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UBS Asset Management,
Investment Solutions Team

Lower for longer

The impact of sluggish inflation on expected returns

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In our recent paper, *Your guide in a low yield environment*, we looked at the challenges facing investors in an environment of low inflation, low interest rates, low yields and low returns. In this paper, we review the underlying factors that have suppressed inflation in the recent past, look at the latest macroeconomic data for pointers to the likely trajectory of inflation in the near future, and suggest some effective tactical solutions for investors.

Only a few years ago, economists warned of the potential for rising inflation, triggered by central bank quantitative easing policies following the 2008 financial crisis, citing economist Milton Friedman's warnings about the inflationary effects of printing money.

But that didn't happen; instead, in much of the developed world, inflation is running well behind historical norms, with negative interest rates in a handful of countries. Core inflation is currently 1% in the Eurozone and 0.8% in Japan. In March, the Federal Reserve Bank of Cleveland reported that its latest estimate of 10-year expected inflation is 1.65%, or less than 2% on average over the next decade.[1]

Friedman would have attributed this low inflation to a declining velocity of money, or the number of times per year a dollar turns over to buy goods and services. In response, central banks have increased quantitative easing programs and maintained low interest rates, and some have begun adopting negative deposit interest rates in recent years—charging banks for holding their money. Earlier this year, the Bank of Japan was the latest to follow this trend.

In contrast, the US Federal Reserve raised its key interest rate in December to a range of 0.25% to 0.50%, after more than nine years at 0%. Fed Chair Janet Yellen said in March that global economic uncertainty calls for a slow pace of increases, so the Fed rate is unlikely to go much higher soon.

Low inflation adds to investor challenges

The zero and negative nominal interest rates introduced by central banks in Japan and Europe, including in Switzerland and in various Scandinavian countries, are designed to stimulate the economy. The interest rate that drives capital investment decisions is the 'real' interest rate, which is the nominal rate minus the rate of inflation. Central banks have historically brought their reference (nominal) rates below inflation to stimulate the economy with negative real rates.

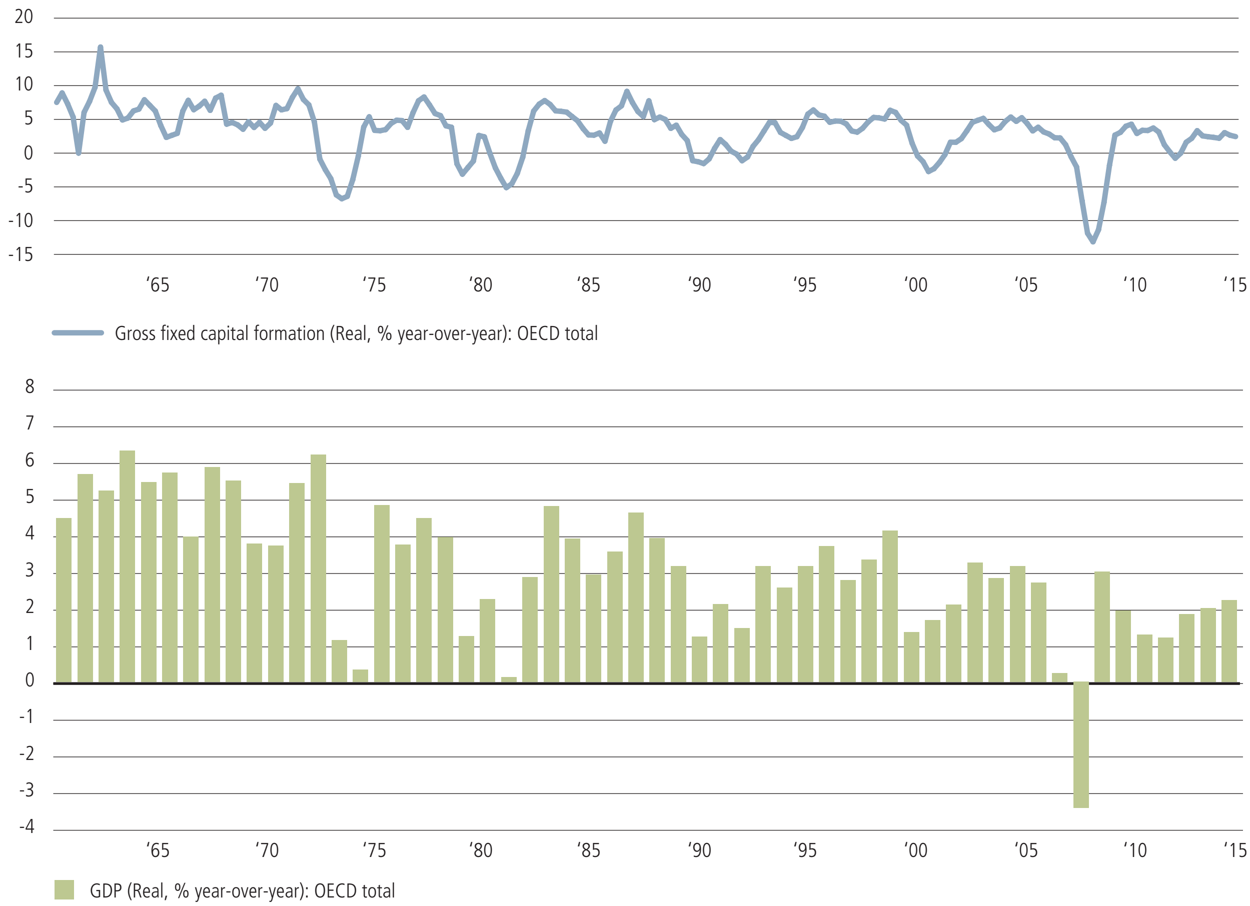
We believe that central banks around the world will continue efforts to increase inflation to their 2% target over the next few years, with varying degrees of success. While we expect inflation to rise modestly in the US and the Eurozone over the next year, new challenges could arise if persistently low inflation leads to additional and unexpected central bank actions.

Given the limited ability for companies to expand profitability in a low-inflation environment, equity returns may be modest, and there are implications for fixed income and commodities as well. Inflation reflects companies' pricing power—lower customer demand removes pricing power and impedes top-line growth. At the same time, costs are either flat or rising slightly, which can squeeze margins. The only route to maintaining margins in this scenario is for companies to cut costs, which has limits of its own. Bonds look more attractive in this environment, from a price appreciation standpoint as opposed to an income standpoint, unless surprise inflation spikes or rate increases show up to spoil the bondholders' party.

Therefore, in order to meet risk/return objectives, the balance between return generation from market exposure (beta), skill (alpha) and other factors may need to be altered.

[1] The Cleveland Federal Reserve Bank's estimate of inflation expectations is based on a model that combines information from a number of sources to address the shortcomings of other commonly used measures, such as the "breakeven" rate derived from Treasury inflation protected securities (TIPS) or survey-based estimates.

Exhibit 1: Capital expenditure has trended lower in the last five years in OECD countries



Source: Thomson Reuters Datastream/UBS Asset Management.

The impact of global demand and capital expenditure on inflation

Inflation is being constrained in much of the world by a 'perfect storm' of negative factors. Global demand has been weak as developed markets continue to recover from the great recession. At the same time, negative demographic trends, private deleveraging, and years of fiscal austerity, especially concentrated in infrastructure investment, have significantly dampened potential growth in many major economies.

Note, in Exhibit 1, how real GDP in the industrialized countries after the mid-1990s has been growing more slowly than in the 1960s. Investment levels have also dropped over the same time period. It is unclear which is cause and which is effect, or whether these two variables are jointly determined.

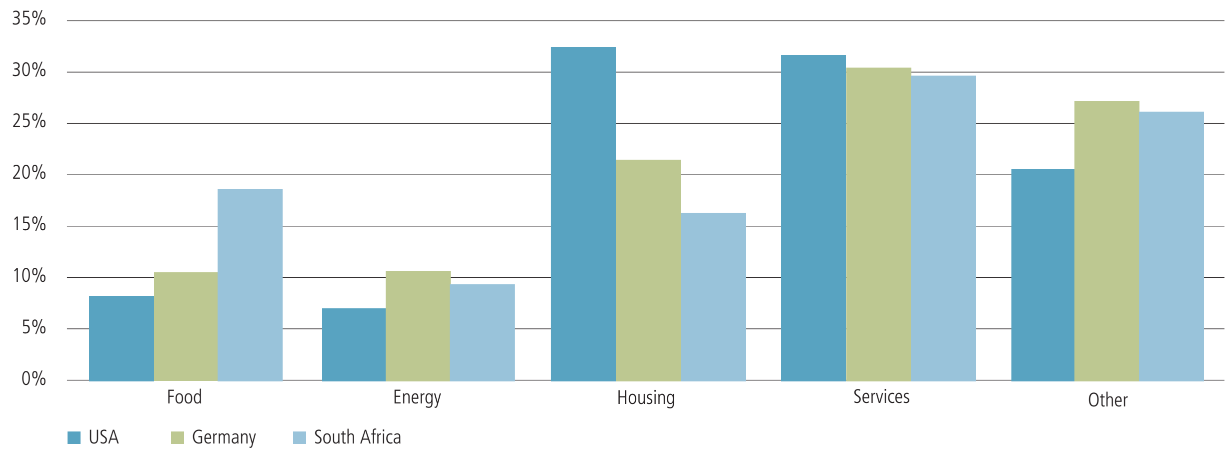
Governments cut infrastructure expenditure because delaying bridge maintenance, for example, is politically easier than laying off workers. In the private sector, companies have cut equipment investment and research and development because they currently do not expect demand to grow, nor do they see adequate return potential on those investments even with the cost of capital at historic lows. At the aggregate level, this reluctance to invest has been ongoing for years and has contributed to slower economic growth.

Weak commodity prices hurt emerging market economies

Emerging markets that are commodity exporters have felt pressure from falling commodities prices. Three factors have combined to hold down the prices of gas and oil in particular in recent years:

- **Demand:** In addition to a long-term trend toward higher energy efficiency, the current global economic climate has resulted in weak demand for commodities (not limited to energy).
- **Supply:** New oil and gas extraction technologies have improved efficiency and can respond more quickly to price change. Several countries obtain the majority of their

Exhibit 2: Consumer Price Index (CPI) baskets differ across the world, reflecting income levels and special circumstances



government's revenues from oil sales and royalties, and because their costs are in (devalued) local currencies while revenue is in dollars, they have a strong incentive to keep producing; the new supply created by oil shale technology is ready to come back online if oil prices rise too much.

- **The dollar:** A strong dollar means that commodity prices, which are typically denominated in USD, will tend to decrease.

Some economists suggest that dollar-denominated borrowing has choked several emerging markets since the strengthening of the USD, beginning in 2014. While the dollar was cheap, companies outside of the US borrowed in dollars, which was cheaper than borrowing in their own currency. Now that the dollar has strengthened, interest in borrowing has waned, but the burden of repayment has increased.[2] The continued strong dollar will further hamper economic growth as financing has become less accessible and more costly.

The China price

Furthermore, countries that export finished goods to industrialized countries have not thrived, despite the advantage of being able to acquire primary inputs such as commodities and labor at lower prices. Their problem is that demand for finished goods, particularly from the developed world, has been lagging.

In the past, the "China price" was used in international supply chains to decide where to produce goods. This created competitive pressure that globally kept inflation relatively low at the beginning of this century.

Where there is price competition, sellers can't raise prices to improve their profit margins; it is reasonable to expect that import prices will continue to provide a ceiling to pricing power. Sellers cannot increase prices if demand is weak, and therefore pricing power is diminished, until and unless global growth increases to the point of overheating product markets.

In its hope to avoid the pitfalls learned from export-led growth in Japan, China has been trying to steer the focus of its economy away from exports and toward the internal market—a move that should pay off, but only over time. In the meantime, this shift is adding to the softening of global demand.

Moreover, services in poorer countries are often provided within a family and without market transactions, thus increasing the market weight of necessities. In richer countries, where shelter, health care and services are a bigger part of spending, inflation is likely to grow more rapidly.

In the examples shown in Exhbit 2, Germany has a CPI basket weighting to food of 10.3%, compared to 18.2% in South Africa. Similarly, Germans spend more for housing than South Africans, at 21.8% versus 16.6%.[3]

Similar differences in commodities-based versus nontradable goods and services exist between developed and developing countries globally. In markets where citizens spend a larger proportion of their income on commodities, including energy, rising or falling commodities prices will tend to have a bigger impact on overall inflation rates.

[2] http://www.economist.com/news/finance-and-economics/21693961-why-borrowing-dollars-central-business-cycle-developing
[3] All data are from http://stats.oecd.org/.

Exhibit 3: Japan a mixed bag, trending down in the short term

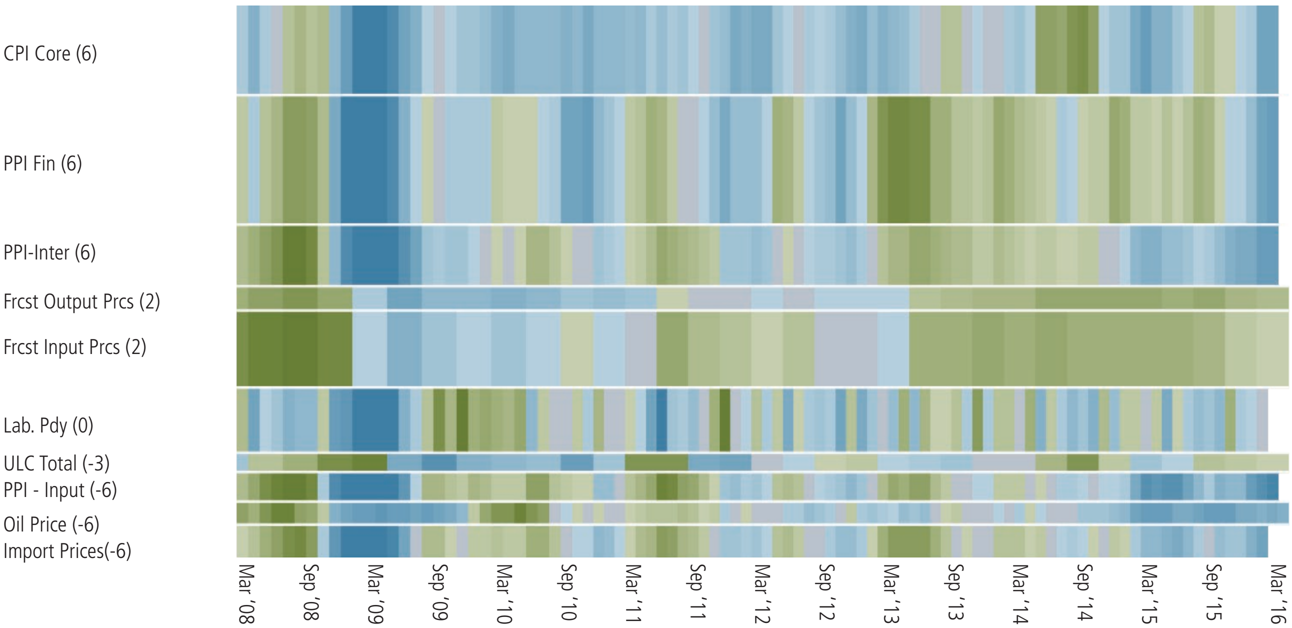


Exhibit 4: Eurozone–the deflation risk is real

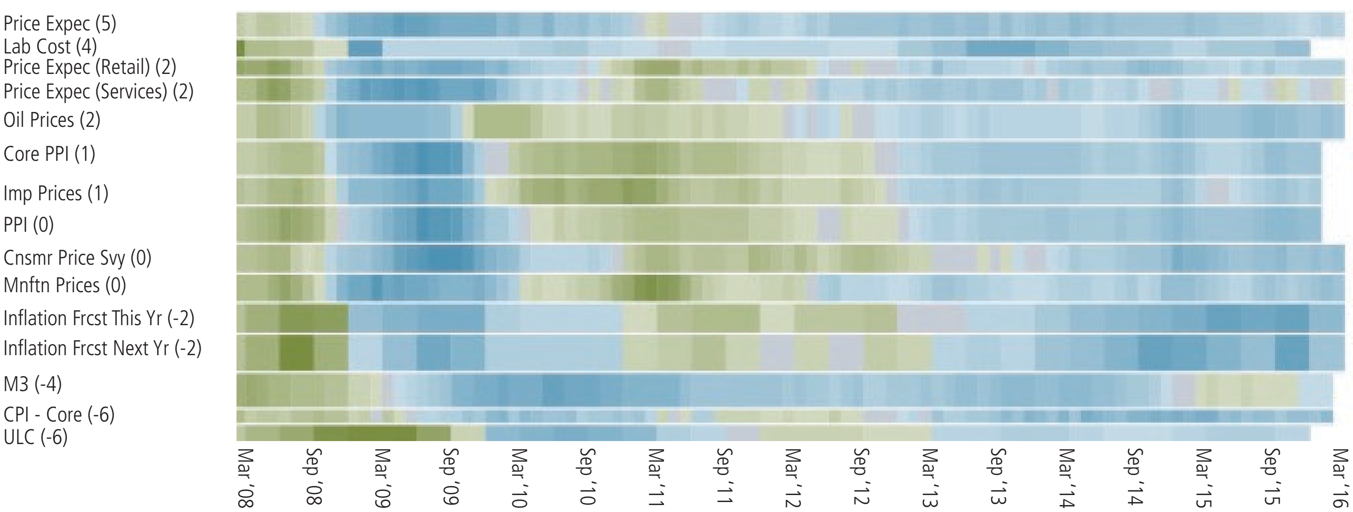
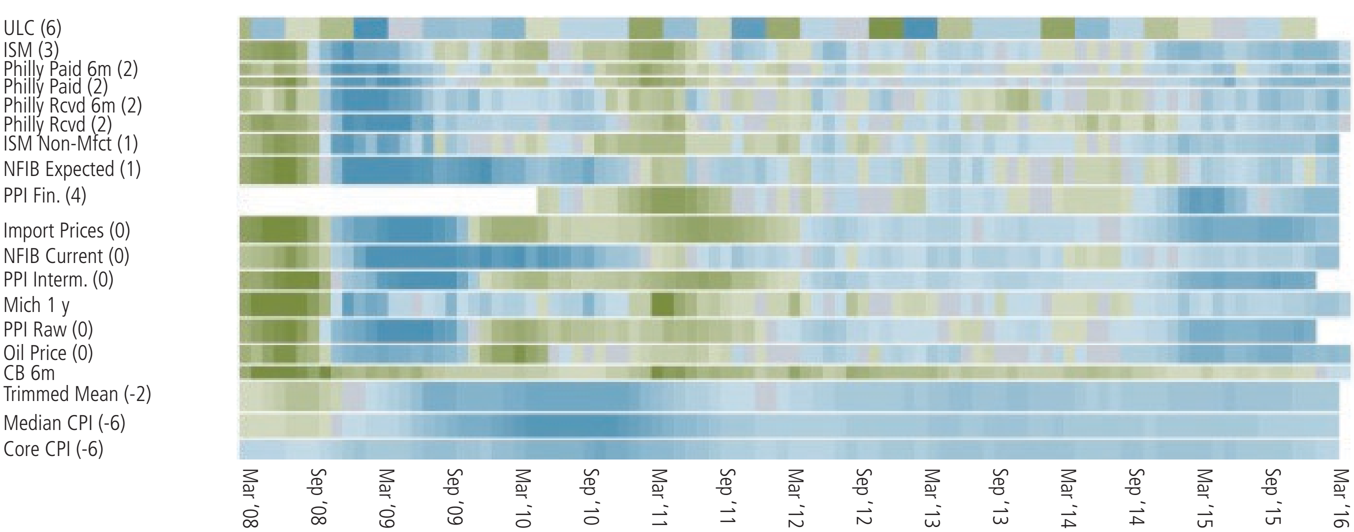
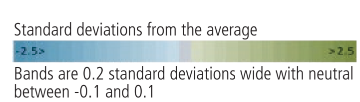


Exhibit 5: US inflation measures are moving towards the normal range – Fed will tighten further





Indicators for inflation in the near term
We have studied a number of macroeconomic variables and have found that historically some of them have been reliable predictors of inflation. The charts on page 16 help to put inflation expectations in the context of these leading inflation indicators (see Exhibits 3, 4 and 5).

In the following 'heat maps,' each row represents the most recent price change information for a key inflation indicator, relative to historical trends. Shades of green show above-trend activity, while shades of blue signal below-trend performance. The indicators are listed in the order of how many months they lead or lag actual inflation, with the number in parenthesis indicating the number of months. The height of each row corresponds to that indicator's correlation with inflation rates, relative to other indicators.

The key differences between the heat maps for the US, the Eurozone and Japan are the dynamics of the leading indicators (the top rows of each chart). While the US has some green indicating that inflation measures are converging toward the Fed's target of 2%, Europe shows a deep blue indicating that inflation is converging to zero or perhaps to a negative number, which is a material cause of concern since a negative price trend leads people to delay big purchases, hoping for even lower prices and therefore depressing aggregate demand in the short term. Japan's indicators show a confusing mix, while we wait for recent monetary easing to bear fruit.

By way of example, in the US heat map, a key indicator is in the top row, Unit Labor Costs (ULC), which has trended into positive territory for most of the past year. Rising costs associated with labor are historically a reliable inflation indicator. The Eurozone heat map offers virtually no comparable indications of rising prices.

These heat maps help explain why the US Federal Reserve decided to begin raising interest rates in 2015, while central bankers in Japan and the Eurozone have turned to negative interest rates in recent months.

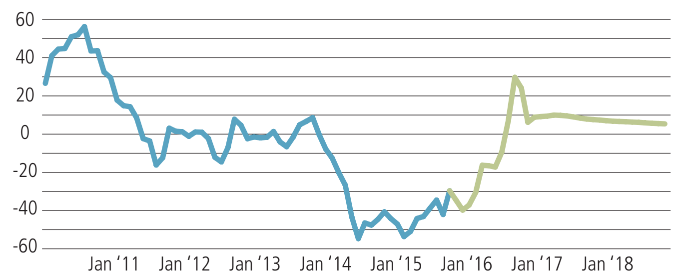
Low oil prices will exert progressively less drag on year-over-year headline rates of consumer price inflation in 2016, as shown in Figure 6. A modest rise in inflation would be welcome, helping to reduce the threat of deflation in places like Japan. But what will matter most to asset prices are central banks' responses.

Source, Page 16: Institute of Supply Management, Federal Reserve, PMAC, University of Michigan, Conference Board, Bureau of the Census. Data as at 07 April 2016.

Overall, we believe that inflation will probably move higher gradually. It will largely be driven by energy prices, and thus represents little cause for alarm as commodity prices are unlikely to reach the highs of 10 years ago.

Exhibit 6: Stabilizing oil prices are forecast to bring modest inflation to the US and the Eurozone in 2016

Change in oil price year-over-year, assuming forward pricing, in %



Source: Bloomberg Finance LP, UBS Asset Management. Data as of April 2016.

Inflation has consequences
Inflation is just one macro-variable, and we are watching many more. However, we believe that inflation will be a key macro-variable that sets the tone of asset returns for the next three to five years. The intermediate-term return environment is characterized by the potential for a more volatile business cycle and for low expected returns for equities due to narrow margins. Inflation normalization may encourage central banks to normalize rates, which will result in higher bond yields, which reduces the total returns of bonds via the duration mechanism.

As a consequence, beta alone—pure passive exposure to asset classes—appears unlikely to meet return requirements for many investors. After a protracted period during which beta has dominated returns, this shift is a significant one. Against this backdrop, fund manager skill is likely to play a much greater role in investment returns, and a return to active management should be considered. This may be a propitious time to introduce a top-down tactical asset allocation plan.

Elements of an investment plan should include:
- Lowered return expectations due to increasing interest rates
- An allocation to illiquid assets to capture the liquidity premium (if the investor has a long enough horizon)
- A risk allocation approach to think not just in terms of expected returns, but of risk-adjusted expectations
- A plan to take advantage of the cyclicality of markets by applying top-down active management and global tactical allocation