MORNING BRIEFING
September 26, 2017

Inflation Mystery Solved

See the collection of the individual charts linked below.

(1) Janet in Wonderland. (2) There's no Phillips curve on the other side of the looking glass. (3) BIS chief economist Claudio Borio's speech affirms my 40 years of work on disinflation. (4) Fed's top economist says that inflation is a mystery. (5) Borio tells central bankers to stop targeting inflation. (6) Inflation isn't just a monetary phenomenon. (7) Real forces related to globalization, technology, and demography can drive inflation too. (8) Global slack matters. (9) Technology disrupts pricing power. (10) What if the neutral real interest rate does not exist? (11) Dog barking at a mirror. (12) Bottom line: Raise interest rates to stop borrowing binges, stock market melt-ups, and a debt trap.

Inflation I: Borio vs. Yellen. Last Wednesday, Fed Chair Yellen, in her press conference following the latest FOMC meeting, reminded me of Alice in Wonderland. She wondered why inflation remained so curiously low. In the world that she knows, ultra-easy monetary policy should stimulate demand for goods and services, lower the unemployment rate, and boost wage inflation, which would then drive up price inflation.

Since the time Yellen became Fed chair on February 3, 2014 through today, the unemployment rate has dropped from 6.7% to 4.4% (from February 2014 through August 2017) (*Fig. 1*). Yet over that same period, wage inflation has remained around 2.5% and price inflation has remained below 2.0% (*Fig. 2* and *Fig. 3*). Yellen expected that by now wages would be rising 3%-4%, and prices would be rising around 2% based on the inverse correlation between these inflation rates and the unemployment rate as posited by the Phillips Curve Model (PCM)—which apparently doesn't work on the other side of the looking glass (*Fig. 4*).

Last Friday, Claudio Borio, the head of the Bank for International Settlements' (BIS) Monetary and Economic Department, presented a speech explaining to Janet in Wonderland that the real world no longer works the way she believes. The speech was titled "Through the looking glass." The BIS chief economist started with the following quote:

"'In another moment Alice was through the glass … Then she began looking about, and noticed that … all the rest was as different as possible' – *Through the Looking Glass, and What Alice Found There,* by Lewis Carroll." He might as well have replaced Alice's name with Janet's.

I agree with Borio's underlying thesis that powerful structural forces have disrupted the traditional PCM, which logically posits that there should be a strong inverse relationship between the unemployment rate and both wage and price inflation. I have been making the case for structural disinflation for almost all 40 years that I've been in the forecasting business. I've discussed how globalization, technological innovation, demographic changes, and Amazon have subdued inflation and continue to do so.

The central bankers have been late to understand all this. Most still don't, including Yellen. So it's nice to see at least one of their kind showing up at the structural disinflation party, which has been in full swing for a very long time.

Inflation II: Yellen's Mystery. Meanwhile, Fed Chair Janet Yellen is still trying to come up with the answer to the following question: "What determines inflation?" She first asked that in a public forum on October 14, 2016. She did so at a conference sponsored by the Federal Reserve Bank of Boston titled "Macroeconomic Research After the Crisis" that should have been titled "Macroeconomic Research *in* Crisis." She still doesn't have the answer, as evidenced by a review of what Janet in Wonderland said at her press conference last Wednesday about inflation:

(1) *Transitory.* "However, we believe this year's shortfall in inflation primarily reflects developments that are largely unrelated to broader economic conditions. …. [T]he Committee continues to expect inflation to move up and stabilize around 2 percent over the next couple of years, in line with our longer-run objective."

(2) *Imperfect.* "Nonetheless, our understanding of the forces driving inflation is imperfect, and in light of the unexpected lower inflation readings this year, the Committee is monitoring inflation developments closely."

(3) *Mysterious.* "For a number of years there were very understandable reasons for that [inflation] shortfall and they included quite a lot of slack in the labor market, which [in] my judgment [has] largely disappeared, very large reductions in energy prices and a large appreciation of the dollar that lowered import prices starting in mid-2014. This year, the shortfall of inflation from 2 percent, when none of those factors is operative is more of a mystery, and I will not say that the committee clearly understands what the causes are of that."

(4) *Lagging.* "Monetary policy also operates with the lag and experience suggests that tightness in the labor market gradually and with the lag tends to push up wage and price inflation…."

(5) *Idiosyncratic.* "So, you know, there is a miss this year I can't say I can easily point to a sufficient set of factors that explain this year why inflation has been this low. I've mentioned a few idiosyncratic things, but frankly, the low inflation is more broad-based than just idiosyncratic things. The fact that inflation is unusually low this year does not mean that that's going to continue."

(6) *Persistent*. "Of course, if it, if we determined our view changed, and instead of thinking that the factors holding inflation down were transitory, we came to the view that they would be persistent, it would require an alteration in monetary policy to move inflation back up to 2 percent, and we would be committed to making that adjustment."

(7) *And again, mysterious.* "Now, inflation is running below where we want it to be, and we've talked about that a lot during this, the last hour. This past year was not clear what the reasons are. I think it's not been mysterious in the past, but one way or another we have had four or five years in which inflation is running below our 2 percent objective and we are also committed to achieving that."

Inflation III: Borio's Solution. The man from the BIS has the answer for Fed Chair Janet Yellen and all the other central bankers who have a fixation with their 2% inflation targets: "Fuggetaboutit!" In his speech, Borio sympathized with their plight: "For those central banks with a numerical objective, the chosen number is their credibility benchmark: if they attain it, they are credible; if they don't, at least for long enough, they lose that credibility." His advice to just move past the quandary rests on many of the points I've been making on this subject for some time:

(1) *Inflation is neither a monetary nor a Phillips curve phenomenon.* He starts off by challenging Milton Friedman's famous saying that "inflation is always and everywhere a monetary phenomenon." He also acknowledges Yellen's confusion: "Yet the behaviour of inflation is becoming increasingly difficult to

understand. If one is completely honest, it is hard to avoid the question: how much do we really know about the inflation process?" He follows up with two seemingly rhetorical questions: "Could it be that we know less than we think? Might we have overestimated our ability to control inflation, or at least what it would take to do so?" The rest of the speech essentially answers "yes" to both questions.

As Exhibit #1, Borio shows that, for G7 countries, "the response of inflation to a measure of labour market slack has tended to decline and become statistically indistinguishable from zero. In other words, inflation no longer appears to be sufficiently responsive to tightness in labour markets." If the PCM isn't dead, it is in a coma.

Borio mentions, but doesn't endorse, former Fed Chairman Ben Bernanke's view that central bankers have been so successful in lowering inflationary expectations that even tight labor markets aren't boosting wages and prices. In a 2007 speech, Bernanke explained: "If people set prices and wages with reference to the rate of inflation they expect in the long run and if inflation expectations respond less than previously to variations in economic activity, then inflation itself will become relatively more insensitive to the level of activity—that is, the conventional Phillips curve will be flatter."

So according to Bernanke, the PCM isn't dead, but in a coma because inflationary expectations have been subdued (*Fig. 5*).

(2) *Globalization is disinflationary.* Borio, who seems to be the master of rhetorical questions, then asks: "Is it reasonable to believe that the inflation process should have remained immune to the entry into the global economy of the former Soviet bloc and China and to the opening-up of other emerging market economies? This added something like 1.6 billion people to the effective labour force, drastically shrinking the share of advanced economies, and cut that share by about half by 2015." Sure enough, the percentage of the value of world exports for the G7 countries fell from 52.4% at the start of 1994 to 33.1% in April, as the percentage for the rest of the world rose from 47.6% to 66.9% (*Fig. 6*).

I am getting a sense of déjà vu all over again. In my 5/7/97 *Topical Study* titled "Economic Consequences of the Peace," I discussed my finding that prices tend to rise rapidly during wars and to fall sharply during peacetimes before stabilizing until the next wartime spike. I wrote: "All wars are trade barriers. They divide the world into camps of allies and enemies. They create geographic obstacles to trade, as well as military ones. They stifle competition. History shows that prices tend to rise rapidly during wartime and then to fall during peacetime. War is inflationary; peace is deflationary." I called it "Tolstoy's Model of Inflation" (*Fig. 7*).

Borio logically concludes that measures of domestic slack are insufficient gauges of inflationary or disinflationary pressures. Furthermore, there must be more global slack given "the entry of lower-cost producers and of cheaper labour into the global economy." That must "have put persistent downward pressure on inflation, especially in advanced economies and at least until costs converge." That all makes sense in the world most of us live in, if not to the central bankers among us with the exception of the man from the BIS.

(3) *Technological innovation is keeping a lid on pricing.* Borio explains that technological innovation might also have rendered the Phillips curve comatose or dead, by reducing "incumbent firms' pricing power—through cheaper products, as they cut costs; through newer products, as they make older ones obsolete; and through more transparent prices, as they make shopping around easier."

Wow—déjà vu all over again! In the same 1997 study cited above, I wrote: "The Internet has the potential to provide at virtually no cost a wealth of information about the specifications, price, availability, and deliverability of any good and any service on this planet. Computers are linking producers and consumers directly." I predicted that alone could kill inflation. Online shopping as a percent of GAFO retail sales rose from 9.1% at the end of 1997 to 30.3% currently (*Fig. 8*).

Borio concludes, "No doubt, globalisation has been the big shock since the 1990s. But technology threatens to take over in future. Indeed, its imprint in the past may well have been underestimated and may sometimes be hard to distinguish from that of globalisation."

(4) *The neutral real rate of interest is a figment of central bankers' imagination.* Borio moves on from arguing that the impact of real factors on inflation has been underestimated to contending that the impact of monetary policy on the real interest rate has been underestimated. In the US, Fed officials including Fed Chair Yellen and Vice Chair Stanley Fischer have contended that the "neutral real interest rate" (or r*) has fallen as a result of real factors such as weak productivity.

Borio rightly observes that r* is an unobservable variable. Ultra-easy monetary policies might have driven down not only the nominal interest rate but also the real interest rate, whatever it is. Last year, in the 10/12 *Morning Briefing*, I came to the same conclusion, comparing the Fed to my dog Chloe barking at herself in the mirror when she was a puppy:

"In any event, in their opinion, near-zero real bond yields reflect these forces of secular stagnation rather than reflect their near-zero interest-rate policy since the financial crisis of 2008. …. Their ultra-easy policies have depressed interest income, reducing spendable income and also forcing people to save more. Cheap credit enabled zombie companies to stay in business, contributing to global deflationary pressures and eroding the profitability of healthy companies. Corporate managers have had a great incentive to borrow money in the bond market to buy back shares as a quick way to boost earnings per share rather than invest the proceeds in their operations."

(5) *Ultra-easy monetary policies are stimulating too much borrowing.* Borio concludes that central banks should consider abandoning their inflation targets and raise interest rates for the sake of financial stability. He is concerned about mounting debts stimulated by ultra-easy money. I am too, and I'm also concerned about a potential for stock market melt-ups around the world.

The risk he sees is a "debt trap … [which] could arise if policy ran out of ammunition, and it became harder to raise interest rates without causing economic damage, owing to the large debts and distortions in the real economy that the financial cycle creates."

CALENDARS

US. Tues: Consumer Confidence Index 120.2, Richmond Fed Manufacturing Index 13, New Home Sales 583k, S&P Corelogic Case-Shiller HPI 0.4%m/m/5.9%y/y, Yellen, Evans. **Wed:** Durable Goods Orders, Total, Ex Autos, and Core Capital Goods 1.5%/0.4%/0.3%, Pending Home Sales -0.1%, MBA Mortgage Applications, EIA Petroleum Status Report, Kashkari. (Bloomberg estimates)

Global. Tues: None. **Wed:** Eurozone M3 4.7% y/y, Japan Small Business Confidence 49.4, Poloz. (DailyFX estimates)

STRATEGY INDICATORS

YRI Weekly Leading Index (*link*): Our Weekly Leading Index (WLI)—a good coincident indicator that can confirm or raise doubts about stock market swings—sank 6.8% during the three weeks ending September 16 (after a seven-week surge of 5.0% to a new record high), driven by a hurricane-related jump in jobless claims. Our WLI is the average of our Boom-Bust Barometer (BBB) and Bloomberg's

Weekly Consumer Comfort Index (WCCI). Our BBB tumbled 10.2% over the three-week period, following a seven-week jump of 5.5% to a new record high, as jobless claims spiked to a 15-month high of 268,750 (4-wa). Claims were at 236,750 three weeks ago, not far from late May's 235,500—which was the lowest since April 1973. The CRB raw industrial spot price index—another BBB component—continued to move down from recent highs. Meanwhile, the WCCI slipped 5.1% the past three weeks, after climbing by a total of 13.4% the prior seven weeks to a new cyclical high.

S&P 500/400/600 Forward Earnings (*link*): Forward earnings rose to a record high last week for LargeCap and MidCap; SmallCap's rose too, but remained 0.1% below its mid-July record. Momentum remains strong as the yearly change in forward earnings is up from six-year lows in early 2016, but the easy y/y comparisons may be waning. In the latest week, LargeCap's forward earnings edged up w/w to 9.6% y/y from 9.5%, which compares to a 64-month high of 10.2% in mid-May and a six-year low of -1.8% in October 2015; MidCap's was steady at 13.2% y/y, which compares to a 66-month high of 14.0% in early August and a six-year low of -1.3% in December 2015; and SmallCap's was unchanged at a nine-month low of 9.4% from 9.5%, which compares to a 39-month high of 13.0% in mid-July and a six-year low of 0.3% in December 2015. LargeCap's consensus growth rates expected for 2017 have remained strong throughout this year instead of falling. However, 2018 should improve if the corporate tax rate changes. Here are the latest consensus earnings growth rates: LargeCap 11.1% and 10.9%, MidCap 11.0% and 13.7%, and SmallCap 5.7% and 20.3%.

S&P 500/400/600 Forward Valuation (*link*): Forward P/E ratios rose for two of the three indexes last week. Valuations have improved from their more-than-five-month lows in mid-April, but remain below their multi-year highs in early March. P/Es are easing now after melting up since the election, but the "E" still remains low as analysts await legislative changes to the tax rate and its impact on corporate earnings. LargeCap's forward P/E was steady at an eight-week high of 17.7, and compares to the 13-year high of 17.8 in early March. That's up from a 15-month low of 14.9 in January 2016 and the post-Lehman-meltdown P/E of 9.3 in October 2008, but remains well below the Tech bubble's record high of 25.7 in July 1999. MidCap's forward P/E rose to a seven-week high of 17.8 from 17.7. MidCap's P/E is higher than LargeCap's again after being below in recent weeks for only the second time since 2009. MidCap's P/E, which compares to a 15-year high of 19.2 in late February and the record high of 20.6 in January 2002, is up from a three-year low of 15.0 in January 2016. SmallCap's rose to a 15-week high of 19.4 from 19.2, which compares to a recent high of 19.7 in early June and a 15-year high of 20.5 in early December when Energy's earnings were depressed. That's up from a three-year low of 15.5 in February 2016, but down 2.5 points from SmallCap's record-high P/E of 20.9 in April 2002. Looking at their forward price/sales (P/S) ratios, valuations last week were similarly higher for the three indexes: LargeCap's P/S of 1.97 matches the record high of 1.97 in late July, MidCap's 1.26 is down from a record high of 1.39 in early March, and SmallCap's 0.99 is down from 1.08 in early March and its record high of 1.17 in November 2013.

S&P 500 Sectors Quarterly Earnings Outlook (*link*): Q3 earnings revisions activity picked up for the 11 S&P 500 sectors last week. The Q3 consensus rose w/w for one of the 11 S&P 500 sectors, fell for six, and was steady for four. Health Care rose 0.4% w/w, and these four were steady: Consumer Staples, Materials, Tech, and Telecom. Last weeks' biggest decliners: Real Estate (-0.8%), Industrials (-0.6), and Consumer Discretionary (-0.5). The S&P 500's Q3-2017 EPS forecast dropped 13 cents w/w to $32.80, and is down 3.0% from $33.82 at the end of Q2. That represents a forecasted pro forma earnings gain for Q3-2017 of 6.2% y/y, down from Q2's 12.3% and Q1's 15.3%, which was the strongest growth since Q3-2011 owing mostly to easier comps for Energy. The Q3-2017 forecast is up from 6.0% a week earlier, but down from 8.7% at the end of Q2. Since the end of Q2, Q3 estimates are lower for seven sectors and higher for four. Materials' Q3 forecast has risen 4.9%, Real Estate's is up 1.7%, Tech's has risen 1.4%, and Telecom has gained 0.6%. Energy's has tumbled 19.9% for the worst decline, followed by the Q3 forecasts for Consumer Discretionary (-4.9), and Utilities (-3.0). The S&P

500's Q3-2017 forecasted earnings gain of 6.2% y/y would be its fifth straight gain after four declines. Eight of the 11 sectors are expected to record positive y/y earnings growth in Q3-2017, but only two are expected to beat the S&P 500's forecasted y/y earnings gain of 6.2%. That's because analysts expect Energy to report another large profit jump in Q3 relative to very low earnings a year ago. That's down from Q2-2017 when all 11 sectors rose y/y on a blended basis, the first time that has occurred since Q3-2011 when 10/10 sectors rose y/y. The latest forecasted Q3-2017 earnings growth rates vs. their Q2-2017 growth rates: Energy (133.3% in Q3 vs. 563.9% in Q2), Tech (11.8% vs. 18.3%), S&P 500 (6.2, 12.3), Industrials (5.3, 5.5), Health Care (3.7, 8.7), Real Estate (3.4, 4.7), Financials (2.8, 12.2), Consumer Staples (2.6, 4.5), Materials (0.1, 6.1), Consumer Discretionary (0.0, 4.1), Telecom (-1.1, 4.8), and Utilities (-2.3, 5.9). On an ex-Energy basis, S&P 500 earnings are expected to rise only 4.3% y/y in Q3. That's the slowest growth since ex-Energy earnings rose just 2.2% in Q2-2016, and is down from gains of 9.6% in Q2 and 11.0% in Q1.

S&P 500 Q3 Earnings Trend vs. Past Quarters (*link*): With the September-quarter books closed at the end of this week, the current Q3-2017 EPS forecast of $32.80 has dropped 3.0% over the 12 weeks since the quarter's start. That marks the 26th straight quarter that forecasts have fallen, but the decline is smaller than the average 4.0% decrease over the same time period and below the average 4.3% decline in the quarter's estimate since 1994. Analysts expect EPS for Q3-2017 to be up 5.1% y/y on a frozen actual basis, behind the 10.0% gain for Q1-2017, but that would mark the fifth straight quarter of higher EPS on a y/y basis. Since 1994, the Q3 earnings surprise has been positive in 17/23 years (all but 1997-1998, 2001, 2005, and 2007-2008). We think Q3 will mark the S&P 500's 35th straight quarter of positive surprises—a streak dating back to Q1-2009 and longer than the prior 10-quarter positive surprise streak (Q1-2003 to Q2-2005).

US ECONOMIC INDICATORS

Regional M-PMIs (*link*): Three Fed districts so far have reported on manufacturing activity for this month—New York, Philadelphia, and Dallas—and they show growth in the sector accelerated for the second month at a robust pace. We average the composite, orders, and employment measures as data become available. The composite index rebounded from 15.3 in July to 23.2 this month, moving back toward February's cyclical high of 28.8. The New York (to 24.4 from 25.2) gauge held near August's cyclical high, while both Philadelphia's (23.8 from 18.9) and Dallas' (21.3 from 17.0) accelerated at healthy clips. The new orders gauge expanded markedly for the second month from 10.5 in July to 24.3 this month as bookings in the New York (24.9 from 20.6), Philadelphia (29.5 from 20.4), and Dallas (18.6 from 14.3) districts accelerated sharply—with New York's and Dallas' at new cyclical highs. The employment measure edged higher for the second month to 11.2 after slowing steadily from April's cyclical high of 14.1 to 8.6 in July. New York (10.6 from 6.2) manufacturers added to payrolls at a faster pace for the second month, while Philadelphia's (6.6 from 10.1) hired at a slower rate for the fifth month. Meanwhile, the hiring pace at factories in the Dallas (16.3 from 11.2) area was the best since April 2014.

GLOBAL ECONOMIC INDICATORS

Germany Ifo Business Climate Index (*link*): German business confidence slipped for the second month in September on election concerns. However, Ifo's president notes that the German economy goes into the new legislative period with a strong tailwind. The Ifo business climate index slipped to 115.2 in September from 115.9 in August and 116.1 in July—which was the highest in the history of the survey going back to 1991. The expectations and current situation components both eased, but remained at high levels. The former ticked down to 107.4 after climbing the previous four months from 105.2 in April to 107.8 in August—which was the highest reading since February 2014. Business assessment of the current situation declined for the second month to 123.6, after an 11-month surge from 112.8 last August to a record high of 125.6 this July. Ifo's expectations component correlates closely with German factory orders and production; the overall index tracks exports more closely. Recent Ifo data are still predicting a continued acceleration in German activity.

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