THE INFLATION TIDE IS READY TO TURN

Inflation has been stubbornly low, leading many to question traditional gauges like the Phillips curve. We think the theory still works—but doesn't tell the full story. A more holistic assessment that includes structural influences shows inflation poised to rise.

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Investors face a key controversy in 2018: Why has inflation stayed so low when growth is strong and unemployment is falling? That's not how the world is meant to work, and it has raised questions about the Phillips curve—a theory that links the rate of inflation (or wage growth) to spare capacity in an economy. The theory is the foundation for modern central banking.

Some argue that the Phillips curve is no longer useful and should be abandoned. Others argue that it's still alive and well, ready to reassert itself as conditions permit (which could be quite soon). A third group thinks central banks should stick to the Phillips curve even if doesn't work, because there's nothing better right now. We don't put much stock in this notion.

INFLATION DOESN'T SEEM VERY CYCLICAL TODAY

One thing that has become very clear in recent years is that we don't understand inflation as well as we thought. It's certainly too complex to boil down to a simple concept like the Phillips curve. But that doesn't mean the Phillips curve doesn't work—it just doesn't tell the full story. What else should investors look at to understand inflation? We think this requires both a cyclical and structural perspective.

First, though, we need to get one important fact straight: in the context of the inflation-targeting era, current inflation rates aren't actually that low.

The best way to see this is by looking at the core inflation rate—inflation excluding food and energy prices (*Display 1, page 2*). For major developed economies, core inflation is currently 1.4%. That's pretty much the same as the average over the last 20 years (1.5%) and not much below the average for the 10 years before the global financial crisis (1.6%). The picture is very similar for headline inflation: it's currently 1.9%, slightly higher than the 1998–2017 average of 1.7% but the same as the precrisis average.

UNDERSTANDING INFLATION REQUIRES BOTH A CYCLICAL AND STRUCTURAL PERSPECTIVE.

Core inflation has also been remarkably stable over the last 20 years. With two very brief exceptions, inflation excluding food and energy has fluctuated in a narrow range between 1.0% and 2.0% since January 1998, and has been above 2.0% just once (at the peak of the last cycle in August 2008). The lack of inflation volatility is all the more surprising given the large swings in economic activity during that period. All told, inflation hasn't been very cyclical in recent years.

THE PHILLIPS CURVE ISN'T DEAD—BUT DOESN'T TELL THE WHOLE STORY

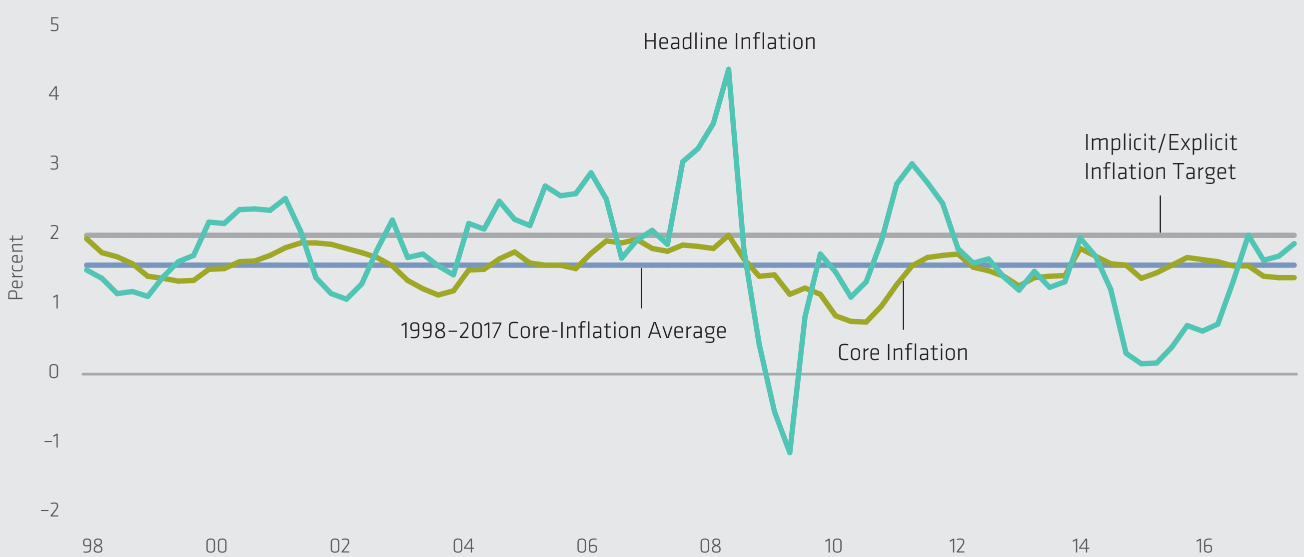
Does this lack of cyclicality mean we should abandon the Phillips curve? In our view, the answer is no. We think the theory behind the curve still makes sense—at least as a partial explanation of inflation.

Most of the evidence still broadly supports the theory. *Display 2, page 3*, compares annual developed-market core inflation to the global output gap between 2000 and 2017 (*see* "The Phillips Curve and Inflation," *page 3*). There's a clear positive relationship between the size of the output gap and core inflation, which is consistent with Phillips curve theory. The bigger the output gap, the higher the rate of inflation.

But the relationship isn't particularly strong, suggesting that other factors are at play. And it takes a big change in the output gap to have a material impact on core inflation; in other words, inflation isn't that responsive to business-cycle changes.

DISPLAY 1: TODAY'S INFLATION RATES AREN'T THAT LOW

G7 Consumer Price Inflation (Year-over-Year % Change)



Through November 30, 2017
Source: Haver Analytics and AllianceBernstein (AB)

THE PHILLIPS CURVE AND INFLATION

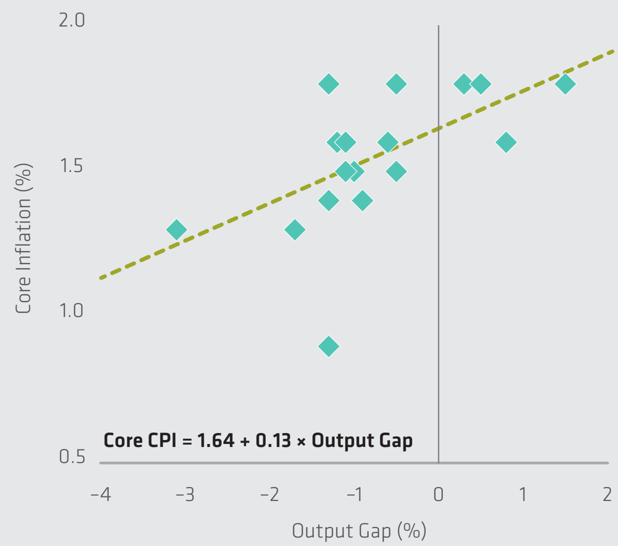
The Phillips curve is an economic theory that compares an economy's inflation rate to its unemployment rate. In theory, as unemployment falls, wages and other prices tend to increase.

The Phillips curve can also be used to compare inflation with an economy's output gap—the difference between current economic output and potential economic output at maximum efficiency, i.e., full employment. If an economy's current output is higher than its potential output, it is said to have a positive output gap; under the Phillips curve, its inflation rate should rise.

If current output is lower than potential output, an economy is said to have a negative output gap, and inflation should fall.

DISPLAY 2: INFLATION SEEMS LESS RESPONSIVE TO BUSINESS CYCLE

Developed-Market Core Inflation vs. Global Output Gap (2000–2017)



As of December 31, 2017
Source: Bank of England, Haver Analytics and AB

A cross-country analysis reinforces these findings, showing that countries with large output gaps tend to have higher inflation than countries with small output gaps. Moreover, the coefficient on the output gap is small and has fallen, suggesting that inflation has become less responsive to the business cycle.

In our view, the evidence continues to suggest that we should keep the Phillips curve as an essential building block when it comes to constructing a cyclical view of inflation. But it doesn't provide a complete picture. There's a lot left unexplained—and that's where structural factors come in.

STRUCTURAL PRESSURES POISED TO REVIVE INFLATION

Unlike the debate over the Phillips curve, there's little dispute about the structural factors that have contributed to low inflation. It's widely accepted that globalization, technological change, demographics and the debt overhang have all weighed on prices in recent years.

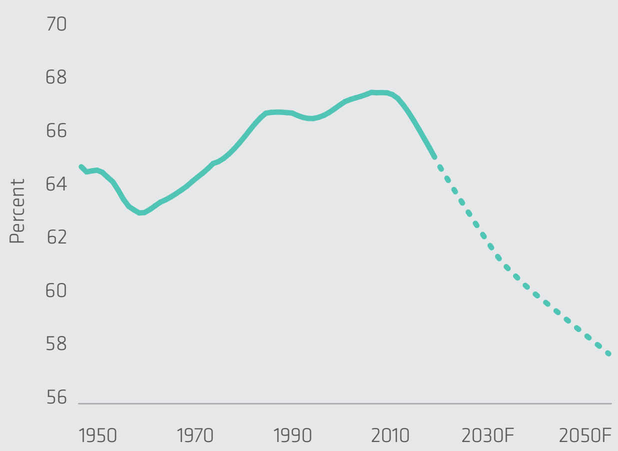
We think that's starting to change, although not so much for technology: the Internet, automation and robotics are likely to exert downward pressure on prices for many years to come. But it's certainly true for other factors.

Demographics: The ratio of working-age people to the total population steadily increased in developed countries between the 1960s and 2010 (*Display 3, page 4*). A growing labor pool put downward pressure on inflation. However, we're at a turning point: the relative size of the working-age population is projected to fall very sharply in the coming decades, reversing the impact from this factor and putting upward pressure on inflation.

Globalization: The forces of globalization have exacerbated demographic trends. China's 2001 entry into the World Trade Organization, in particular, unleashed a huge pool of cheap labor that helped hold inflation down. This won't likely be repeated in coming years: India and Africa may have the potential to replicate China's experience, but not anytime soon.

DISPLAY 3: DEMOGRAPHIC INFLUENCE ON INFLATION IS SET TO CHANGE

Working-Age Population as Percent of Total Developed-Market Population



As of June 21, 2017
Source: Haver Analytics, United Nations World Population Prospects—Medium Variant and AB

Populism: Globalization has had a huge impact in moderating inflation over the last 25 years, but it's likely to give way to populism over the next 25 years. There are three pillars to the populist effect: raising the drawbridge (deglobalization), institutional erosion, and greater redistribution of income and wealth. In our view, all three of these pillars will ultimately result in higher inflation (*Display 4*).

Debt Overhang: Fiscal austerity and private-sector deleveraging have weighed on demand since the global financial crisis, suppressing inflation. But central-bank asset purchases and ultralow interest rates have ended this process, allowing governments to abandon austerity and allowing households and firms to postpone their deleveraging efforts. We expect the debt overhang to put upward pressure on prices, as higher inflation is ultimately seen as the most politically expedient way of dealing with too much debt.

Each of these factors will play a part in determining inflation as we move forward. But one additional factor is likely to be crucial, particularly over longer time horizons: the monetary regime itself. We think it's worth exploring further.

DISPLAY 4: THE POPULIST EFFECT SHOULD PUSH INFLATION UP

RAISING THE DRAWBRIDGE

+ Increased trade protection
+ Restrictions on capital flows and FDI
+ More restrictions on immigration/cross-border flows of labor
+ Withdrawal from supranational relationships

Lower Growth
Higher Inflation

INSTITUTIONAL EROSION

+ Erosion of monetary policy independence—fiscal dominance
+ Greater use of fiscal policy—structural budget deficits; loose constraints
+ Increased regulation
+ Renationalization of key industries

Greater Macro Volatility
Higher Inflation

REDISTRIBUTION

+ Increased taxation of companies/high-income earners
+ Higher minimum wages/labor market regulation/universal basic income
+ Return of collective bargaining
+ Use of price controls

Lower Profit Share
Higher Inflation

As of January 18, 2018
Source: AB

A LIKELY SHIFT IN FUTURE MONETARY REGIME

It's remarkable to note that only over the last century have countries experienced the sustained inflation we now take for granted (*Display 5*). But it's no coincidence that this transition happened at around the same time as the biggest monetary-regime shift in history—moving from the gold standard to fiat (paper) money.

Likewise, the runaway inflation of the 1970s was tamed by another major regime shift, one that prioritized low inflation and eventually evolved into explicit inflation targeting.

We're not recommending a return to the gold standard; far from it. With high debt levels and rising populist pressures, we think it's only a matter of time before the current monetary regime is replaced by one with more tolerance for high inflation rates.

This transition isn't likely to take place overnight, particularly at the global level. So how is the structural inflation backdrop likely to evolve in the meantime? In *Display 6, page 6*, we offer a framework for thinking about this over various time horizons.

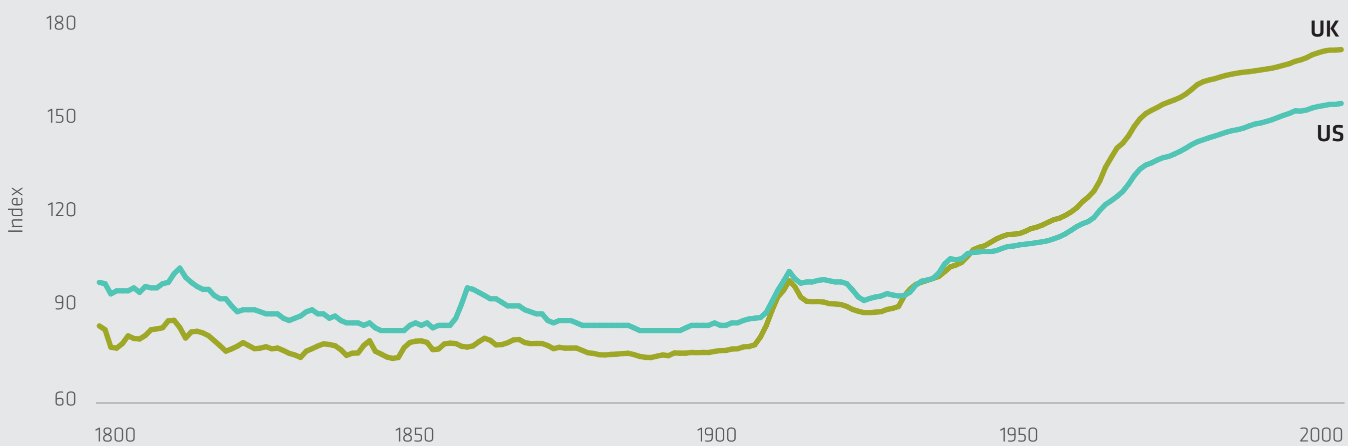
When we look in the rearview mirror, the net impact of these combined structural factors has been to put significant downward pressure on inflation. This has contributed to the flatness of the Phillips curve in recent years and made it hard for central banks to reach their inflation targets.

But the structural inflation backdrop isn't static, and downward pressure on inflation has started to dissipate. Over the cyclical horizon—the next six to 18 months—we expect structural factors to have a broadly neutral impact on global inflation.

Further out, over the secular horizon, we think structural forces will start to exert sustained upward pressure on inflation rates, as the combined impact from the other factors begins to outweigh the persistent downward pressure exerted by rapid technological progress.

DISPLAY 5: MONETARY-REGIME CHOICE ULTIMATELY DRIVES INFLATION

Inflation Rate Indexed in Logarithmic Scale (1945 = 100)



Through December 31, 2016

Source: Bank of England, Haver Analytics, US Census Bureau and AB

SUMMING IT ALL UP

Our analysis suggests that it's premature to abandon the Phillips curve, and that it's far too early to assume that inflation will remain perpetually dormant. With structural and cyclical factors pointing in the same direction, we think inflation is approaching a turning point and set to rise.

This is likely to be a gradual process, at least over the cyclical horizon—courtesy of a less responsive Phillips curve and the slow nature of structural forces. But given current market pricing, which in some cases is still set for deflation, even a hint of inflation would leave central banks exposed and bond markets vulnerable.

The real story comes over the longer term: high debt levels and the need to counter rising populist pressure will likely to lead to a more inflationary monetary regime. Recent attempts to socialize higher inflation targets and speculation about "helicopter" money are just the first signs of a shift in this direction. We expect the inflation tide to continue rising as structural pressures increase.

DISPLAY 6: STRUCTURAL FACTORS SET TO PUT UPWARD PRESSURE ON INFLATION

	Rearview Mirror	Cyclical Horizon	Secular Horizon
Demographics	↓	—	↑
Globalization/Populism	↓	—	↑↑
Debt Overhang	↓	—	↑
Technology	↓	↓	↓↓
Monetary Regime	—	—	↑↑
Net Impact	↓↓	—	↑↑

As of January 18, 2018
Source: AB

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