Inflation is Inflationary: U.S. Inflation Outlook 2018

DoubleLine Macro-Asset Allocation Team | April 2018

"I think investors should add commodities to their portfolios."

- Jeffrey Gundlach, CNBC, December 13, 2017

Introduction

Our clients frequently ask us for our macro views, and in particular how we view the global economy and inflation. As part of our efforts to provide market color to our clients and prospects, we are introducing our "Asset Allocation Series". In this first piece, we discuss our inflation outlook for 2018.

During a recent interview, a top government official said "you can have wage inflation and not necessarily have inflation concerns in general."[1] We find this comment counterintuitive and potentially misleading. Perhaps this train of thought is a symptom of the Personal Consumption Expenditure (PCE) core measure in the U.S. running consistently below the Federal Reserve's (Fed) 2% target for nearly two decades. This pervasive low inflation might reflect a relatively weak economic recovery and disinflationary mindset prevailing in the market.

This is in sharp contrast to the inflationary mindset that persisted in the 1970s, when inflation was so problematic that prices rose at over 10% a year. Though President Ford declared a war against inflation by asking Americans to consume less, the campaign did not succeed. Inflation remained elevated for so many years that people believed hyperinflation would be a permanent fixture in the economy. It was not until years later when former Fed Chairman Paul Volcker aggressively raised interest rates, sending the country into recession twice, that inflation started to decelerate and the deeply ingrained inflationary mindset faded away.

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Today's disinflationary mindset is no exception. Inflation has been low or even nonexistent for quite some time despite our extreme monetary stimulus, solid employment growth and more recently a falling U.S. Dollar (USD). Such a prolonged period of low inflation further demonstrates how dominant the structural deflationary forces of globalization, technological disruption and aging demographics can be. It is no surprise that inflation expectations have continued to drift lower and remained anchored at generational lows.[2]

We don't subscribe to this disinflationary mindset. In particular, we are skeptical that wage inflation is not inflationary. Different from many market participants who had been calling for higher inflation for years, we kept telling our clients that we didn't see enough inflationary evidence and we refrained from owning Treasury Inflation-Protected Securities (TIPS) until September 2016. In late summer 2016, we began to take a more upbeat stance on our inflation outlook. After U.S. headline inflation dipped below 1% for the entirety of 2015, and stayed around the 1% level for the first half of 2016, we saw that energy prices bottomed. We anticipated even a modest energy price appreciation could lift headline inflation significantly higher thanks to the base effect. That's exactly what happened in the second half of 2016 and 2017. After four consecutive years of below 2% inflation from 2013 to 2016, we actually experienced relatively stable inflation which averaged 2.1% last year.

At DoubleLine, we believe we have developed tools to analyze and forecast near-term U.S. inflation which has been very helpful to our asset allocation decisions. We currently see a reasonable potential that U.S. headline inflation will average above 2% for 2018. Assuming Commodity prices, especially crude oil, and the USD can maintain some stability moving forward, headline Consumer Price Index (CPI) inflation could top 2.5% over the summer this year. At the end of this piece, we will discuss which asset classes tend to perform well under this modest inflationary environment.

Inflation is Moving Up

Inflation is defined as the average rate of increase in the prices of a broad group of goods and services. In the U.S., a widely accepted measurement is the CPI. Since the global financial crisis, the U.S. has experienced lower-than-expected inflation. As *Figure 1* shows, overall inflation has averaged only 1.5% per year since 2009. That's just half of the 2.9% average inflation we experienced in the previous period from 2000 to 2008. Falling energy prices in 2014 and 2015 exacerbated the inflation outlook and resulted in a brief deflationary period in the U.S., as shown in *Figure 2*.

U.S. Yearly Average Headline Inflation | As of December 31, 2017

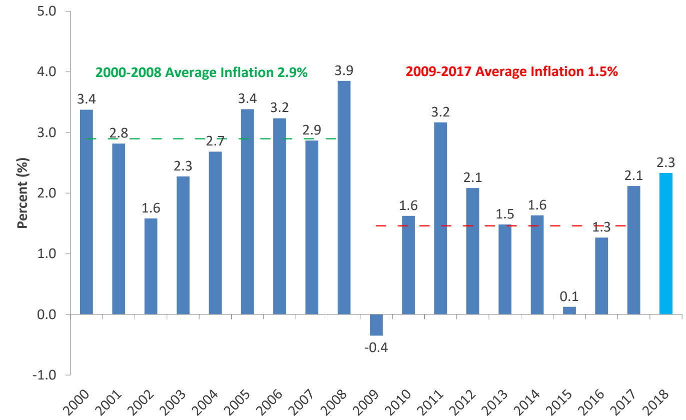

Figure 1
Source: DoubleLine, Bloomberg

U.S. Inflation Could Stay Above 2% in 2018*
As of December 31, 2017

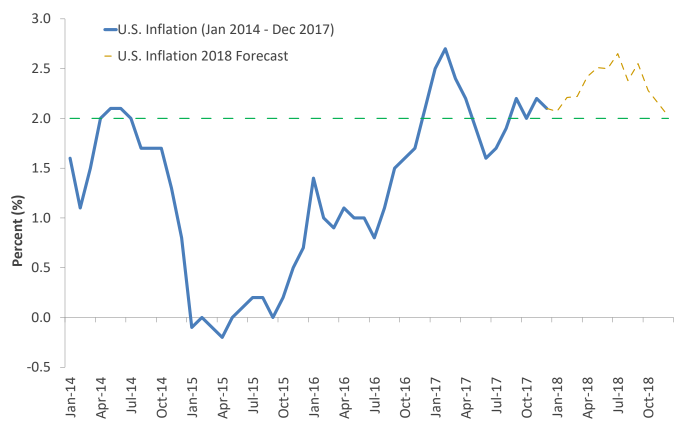

Figure 2
Source: DoubleLine, Bloomberg
* U.S. inflation data is forecasted from January 2018 to December 2018. Forecasts are inherently limited and cannot be relied upon.

As a result, markets priced in a significant deflationary risk starting at the end of 2014 and extending into the beginning of 2016.[3] Market-based measures of inflation expectations indicated by breakeven inflation rates — the difference between yields on nominal and inflation-indexed U.S. Treasury (UST) securities — stayed low at the sub two percent range for the majority of the past three years. We observe a similar pattern in the Fed's favorite inflation measure: the 5-year 5-year-forward breakeven rate.

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Energy inflation started to rise after the price on crude oil bottomed out in January/February 2016. As we anticipated, the base effect from Energy price normalization finally kicked in at the end of 2016.[4] In 2017, the headline inflation rose to 2.7% year-over-year (YoY) in February before falling to 1.6% in June. Then, inflation picked up again and we realized 2% or higher inflation for four consecutive months at year-end.

According to the Bureau of Labor Statistics (BLS), headline CPI increased 0.2% in December, bringing the YoY number to 2.1% for 2017. In fact, Energy basket inflation averaged 8% in 2017, a major factor to lift headline inflation higher though core inflation fell below 2% and stayed around 1.7-1.8% for most of the year.

Looking ahead, we expect inflation prints to be less volatile this year and stay mostly above 2%. For 2018, we believe CPI will rise to 2.5% or higher during the summer before settling at 2.0-2.2% at year-end. Core CPI, which excludes Food and Energy, could potentially rise to 2.0% or higher from 1.8% currently.

Our Inflation Forecast Model

It is crucial for an inflation forecast model to distinguish between changes in Food and Energy prices — which are included in headline inflation —and movements in the prices of other goods and services — that is, core inflation. This decomposition is very useful because Food and Energy prices can be quite volatile, as shown in *Figure 3*. In contrast, core inflation tends to fluctuate around a longer-term trend that is essentially more stable.[5]

U.S. Food, Energy & Core Inflations | As of February 28, 2018

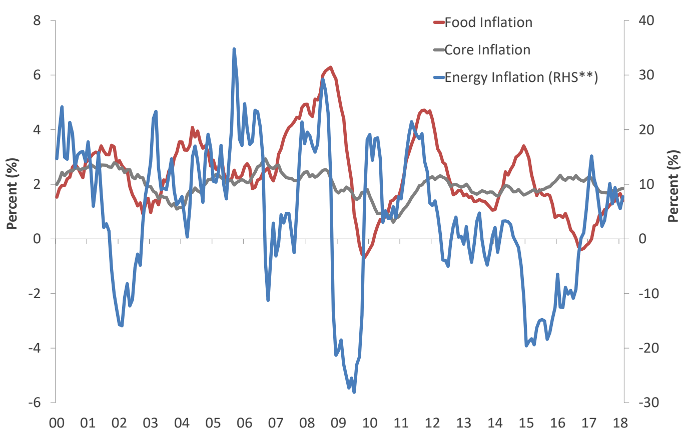

Figure 3
Source: DoubleLine, Bloomberg
**RHS = Right Hand Side

We decompose headline inflation into contributions by energy inflation, food inflation, and core inflation, as shown in *Figure 4*. Clearly, the dominant driving force of headline inflation has been the energy prices. **Our analysis suggests energy basket inflation alone drives almost 90% of the variation in the headline inflation.**

Contributions to U.S. Headline CPI YoY | As of February 28, 2018

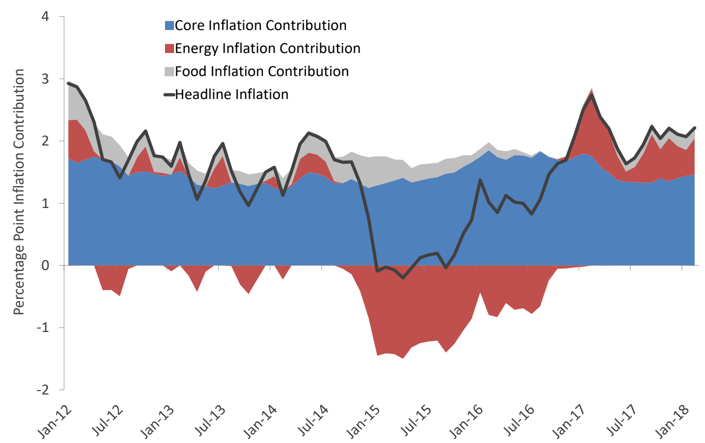

Figure 4
Source: DoubleLine Bloomberg

We find the **base effect** is important to forecast YoY inflation. For example, we find the YoY market price changes in crude oil have a strong correlation with the Energy basket inflation shown in *Figure 5*. Though crude oil prices bottomed out in January/February 2016, Energy basket inflation didn't turn positive until later in the year. The base effect explains why headline inflation stayed low until the end of 2016.

Energy Inflation vs. WTI Price Changes[6] | As of February 28, 2018

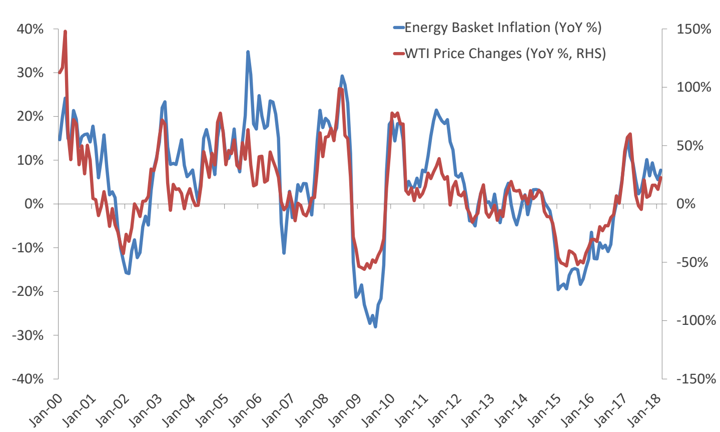

Figure 5
Source: DoubleLine, Bloomberg, New York Fed

The key to our inflation forecast is to figure out the lead/lag relationship between reported individual categories and underlying market price changes. For example, we find that changes in crude oil prices tend to lead Energy inflation by one month and they have a strong correlation of 0.9, as seen in *Figure 5*. We further quantify the sensitivity of price change at the gas pump to the price change in crude oil future prices. Such a lead/lag relationship explains the transmission mechanism as to how producers could pass higher Energy prices onto end consumers.

Core Inflation May Start Rising Again

Consistent with other studies, in particular the sticky price CPI measure proposed by the Atlanta Fed, we find core inflation appears to incorporate future inflation expectations and usually provides a reliable estimate of where inflation is heading in the medium-term.[7] Currently, we are paying close attention to the New York Fed Staff Underlying Inflation Gauge (UIG) measure which captures sustained movements in inflation based on a wide range of prices, real activity and financial data. Our analysis indicates the UIG measure could lead core CPI by as many as 16 months with a correlation of 0.74. As shown in the *Figure 6*, the UIG measure is pointing to higher core inflation in the coming months.

New York Fed UIG and Core CPI YoY | As of February 28, 2018

Figure 6
Source: DoubleLine, Bloomberg

About a year ago, core inflation turned a bit softer because of slightly weaker core services inflation and continued deflation in core goods, as seen in *Figure 7*. Core services inflation declined from over 3% to now roughly 2.5%. Shelter inflation, which accounts for over 30% of the CPI basket, is relatively slow moving and tends to exhibit strong trending behavior. It started rising steadily in late 2010 and has been consistently growing more than 3% YoY.[8] The upward pressure on shelter inflation remains intact driven by record low vacancy rates in the rental market as well as appreciating home prices and rising mortgage payments from higher interest rates. Though we don't expect shelter inflation to start accelerating from here, a strong 3% YoY shelter inflation should prevent core inflation from weakening.

Core Services & Core Goods Inflations | As of February 28, 2018

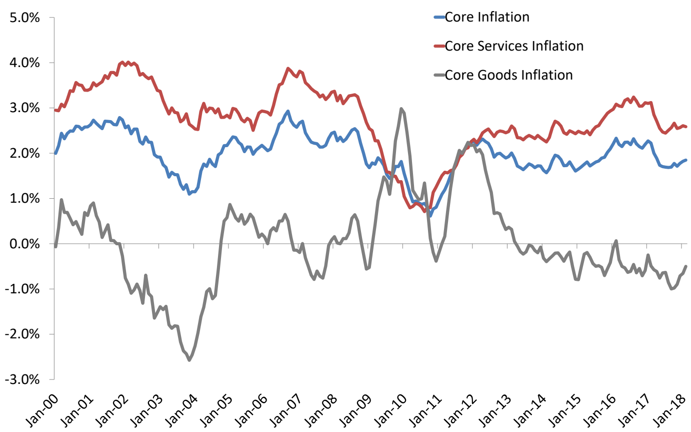

Figure 7
Source: DoubleLine, Bloomberg

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In June 2017, Former Fed Chair Yellen attributed lower inflation to "one-off" price reductions in wireless telephone services.[9] Recently communication service prices have stabilized and could become a major tailwind this year. We estimate stable communication services prices alone could add as much as 0.2% to core inflation by the middle of the year due to the base effect.

What happens next to consumer goods? Thanks to a weaker USD, we expect a gradual increase in core goods inflation. As shown in *Figure 8*, ex-fuel import prices started to rise considerably. It has led the core goods CPI by 17 months with a correlation of 0.6. If we use ex-fuel import prices as guidance, we could see the core goods inflation potentially turn positive later this year.

Ex-Fuel Import Prices & Core Goods CPI | As of February 28, 2018

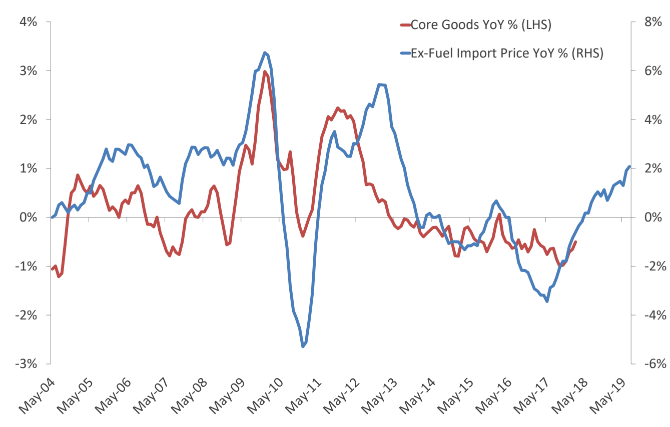

Figure 8
Source: DoubleLine, Bloomberg

Given these facts, we remain cautiously optimistic on core inflation this year. We expect core inflation to start a steady rise shortly and may reach 2% or higher by year-end.

Food & Energy Inflation Is Picking Up

The main driver for headline inflation in 2018 will likely be oil prices. As we discussed earlier, the fluctuation of Energy prices has the greatest impact on inflation. Our base case is, if crude oil indicated by WTI can stabilize around $60-65 level for the year, we expect average Energy inflation to be 7-8% this year. As a result, headline inflation will trend higher by the middle of the year.

Any further rise in oil prices could lift inflation even higher assuming other components are stable. For example, we estimate every 10% additional rise in crude oil prices would lead to another 0.3% increase in headline inflation. If crude oil is heading above $70 per barrel, headline inflation could reach as high as 2.8-3.0%, which hasn't happened since February 2012. On the other hand, inflation could face a tail risk if crude oil takes a nosedive and falls to $55 per barrel or lower. In that case, headline inflation could be sub two percent for most of the year and close to 1.8% in December.

We also want to emphasize that food prices have begun to rise, gaining as much as 1.7% YoY in January. Unfortunately, very few people have pointed this out. The fact is there was a prolonged period of food deflation from December 2015 to June 2017. It was led by supply rather than weak consumer demand or increased competition. Over the past year, food inflation turned positive and picked up significantly. Given that prices of agriculture products have normalized, we might see rising food prices as retailers try to capture margin. We expect food inflation to accelerate this year.

Investment Implications

Higher inflation is not good news for investors, as it reduces real returns holding all other factors constant. In an inflationary environment, a dollar you invest today will be worth less tomorrow, posing a serious threat to investors. For bondholders, it is a major concern, since it can shrink the purchasing power of future interest and principal payments.

We consider Treasury Inflation-Protected Securities (TIPS) as an effective way to guard against inflation. Since the Fed is on track to continue with interest rate hikes and balance sheet reduction, we prefer TIPS which are designed to provide inflation-protected cash flows to investors. We think TIPS could continue to outperform nominal Treasuries over the medium-term.

Alternatively, zero-coupon inflation swaps structurally offer a more efficient way to trade inflation over a given time horizon. A zero-coupon inflation swap is a pure inflation instrument. It is the most liquidly traded inflation derivative. Its structure is simple with the only payments occurring at maturity.

We also like commodities in this reflationary environment. Typically, commodities tend to outperform during the late stage of the economic cycle. Currently we think traditional assets such as stocks, bonds and most credits are expensive to own. However, commodities have not rallied in the past several years until recently. From an asset allocation perspective, we prefer to be overweight commodities.

We realize many investors might be underweight inflation-sensitive assets and overweight assets such as equities that could underperform in a rising inflation environment. There is certainly a risk that inflation continues to run higher than the market expects. Therefore, now may be the time to consider increasing exposure to inflation-sensitive assets. Simply put, let's get real and buy TIPS and commodities. ■

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Citations

[1] Source: Bloomberg, February 22, 2018

[2] University of Michigan compiles a monthly survey of expected change in prices during the next 5-10 years since February 1979. The historical data is available on Bloomberg with ticker CONSP5MD INDEX

[3] Deflationary sentiments are indicated by the pricing changes in US zero-coupon CPI floors

[4] Source: DoubleLine Economic Update, Fourth Quarter 2016.

[5] Our analysis finds, since January of 2000, the CPI for All Urban Consumers: Energy Index has an annualized volatility of nearly 13% while the annualized volatility of core inflation index is just 0.6%.

[6] WTI = West Texas Intermediate

[7] These include Yellen's 2015 speech titled "Inflation Dynamics and Monetary Policy", and Bryan and Meyer's commentary "Are Some Prices in the CPI More Forward Looking than Others? We Think So." published by Federal Reserve Bank of Cleveland in 2010.

[8] We track shelter inflation based on the U.S. CPI Urban Consumers Shelter NSA Index (Bloomberg ticker: CPRHSHLT INDEX).

[9] Source: Federal Reserve Press Conference, Janet Yellen, June 14, 2017

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Definitions:

Consumer Price Index (CPI) - A measure that examines the weighted average of prices of a basket of consumer goods and services, such as transportation, food and medical care. The CPI is calculated by taking price changes for each item in the predetermined basket of goods and averaging them; the goods are weighted according to their importance. Changes in CPI are used to assess price changes associated with the cost of living. Headline CPI is not adjusted for seasonality or for Food and Energy prices. Core CPI does not include the more volatile components of Food and Energy.

Personal Consumption Expenditure (PCE) - A component of GDP that measures expenditures by households and includes durable and non-durable goods and services.

CPI for All Urban Consumers: Energy Index - An aggregate of prices Energy paid by urban consumers designed to measure inflation for the U.S. urban population.

Underlying Inflation Gauge (UIG) - A measure of trend inflation designed to look at the long-run component of aggregate inflation by constructing measures of "core" inflation from a large data set.

You cannot invest directly in an index.

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