



MORNING BRIEFING

October 16, 2017

Bitdollars

See the [collection](#) of the individual charts linked below.

(1) Global economy lifting all boats. (2) Consensus earnings expectations rising around the world. (3) Another happy canary chirping in Malaysia. (4) China's imports and exports showing solid y/y gains. (5) US retail sales and CPI lift GDPNow to 2.7% for Q3. (6) Fed officials obsessed with solving the "lowflation" puzzle. (7) Fed's doves cooing more loudly. (8) True confession by ex-Fed governor: Inflation model is broken. (9) Bernanke calls on Fed to overshoot inflation target. (10) Brainard voices by-the-way concerns about asset price melt-ups. (11) Melissa explains central bank backed cryptocurrencies. (12) Get ready for bitdollars.

Global Economy: Happy Days. Our friends at Lazard Asset Management ran a cool chart showing how the global synchronized recovery is lifting earnings estimates among the major MSCI stock price indexes around the world ([Fig. 1](#)). It was featured in the 10/13 *The Daily Shot Brief*. The data are time series for analysts' consensus expectations for earnings growth over the next 12 months. Debbie and I have been tracking lots of other indicators from around the world that have been pointing in the same upbeat direction since late last year. Here is a quick update:

(1) *Forward earnings.* The global synchronized upturn is also very visible in forward earnings for the MSCI stock indexes for the US, Developed World ex- US, and Emerging Markets ([Fig. 2](#)). The US is at a record high, while the other two broad measures of forward earnings have been in cyclical rebounds since late 2016.

(2) *Asia.* August's industrial production in Malaysia jumped 1.2% m/m and 6.8% y/y to a new record high ([Fig. 3](#)). Indonesian output has stalled at a record high for the past three months, with a gain of 2.3% y/y through August. Also showing strength are China's September imports and exports, up 18.7% and 8.1% y/y through September ([Fig. 4](#)).

(3) *US.* The Atlanta Fed's GDPNow [model](#) raised its forecast for Q3 real GDP growth from 2.5% to 2.7% on Friday following the release of a stronger-than-expected retail sales report and a weaker-than-expected core CPI, both for September. On a three-month basis, adjusted for inflation, Debbie reports that the retail sales report was mixed: up 2.6% (saar) for the total, 2.0% excluding building materials, and just 1.5% for core retail sales (excluding autos, gasoline, and building materials) ([Fig. 5](#)).

The headline CPI rose 0.5% m/m during September as a result of a temporary spike in gasoline prices, and just 0.1% on a core basis. On a y/y basis, the former was up 2.2%, while the latter rose 1.7%, remaining below the Fed's 2% target ([Fig. 6](#)). Excluding food, energy, and shelter, the CPI inflation rate is just 0.6% ([Fig. 7](#)).

The Fed: Stargazing. Fed officials remain puzzled and concerned that inflation remains so low. Participants of the September FOMC meeting were split on solving the inflation puzzle: Why has inflation been so stubbornly low despite historically low levels of unemployment and incredibly accommodative monetary policy? The [minutes](#) demonstrated the debate: "In their review of the recent data and the outlook for inflation, participants discussed a number of factors that could be contributing

to the low readings on consumer prices this year and weighed the extent to which those factors might be transitory or could prove more persistent.”

Melissa and I are in the latter camp that believes structural forces are likely to continue to weigh on inflation. FRB-ATL Fed President Raphael Bostic pointed out in a 10/12 [speech](#) that “abstracting from those transitory factors still leaves the inflation trend running a bit below the FOMC’s target.” The minutes stated that “many” participants are concerned “that the low inflation readings this year might reflect not only transitory factors, but also the influence of developments that could prove more persistent.”

If the low rate of inflation persists, it is safe to say that the Fed isn’t going to raise interest rates very quickly or much, if at all, from where they are now. It was noted in the minutes that “some patience in removing policy accommodation while assessing trends in inflation was warranted.” A “few” participants thought that “no further increases in the federal funds rate were called for in the near term or that the upward trajectory of the federal funds rate might appropriately be quite shallow.” In contrast to the view of the “many,” just “some” participants worried about upside risks to inflation from an “unduly slow pace” of rate hikes. Here’s more on the subject from the Fed’s talking heads:

(1) *Big bang theory*. In a [speech](#) on 10/12, Fed Governor Lael Brainard described the relationships that once guided monetary policymakers as currently “tenuous.” She was referring to the breakdown in the expected relationship between unemployment and inflation. That is, when unemployment is low as it is now, inflation should pick up. Specifically, Brainard highlighted that the Phillips curve, which is like the big bang of monetary policymaking theory, is now “very flat.” Former Fed Governor Daniel Tarullo said in a 10/4 [speech](#) at the Brookings Institution: “The substantive point is that we do not, at present, have a theory of inflation dynamics that works sufficiently well to be of use for the business of real-time monetary policymaking.”

(2) *Constellation of factors*. Three “common global factors” were cited in the FOMC minutes as the root causes of the breakdown in inflation theory: the change in workforce demographics (as baby boomers retire and are replaced by younger and presumably lower-paid workers), low productivity growth, and competitive pressures. In a 10/13 [interview](#) with Business Insider, FRB-SL President James Bullard added a fourth; he sees technology as a disinflationary force as well.

In a 10/11 [speech](#), FRB-SF President John Williams reported that his staff identified several transitory factors weighing on inflation: prescription drug and other healthcare costs, mobile phone plan prices, and airline tickets. Nevertheless, Williams concluded that the “stars are aligned. They all point to a new normal for interest rates.” According to Williams, the new normal for interest rates isn’t very much higher than rates are now. Similarly, Bullard said: “Interest rates probably don’t have to change much from where they are today.”

(3) *Shooting stars*. In her recent speech, Brainard repeatedly cautioned against being “preemptive” or “premature” in raising rates. She referred to a [paper](#) by former Fed Chair Ben Bernanke, *Monetary Policy in a New Era*, in which Bernanke suggests explicitly overshooting the FOMC’s inflation goal for the “new era.” Specifically, Bernanke proposes “a temporary price-level target” that “would delay the liftoff of the policy rate from the lower bound until the average inflation over the entire lower bound episode has reached 2% and full employment is achieved.”

Though Brainard clarified that she was not talking about current policy, she seemed to be saying that Bernanke’s logic makes sense for today’s “new normal” environment, in which the old theories no longer do make sense. The proposal wouldn’t be without its risks, she cautioned; for example, the market might question how serious the Fed was about its inflation target, and the central bank might

lose its nerve to overshoot its inflation target for a prolonged period of time. But it's obvious that she's taking Bernanke's idea seriously.

(4) *Escape velocity*. Brainard also said that she is concerned about not escaping the zero lower bound soon enough. Moving interest rates higher would provide room for monetary policy maneuvers in the event of a future crisis. The minutes indicated that other participants share her angst "that the persistence of low inflation might result in the federal funds rate staying uncomfortably close to its effective lower bound." But unless inflation speeds up soon, the Fed might have no easy way to get away from zero for now.

(5) *Financial stability*. It appears that more Fed officials are turning more dovish. According to the latest FOMC minutes, "only a couple" of participants "expressed concern that the persistence of highly accommodative financial conditions could, over time, pose risks to financial stability." Brainard did mention near the end of her dovish speech that persistently low interest rates risked raising asset valuations, which might lead to "financial imbalances."

She lamely concluded: "Macroprudential tools are the preferred first line of defense to address such financial imbalances, which should in principle enable monetary policy to focus on price stability and macroeconomic stabilization. But the development and deployment of macroprudential tools is still relatively untested in the U.S. context, and the toolkit is limited."

Melissa and I conclude: "Let the Melt-Up begin!"

Central Banks: Chomping at the Bits. Global banking organizations are actively discussing the possible proliferation of central bank backed cryptocurrencies (CBCs). It isn't easy to say that three times fast. And it isn't easy to explain how the technology would work. In a nutshell, CBCs would leverage distributed ledger technology (DLT) like blockchain, which supports bitcoin. But unlike bitcoin, CBCs would have the backing of governments. In other words, there would be bitdollars, biteuros, bityen, bityuan, and so forth.

Why would central banks want to get behind a cryptocurrency? There are all sorts of reasons why not to do so. By nature, DLTs are not centralized and are hard to control and to audit for accuracy. CBCs might pose lots of systemic risks if the technology's stability and its susceptibility to cyberattacks came under question. The implementation of CBCs also could cause all sorts of havoc for the banking industry at large. Financial intermediaries could be rendered useless if central banks were to directly open access to CBCs to retail customers. It's no wonder that Jamie Dimon [called](#) bitcoin a fraud. DLT could be a big threat to his business. "We're not going to call it banking—we're going to call it something else," FRB-SL President James Bullard [told](#) *Business Insider* about the future of the industry.

I asked Melissa to mine the [section](#) in the September *BIS Quarterly Review* on the topic titled "Central bank cryptocurrencies" for answers to "why." One sentence about mid-way through the 16 pages piqued her interest. It stated: "Fedcoin has the potential to relieve the zero lower bound [ZLB] constraint on monetary policy." Beyond that, the section is worth a read for those interested in a deep dive on a CBC's potential properties in relationship to bitcoin and other existing alternative-coins. For now, let's focus on the ZLB tidbit in the BIS study:

(1) *Bitcoin, Fedcoin, and bitdollars*. Global banking organizations are just starting to take the concept of CBC seriously now. But the idea is at least several years old. In the footnotes, the authors of the BIS section credit two 2014 works with having originated the concept of CBCs. Both are thought pieces from the blogosphere that introduce the concept of "Fedcoin" and "bitdollars" interchangeably as a

Federal Reserve backed cryptocurrency.

(2) *Cryptocurrencies as real money?* In 7/21/2014 [blog post](#) referenced by the BIS, Sina Motamedi outlined a scenario in which a reputable private entity—Google, for example—implements a bitcoin-like currency backed by the promise that it could be exchanged for dollars at any time. But what if, for some reason or another, Google were not able to meet its promises in an unforeseen bank-run-type event? The author concludes that that's why central banks need to understand cryptocurrencies as they develop. "If central banks wait too long, there will be risks of bank runs and financial instability from privately issued crypto-currencies." Bitcoin banking startups could face a similar fate.

(3) *A central bank for DLTs.* "Bitcoin needs a central bank. And BitDollar would be the answer to that," supposes Motamedi. Central banks could create their own cryptocurrencies and outlaw the use of any others. While the proliferation of CBCs currently is far from here, the PBOC already has cracked down on cryptocurrency transactions, [reported](#) the *South China Morning Post* (SCMP) just last month. In addition, the PBOC is enthusiastic about creating its own digital currency, says the SCMP.

(4) *Bye-bye, Benjamins.* The distinction between dollars and Fedcoin could be wiped out if the Fed were to establish a fixed 1-to-1 relationship between them. "Just think of dollars as an abstraction which can be manifested in traditional paper form and now digital form. And like original gold-backed currency, we eventually won't even need regular dollars to back BitDollars, as long as the network effects of BitDollars exist to justify their value," he wrote.

Inspired by Motamedi's thoughts, JP Koning explored the concept of Fedcoin in a 10/19/14 [blog post](#) also cited by the recent BIS report. If Fedcoin were to be widely adopted, the Fed might have "a good case for entirely canceling larger denominations like the \$100 and \$50," said Koning.

(5) *Fear not the ZLB.* If cash were to become obsolete, that could effectively free the Fed from the dreaded ZLB, i.e., the zero lower bound. The ZLB is feared by monetary policy makers because it's the point at which interest-rate tools become ineffective at creating stimulus. Cash can become a nuisance for monetary policy if the Fed needs to implement a negative interest rate policy (NIRP) in order to meet its goals for employment and inflation. Under NIRP, cash would be in higher demand as it would be cheaper to hold onto cash than to deposit it in a savings account with a negative interest rate.

To get around that problem, Koning hypothesizes that interest could be paid on each Fedcoin at a rate determined by the Fed. "After all, if the Fed wished to reduce the rate on reserves to -2 or -3% in order to deal with a crisis, and reserve owners began to bolt into Fedcoin so as to avoid the penalty, the Fed would be able to forestall this run by simultaneously reducing the interest rate on Fedcoin to -2 or -3%. Nor could reserve owners race into cash, with only low denomination and expensive-to-store" bills available, Koning theorized. So just as interest could be earned on Fedcoin, a negative rate could be imposed on Fedcoin.

(6) *More ammo for bankers.* Currently, the Fed's goal of maximum employment generally has been met and inflation remains stable, though below the Fed's 2% target. So the Fed's main reason for raising rates now is to be able to provide additional stimulus should it be needed in the event of a future crisis. It's possible that more stimulus would be available in a Fedcoin world. So the prospect of untapped monetary stimulus could allow the Fed to keep interest rates lower for longer.

(7) *Ready or not.* Who knows when the Fed might seriously explore and implement its own CBC? For now, bankers around the world are paying more attention to the idea. In a 9/29 [speech](#), IMF head Christine Lagarde focused on central banking and fintech. She argued that CBCs "could be fully transparent, governed by a credible, pre-defined rule, an algorithm that can be monitored ... that might

reflect changing macroeconomic circumstances.”

Lots of financial press articles translated her words into IMF support for CBCs. Some joked about the potential for “IMFcoin.” Lagarde added: “So in many ways, virtual currencies might just give existing currencies and monetary policy a run for their money.” In other words, central banks might be forced into CBCs, ready or not.

Looks like the Fed is quickly coming to that realization. Just last week, a “faster payments” team of 27 industry leaders was [announced](#) by the Federal Reserve Board. The interim collaboration work group, now formally the “work group,” was established by the Fed’s Faster Payments Task Force.

In an introductory [report](#), the Faster Payments Task force stated: “Non-bank providers such as technology companies have begun to enter the market and develop innovative new solutions to meet the changing expectations of consumers and businesses for faster payment methods. Although innovation is taking place, faster payments solutions are being developed in a fragmented way without collaboration across the payment industry or broad adoption across the market as a whole.”

CALENDARS

US. Mon: Empire State Manufacturing Index 20.0, Treasury Budget \$3.0b, Kashkari. **Tues:** Headline & Manufacturing Industrial Production 0.1%/0.3%, Capacity Utilization 76.2%, Import & Export Prices 0.5%/0.4%, Treasury International Capital. (*Wall Street Journal* estimates)

Global. Mon: China CPI & PPI 1.6%/6.4% y/y, Japan Industrial Production. **Tues:** European Car Sales, Eurozone Headline & Core CPI 1.5%/1.1% y/y, Germany ZEW Economic Sentiment 20, UK Headline & Core CPI 3.0%/2.7% y/y, Carney, Ramsden, Tenreiro. (DailyFX estimates)

STRATEGY INDICATORS

Global Stock Markets Performance ([link](#)): The US MSCI index rose 0.1% last week, and ranked 39th out of the 49 markets as 40 countries rose in US dollar terms. That compares to 13th a week earlier, when it rose 1.2% as 29 countries moved higher. The AC World ex-US index’s 1.7% gain outperformed the US MSCI for the first time in three weeks and was its best in 13 weeks, and compares to a 0.4% gain a week earlier. All regions rose w/w, but EM Eastern Europe performed best last week with a gain of 2.6%, followed by EMEA (2.5%), and EM Asia (2.0). EM Latin America was the worst-performing region as it rose only 0.4% w/w, followed by BRIC (0.8), EMU (1.2), and EAFE (1.6). South Africa was the best-performing country with a gain of 5.6%, followed by Korea (5.4), Greece (4.9), Hungary (4.8), and Poland (4.3). Pakistan was the worst performer as it fell 2.6%, followed by Mexico (-2.0), Sri Lanka (-1.1), and Egypt (-0.6). The US MSCI is up 14.1% ytd, with its ranking down two places w/w to 33rd of the 49 markets, and continues to trail the AC World ex-US (21.1) on a ytd basis. Forty-five of the 49 markets are positive ytd, led by Argentina (68.9), Poland (50.5), Austria (49.7), China (46.7), Korea (38.8), and Chile (36.9). The worst country performers ytd: Pakistan (-26.9), Israel (-4.8), Jordan (-2.8), and Russia (-1.1). BRIC is the best-performing region ytd with a gain of 35.9%, followed closely by EM Asia (35.4) and ahead of EM Latin America (26.7) and EMU (25.2). The worst-performing regions, albeit with gains: EMEA (10.1), EM Eastern Europe (11.2), and EAFE (19.0).

S&P 1500/500/400/600 Performance ([link](#)): Last week, the LargeCap and MidCap indexes rose for a fifth straight week and the seventh time in eight weeks, but SmallCap fell for the first time in five weeks. LargeCap’s 0.2% rise edged out MidCap’s miniscule gain of less than 0.1% and SmallCap’s 0.7% decline. LargeCap and MidCap ended the week 0.1% below their record highs on October 11 and 3, respectively. SmallCap finished the week down 1.1% from its October 3 record. Eighteen of the 33

sectors rose w/w, compared to 27 a week earlier. Last week's biggest gainers: LargeCap Real Estate (1.8), MidCap Utilities (1.8), SmallCap Real Estate (1.8), and LargeCap Consumer Staples (1.5). Last week's worst performers: LargeCap Telecom (-4.6), SmallCap Consumer Discretionary (-3.0), SmallCap Health Care (-2.9), and MidCap Health Care (-2.4). Twenty-six of the 33 sectors are positive ytd, unchanged from a week earlier, as LargeCap (14.0) continues to outperform both MidCap (9.5) and SmallCap (8.4). Tech and Health Care dominate the biggest sector gainers ytd: LargeCap Tech (29.6), SmallCap Health Care (24.9), MidCap Tech (21.1), LargeCap Health Care (19.6), MidCap Health Care (19.0), and SmallCap Utilities (18.5). Telecom and Energy dominate the worst performers ytd: MidCap Telecom (-38.5), SmallCap Energy (-32.3), MidCap Energy (-25.7), LargeCap Telecom (-13.3), and LargeCap Energy (-9.0).

S&P 500 Sectors and Industries Performance ([link](#)): Six of the 11 sectors rose last week, and five outperformed the S&P 500's 0.2% rise. This compares to eight sectors rising a week earlier, when six outperformed the S&P 500's 1.2% gain. Real Estate was the best-performing sector as its 1.8% gain beat these outperforming sectors: Consumer Staples (1.5), Utilities (1.3), Tech (1.3), and Materials (0.7). Telecom (-4.6) was the worst performer for a second week as the sector recorded its worst weekly performance since December 2014. It was followed by these underperformers: Financials (-0.9), Health Care (-0.7), Consumer Discretionary (-0.6), Industrials (-0.1), and Energy (0.1). So far in 2017, nine of the 11 sectors are higher, but only three have outperformed the S&P 500's 14.0% gain. The best performers in 2017 to date: Tech (29.6), Health Care (19.6), and Materials (17.1). The eight sectors underperforming the S&P 500 ytd: Telecom (-13.3), Energy (-9.0), Consumer Staples (5.7), Real Estate (7.1), Utilities (11.2), Consumer Discretionary (12.0), Financials (12.2), and Industrials (13.7).

Commodities Performance ([link](#)): Seventeen of the 24 commodities we follow rose last week as the S&P GSCI commodities index rose 2.8% for its best gain in 11 weeks. That compares to 13 commodities advancing a week earlier, when the GSCI index fell 1.9%. Energy-related commodities lead the week's strongest performers: Nickel (10.4%), Natural Gas (9.0), and Crude Oil (4.8). Last week's biggest laggards: Coffee (-2.7), Feeder Cattle (-1.5), and Wheat (-0.9). Industrial metals-related commodities dominate the best performers in 2017 so far: Zinc (26.3), Aluminum (26.0), Lead (25.9), Copper (24.4), Feeder Cattle (22.3), and Nickel (16.7). This year's laggards: Sugar (-26.1), Natural Gas (-15.1), Coffee (-7.7), Lean Hogs (-6.0), and Unleaded Gasoline (-4.2).

Assets Sorted by Spread w/ 200-dmas ([link](#)): Spreads between prices and 200-day moving averages (200-dmas) rose last week for 16/24 commodities, 6/9 global stock indexes, and 17/33 US stock indexes compared to 13/24, 6/9, and 27/33 rising a week earlier, respectively. Seventeen commodities trade above their 200-dmas, up from 12 a week earlier. Commodities' average spread soared w/w to 3.3% from 1.4%. Nickel leads all commodities and all assets at 15.6% above its 200-dma, and also performed the best of all assets it improved 10.6ppts w/w. Lean Hogs (-12.3) trades the lowest of all commodities relative to its 200-dma, followed by Sugar (-10.4). Coffee (-7.3) fell 2.4ppts last week for the worst performance of all commodities. The global indexes trade at an average of 7.9% above their 200-dmas, up from 7.1% in the prior week. All nine of the global indexes trade above their 200-dmas, unchanged from a week earlier. Brazil (15.5) leads the global indexes, followed by Chile (13.3), which fell 1.2ppts for the worst performance among the global indexes. South Korea (9.2) gained 3.0ppts for the best performance among its peers. The UK (2.4) trades the lowest among its country peers followed by closely by Canada (2.5). The US indexes trade at an average of 3.8% above their 200-dmas, with 26 of the 33 sectors above, down from an average of 4.0% a week earlier, when 26 sectors were above. LargeCap Tech leads all US stock indexes at 11.3% above its 200-dma, followed by SmallCap Utilities (10.3) and SmallCap Health Care (10.3). LargeCap Real Estate (3.3) rose 1.7ppts w/w for the best performance of the US stock indexes. MidCap Telecom trades 20.5% below its 200-dma, the lowest among the US stock indexes and all assets, followed by MidCap Energy (-5.4).

LargeCap Telecom (-5.3) dropped 4.3ppts for the worst performance among US assets last week for a second straight week.

S&P 500 Technical Indicators ([link](#)): The S&P 500 index remained in a Golden Cross last week for a 77th week (after 17 weeks in a Death Cross) as both the short-term and long-term technicals weakened w/w. However, the index's 50-day moving average (50-dma) relative to its 200-dma edged up to 3.4% from 3.3% in the prior week, which was the lowest since early January. That's down from a 34-month high of 5.4% in early April and compares to a six-month low of 2.0% in early December and a 52-month low of -4.5% in March 2016. The S&P 500's 50-dma and 200-dma both rose together for an eighth straight week, after failing to rise together in mid-August for the first time in 36 weeks. The index closed above its 50-dma for a seventh week after three weeks below, which was its worst streak since it closed below its 50-dma for 10 straight weeks from September 2016 until the November election. The S&P 500 dropped to 2.6% above its rising 50-dma from a 29-week high of 2.8% a week earlier, which compares to a four-month low of 1.0% below its falling 50-dma in mid-August. These 50-dma readings compare to a 38-week high of 4.8% on December 13 and a 52-month high of 6.2% in March 2016. The S&P 500 dropped to 6.1% above its rising 200-dma from a 10-week high of 6.2% a week earlier, which compares to a post-election low of 3.0% above its rising 200-dma in mid-August. That's down from a 38-month high of 9.4% on March 1, but up from an eight-month low of -0.1% immediately before the election.

S&P 500 Sectors Technical Indicators ([link](#)): Among the 11 sectors, just five improved w/w relative to their 50-dma and 200-dma: Consumer Staples, Materials, Real Estate, Tech, and Utilities. Eight of the 11 sectors trade above their 50-day moving averages (50-dmas). That's unchanged from a week earlier as Real Estate moved above its 50-dma for the first time in four weeks and Telecom fell below for the first time in five weeks and joined Consumer Staples (fourth week below) and Utilities (third week below). Still, that's a turnaround from mid-August when just three sectors traded above their 50-dmas, matching mid-April's reading, which was the lowest since the election. All 11 sectors had been above their 50-dmas during mid-January, and all 11 were below the week before the election, for the first time since December 11, 2015. The longer-term picture is a tad stronger: Nine of the 11 sectors were above their 200-dmas last week, unchanged from a week earlier. Energy traded above its 200-dma for a third week after 29 weeks below; Consumer Staples was below its 200-dma for a fourth week after 32 straight weeks above; and Telecom ended the week below its 200-dma for a 29th straight week. Nine sectors are in a Golden Cross, with 50-dmas higher than their 200-dmas, unchanged from a week earlier and leaving Telecom out of the club for a 32nd week and Energy for a 28th week. All 11 sectors had been in a Golden Cross during a 21-week streak that ended October 24, the longest such stretch since October 2014. Nine of the 11 sectors have rising 50-dmas, up from eight a week earlier as Real Estate's rose for the first time in four weeks. Consumer Staples' 50-dma has been falling for four weeks, and Telecom's for two weeks. Nine sectors have rising 200-dmas, unchanged from a week earlier. Energy's 200-dma fell for a 24th straight week, and Telecom's dropped for a seventh week.

US ECONOMIC INDICATORS

Retail Sales ([link](#)): September retail sales posted its biggest gain in two and a half years, driven by a hurricane-related surge in motor vehicle, gasoline, and building materials spending. Sales soared 1.6% last month, while August's (to -0.1% from -0.2%) decline was less negative and July's (0.5 from 0.3) increase was more positive. Core retail sales advanced 0.4% following upward revisions to both August (0.0 from -0.2) and July (0.7 from 0.6). (BEA uses this core retail sales measure to estimate personal consumption expenditures each month.) Meanwhile, we estimate real retail sales rebounded 0.4% in September after posting its first loss in seven months in August (-0.6). These sales expanded 2.6% (saar) last quarter, slowing from Q2's 5.3% rate. Real core retail sales posted the first back-to-back decline since last fall, dropping 0.8% in September after a 0.5% loss in August; its quarterly growth rate

slowed to 1.5%, one-fifth of Q2's 7.8% rate. Eight of the 13 major nominal retail sales categories rose in September, while five fell. Leading September's gain were sales at gasoline (5.8%), motor vehicle (3.6), and building materials (2.1) retailers, followed by gains from 0.3% to 0.8% for food & beverage, clothing, general merchandise, nonstore, and food services & drinking establishments. Electronic & appliance stores (-1.1) posted the biggest decline, with the remaining components recording losses from -0.2% to -0.6%.

Consumer Sentiment Index ([link](#)): Confidence unexpectedly skyrocketed to its highest level in 13 years in mid-October! The Consumer Sentiment Index (CSI) rebounded from 95.1 to 101.1 this month, its best reading since January 2004. Both the present situation (to 116.4 from 111.7) and expectations (91.3 from 84.4) components soared, to their highest levels since November 2000 and January 2004, respectively. "While the early October surge indicates greater optimism about the future course of the economy, it also reflects an unmistakable sense among consumers that economic prospects are now about as good as could be expected," Richard Curtin, director of the University of Michigan consumer survey, said in a statement. "Indeed, nothing in the latest survey indicates that consumers anticipate an economic downturn anytime soon—which contrarians may consider a clear warning sign of trouble ahead."

Business Sales & Inventories ([link](#)): Nominal business sales in August and real sales in July both reached new record highs. The details: Nominal manufacturing & trade sales (MTS) have only posted one decline the past 13 months, rising 0.7% m/m and 5.7% over the period. Inflation-adjusted MTS recovered 1.2% in the three months through July after slumping 1.0% the first four months of the year. Real sales of both retailers and wholesalers climbed to new record highs in July, while manufacturers' sales are moving back toward December's cyclical peak. July's real inventories-to-sales ratio was at 1.43 for the third month, matching December's reading, which was the lowest since January 2015; it was at a cyclical high of 1.47 last May. August's nominal inventories-to-sales ratio was at 1.38 for the third month after holding at a two-year low of 1.37 for six months; it had peaked at 1.42 during the first four months of 2016.

CPI ([link](#)): The core CPI rate in August was at 1.7% for the fifth month, below the Fed's target rate of 2.0% y/y for the sixth month, after 15 months above—ranging from 2.1% to 2.3%—from December 2015 through February of this year. The three-month rate accelerated for the fourth month to 2.0% (saar) after no change in May, which was the lowest reading in seven years. On a monthly basis, core prices rose 0.1% for the fifth time in the past six months; the outlier was August's 0.2% uptick. Among the indexes posting gains last month were shelter, motor vehicle insurance, recreation, education, and wireless telephone services, which were partly offset by lower prices for new vehicles, used cars & trucks, household furnishings & operations, and medical care. The headline CPI jumped 0.5%—an eight-month high—coming on the heels of a 0.4% gain in July; prices were little change the previous three months. The yearly rate edged up for the second month to 2.2% after falling the prior four months from 2.7% to 1.6%.

PPI ([link](#)): The PPI for final demand accelerated 0.4% in September after rising 0.2% in August and falling 0.1% in July—which was the first decline in 11 months. Prices for final demand goods climbed 0.7% in August after rebounding 0.5% in August; these prices declined the prior three months by a total of 0.6%. Final demand services rose 0.4% after a 0.1% gain and a 0.2% loss the previous two months. Over 80% of last month's gain in final demand goods was energy-related, with gasoline prices accounting for two-thirds of the advance. Meanwhile, final demand trade services accounted for over 60% of the gain in final demand services last month. The yearly inflation rate for the headline series accelerated 2.6%—its highest reading since February 2012. The goods rate moved higher for the third month from 2.2% in June to 3.3% in September—within 0.8ppt of its five-year high of 4.1% posted in March and April; the services rate (2.1% y/y) held at its cyclical high. Meanwhile, the core (2.2% y/y)

rate jumped at its fastest pace since May 2012, while core ex trade services (2.1) rate continued to bounce around recent highs.

GLOBAL ECONOMIC INDICATORS

Eurozone Industrial Production ([link](#)): Output in August expanded at its fastest pace since last November. Industrial production (excluding construction) surged 1.4%—roughly triple the expected 0.5% gain—to a new cyclical high. Through the first eight months of 2017, output soared 3.2% on widespread strength. Capital goods (6.5%, ytd) production posted the biggest advance, followed by consumer durable (3.5), intermediate (3.4), and consumer nondurable (1.0) goods production, with capital and industrial goods output at new cyclical highs; energy output (-2.4) contracted. The top four Eurozone economies show robust production in Germany (3.0%), Italy (1.2), and Spain (1.1), with Germany's output at a new record high. French production slipped 0.4% after a 1.0% rebound the prior month. Of the remaining countries for which data are available, the biggest monthly gains were recorded in Malta (5.4), Portugal (4.7), Greece (3.0), and Ireland (1.4), while the largest decline was posted in the Netherlands (-2.3). Looking ahead, September's M-PMI for the Eurozone jumped to a 79-month high of 58.1. The upturn remained broad-based by nations, with all eight countries included in the Eurozone average reporting growth—Germany (60.6, 77-month high), the Netherlands (60.0, 79-month high), Italy (56.3), and France (56.1, 77-month high) were among the leaders. Greece was at the bottom of the leader board, reaching an 111-month high of 52.8.

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