintains a -0.1% policy rate while targeting a 0% yield for its 10-year government bonds. Further, the BOJ continues its purchase of exchange traded funds and REITs at an annual rate of 6 trillion yen and 90 billion yen respectively. In the BOJ's Outlook for Economic Activity and Prices[28], the Bank expects Japan's economy to continue expanding and maintain growth at a pace above its potential

[26] https://www.ecb.europa.eu/pub/pdf/other/ecbstaffprojections201703.en.pdf
[27] https://www.boj.or.jp/en/announcements/release_2017/k170427a.pdf
[28] https://www.boj.or.jp/en/mopo/outlook/gor1704a.pdf

through fiscal year 2018 on the back of highly accommodative financial conditions and the effects of the government's large-scale stimulus measures. The year-on-year rate of change in the consumer price index (CPI, all items less fresh food) is likely to continue an uptrend and increase toward 2 percent, mainly on the back of an improvement in the output gap and a rise in medium- to long-term inflation expectations.

What's Next

A third of the year is behind us and Donald J. Trump has been our president for 100-days. Consumer and business sentiments remain high with big hopes and expectations. But as the year goes forward, political reality will likely bring everyone down to earth. Thus far, the hard, backward-looking data have not been supportive of the more euphoric "alternative reality". This is not to say that the market view of the future cannot be realized. It is to say that we have not seen any proof that it would be real. If the three arrows of monetary, fiscal and structural policies are deployed at the same time, we would see a jump in growth with a self-feeding loop of more positive economic outcomes. The issue is can and will the fiscal and structural changes promised by the Trump Administration become political reality. This is where the means to the end matters. It is not only the direction of change but the scale, scope and timing of the changes to come. After 100-days and the budget and debt ceiling negotiation process and (the lack of) timing has not inspired any confidence. The synchronized global economic growth/relation and the healthier American consumer are giving us better confidence about 2017 and 2018. The geopolitical and trade risks (including those imposed by the Trump Administration) continue to be discounted. We suspect that sentiment will change and change quickly. In this uncertain (may be a little less uncertain than 2016 Q4) environment, risk management remains job one and we should question our investment directional convictions often.

Sincerely yours,
CHAO & COMPANY, LTD.
Philip Chao
Principal & CIO

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