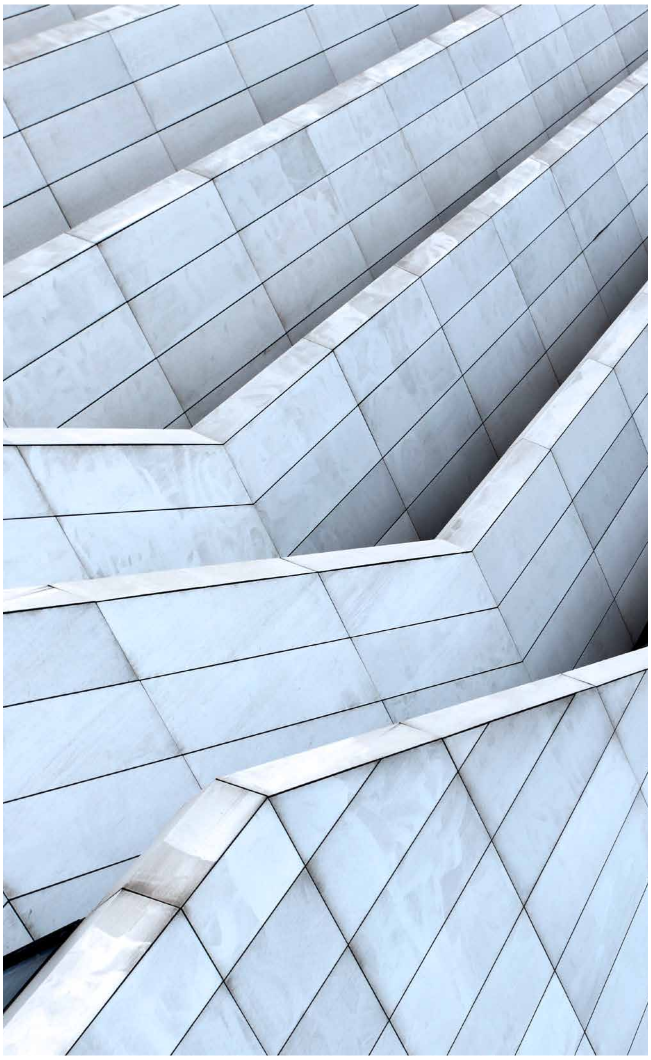
What if inflation bounces higher?

UBS ETF Market Matters

The recent election of Donald Trump (along with potential implications of fiscal spending and corporate tax cuts) has triggered revision of inflation expectations on a broader scale. The question is whether the inflation risk is underestimated and how to inflation-protect portfolios.

Shorter-term Treasury Inflation-Protected Securities (TIPS) as well as gold have historically shown high absorption of inflation shocks, i.e. their value increased along with rising inflation. However, gold features higher level of volatility and as an inflation-hedging instrument may be less appropriate for more risk-averse investors.

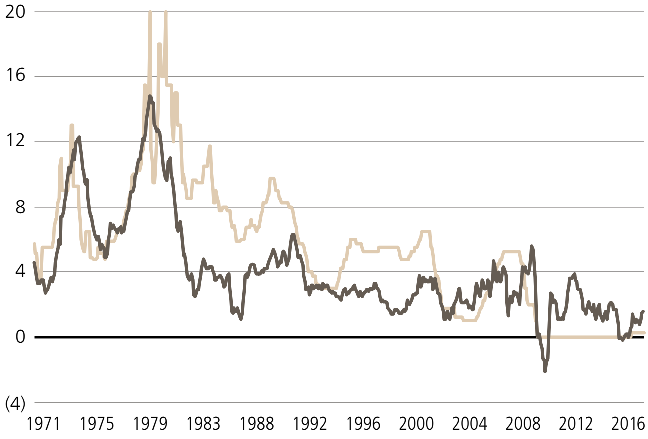
We find that a shorter-term TIPS portfolio could be a more suitable inflation-sensitive investment than longer-term TIPS for investors who want to closely follow realized inflation over short horizons (i.e. when TIPS are not held until maturity).



Over the past years a number of economic events including, amongst others, the Financial Crisis of 2007–2008, the European Sovereign Debt Crisis of 2011–2012, through to the recent Oil Price Drop in 2015, have led inflation expectations to low levels. Despite massive monetary stimuli, inflation figures have generally remained low with little indication of rising attempts. Figure 1 illustrates U.S. inflation with the current Fed target rate near zero level and inflation below the 2% target. Communication from the U.S. Federal Reserve, and other central banks, has not been able to lift market's inflation expectations for an extended period of time. The U.S. post-crisis inflation averaged 1.4% from October 2008 to October 2016 compared to the long-run average of 4.1% (from January 1971). The most common explanations for lower inflation include weaker growth globally, falling energy prices, stronger dollar as well as the structural impact of technological progress.

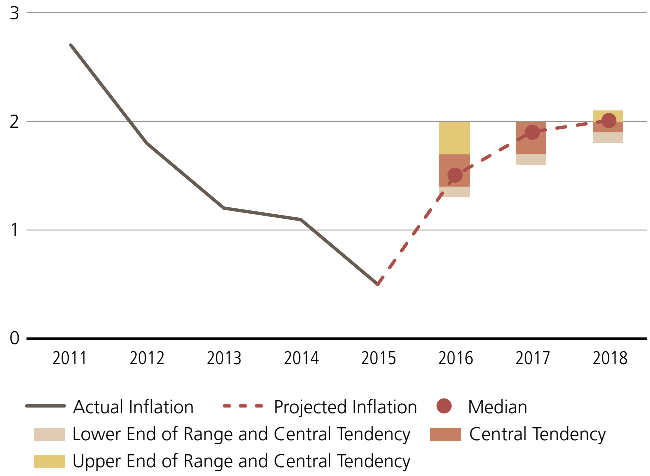
However, Figure 2 shows FOMC members' inflation projections for the coming years, indicating a major change is anticipated in the U.S. inflation, from actual downward sloping to expected upward trending. Furthermore, Donald Trump's win (along with potential implications of his fiscal policy plans) as well as the December FOMC guidance that have triggered revision of inflation expectations on a broader scale. What if Donald Trump implements the fiscal spending of USD 1 trillion? Could inflation overshoot?

Figure 1: Historical inflation and Fed target rate (in %)



Source: Bureau of Labor Statistics. Federal Reserve Bank. UBS Asset Management, data as of 30 November, 2016

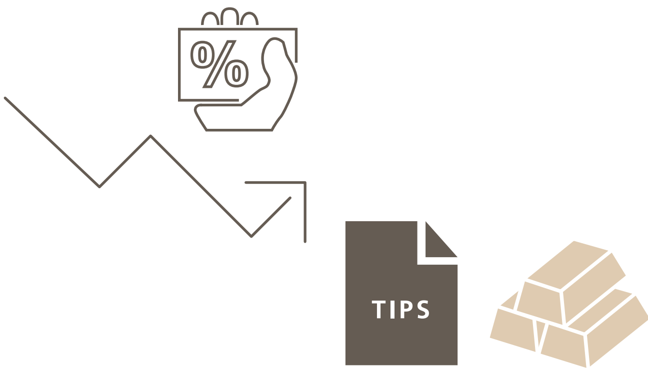
Figure 2: Inflation projections (FOMC minutes from Sep 2016)



Source: Federal Reserve Bank. UBS Asset Management, data as of 13 December 2016

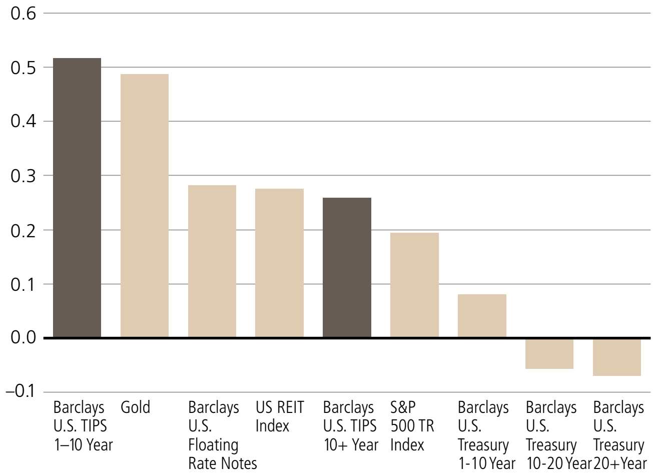
How to protect against inflation risk?

One way to hedge unexpected bursts of inflation is to invest in TIPS. Principal of TIPS increases (decreases) with inflation (deflation) as measured by the Consumer Price Index for Urban Consumers (CPI-U). This inflation-indexation ensures that purchasing power is preserved, an important factor since many investors target real consumption. The TIPS market has grown substantially from its inception in 1997 and the current market is valued at USD 1.1 trillion (Barclays U.S. TIPS Index), compared to nominal treasuries of USD 6.8 trillion (Barclays U.S. Treasury Index). In contrast to other inflation-hedging options (Figure 3), shorter-term TIPS have offered a superior level of inflation-protection, i.e. their value was most highly correlated with inflation.



Although gold is generally considered a "safe haven" asset that tends to absorb different types of shocks (inflation, market, currency etc.), its inflation-protection ability appears somewhat weaker than that of shorter-term TIPS. That said, there are also other significant drivers of gold performance other than inflation. Floating rate bonds, real estate, longer-term TIPS and equities have all shown some resilience to inflation, but significantly lower compared to shorter-term TIPS or gold. Nominal bonds have structurally no protection against inflation shocks. In case of a sharp inflation surprise, the value of nominal bonds may therefore fall substantially.

Figure 3: Correlation of 12M returns vs CPI year-on-year (monthly data from Sep '03–Oct '16)



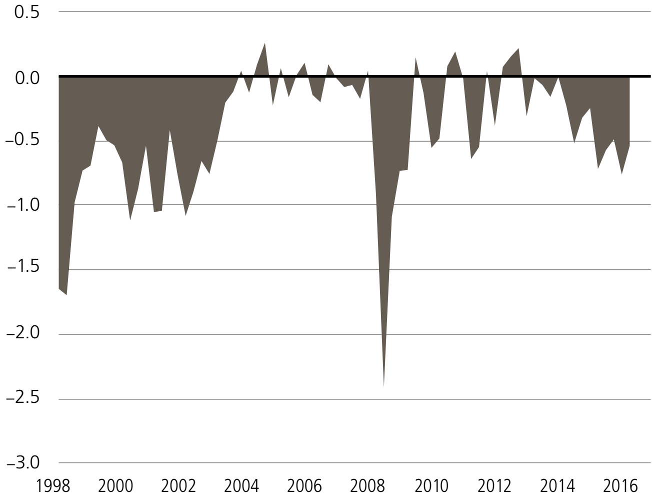
Source: Bloomberg, UBS Asset Management, data as of 13 December 2016

What does the break-even inflation rate tell you?

The break-even inflation rate (BEI) is the yield spread between nominal and inflation-linked bonds on a duration neutral basis. It has become one of the most important indicators of inflation expectations and associated premia. Measures of BEI rate reflect the overall inflation-related compensation comprised of three parts: inflation expectation, inflation risk premium (reward for taking inflation risk) and (negative) liquidity premium (TIPS holders are compensated for their lower liquidity vis-à-vis nominal bonds). If inflation risk premium exceeds illiquidity premium, then BEI is greater than anticipated inflation and vice-versa. Such a decomposition of BEI can be done with the help of surveys on inflation expectations. The BEI rate was below anticipated inflation in the first years following the TIPS launch program in 1997 as well as during the Financial Crisis in 2008, which suggests that illiquidity premium must have been a dominant driver[1] (see Figure 4 presenting the BEI minus Survey of Professional Forecasters (SPF)[2]).

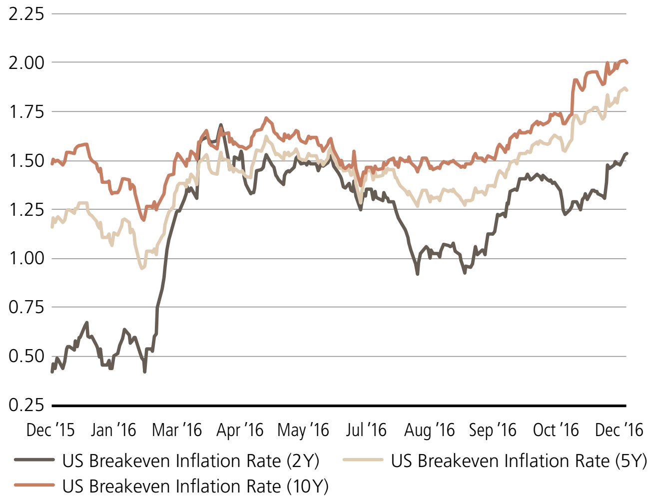
Other drivers of BEI include indicators of price pressures (e.g. wage growth) and cyclical conditions (e.g. consumer confidence, unemployment rate, or business cycle conditions), so its dynamics are rather complex. Nevertheless, BEI rates are widely available and provide estimates about inflation expectations over different horizons. Figure 5 illustrates development of the U.S. BEI rates for three different time horizons, showing they moved up recently closer to 2%, across its term-structure. Investors who think that future inflation will be higher than indicated by the respective BEI rate (e.g. because Fed's hikes are too dovish, or energy prices edge up higher) may consider reallocation of some nominal bonds into TIPS.

Figure 4: US breakeven inflation minus SPF[2] over the next ten years



Source: Bloomberg, UBS Asset Management, data as of 11 November, 2016.

Figure 5: US breakeven inflation rates

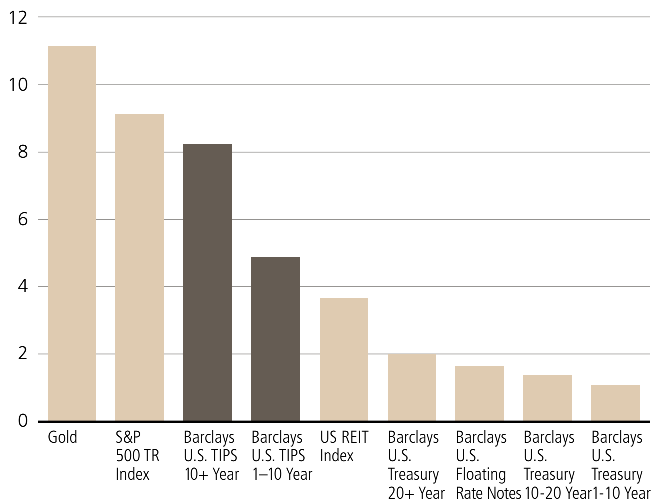


Source: Bloomberg, UBS Asset Management, data as of 13 December, 2016.

What about the performance?

Figure 6 illustrates the performance of key asset classes for 2016 (at the time of writing). The TIPS have had quite a strong performance relative to nominal bonds. This may suggest that investors have revisited the outlook for inflation, but also for real interest rates. Unlike nominal bonds, TIPS are protected from an unexpected rise in inflation. However, both nominal bonds and TIPS are influenced by changes in inflation expectations and real interest rates. The moderate rise in inflation (CPI-U index was 1.6% year-on-year basis as of October 2016) and change in rates (Fed hiked twice in 2016) largely explain a better performance of TIPS compared to nominal bonds.

Figure 6: Year-to-date performance in 2016

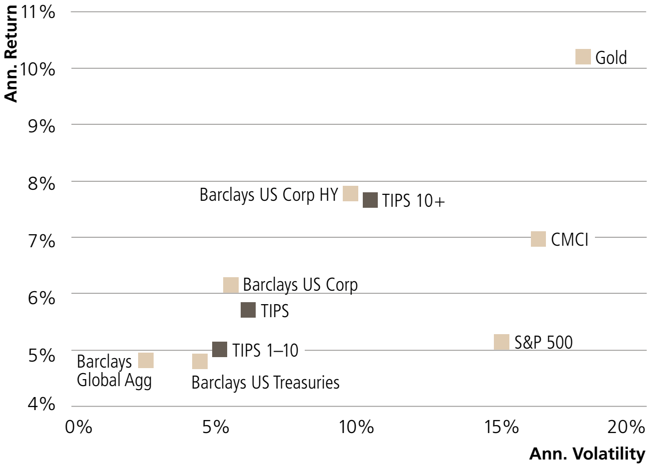


Source: UBS Asset Management, data as of 30 November 2016

1 For a detailed analysis on the argument of illiquidity premium for TIPS see Dudley, Roush and Steinberg Ezer (2009).
2 The SPF 10-Year CPI Inflation Rate is surveyed as part of the Philadelphia Fed professional economist survey. The data is obtained every 3 months for selected economic variables, i.e. inflation expectations.

Additionally, Figure 7 shows the longer-term risk/return profile. The TIPS have slightly higher returns than nominal treasuries, but at the cost of slightly more risk. Strikingly, gold had delivered better returns, but the associated risk level was substantial. In this regard, gold as an inflation-hedging instrument was less appropriate for risk-averse investors. Simply put, TIPS offered a more attractive risk-adjusted outcome as well as a guarantee of real consumption value if held until maturity.

Figure 7: Risk-return profile of key asset classes (monthly data from July '00–Nov '16)



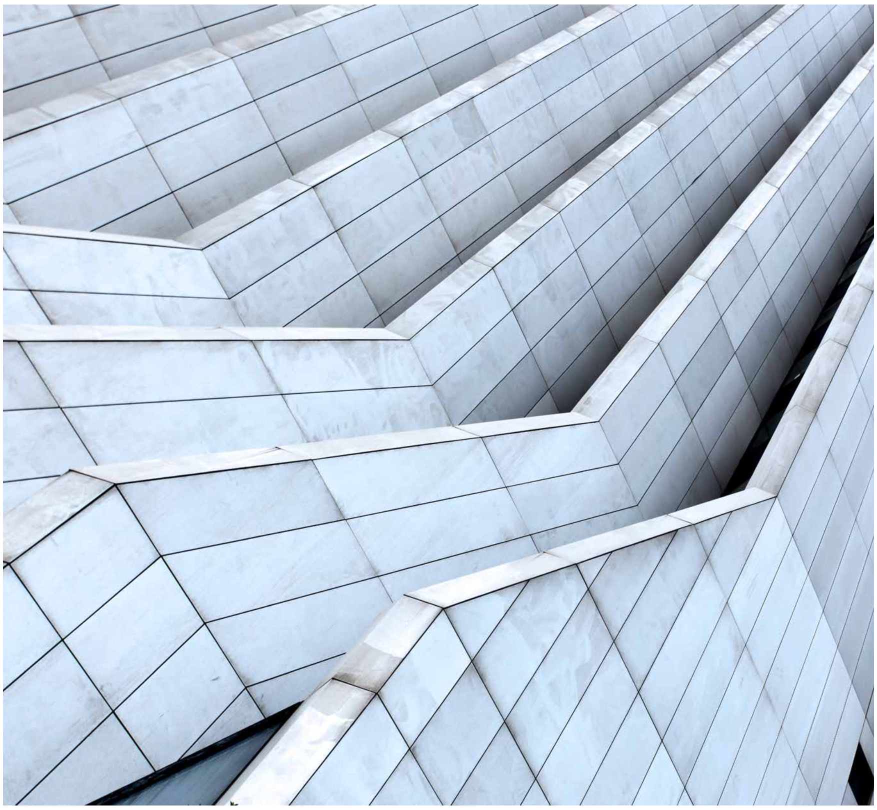
Source: Barclays Point, UBS Asset Management, data as of 30 November 2016.

Past performance is not indicative of possible future returns.

Short or long TIPS?

All TIPS securities receive the same CPI principal adjustment, hence they are all expected to protect against inflationary risk. However, just like nominal bonds, they also carry interest rate risk, and longer-dated TIPS (e.g. with maturity greater than 10 years) carry considerable more interest rate risk compared to shorter-maturity TIPS (e.g. of 0-to-10 year maturities). Figure 3 shows that shorter-term TIPS have been more highly correlated to actual inflation than longer-term ones. Because of their lower duration (lower sensitivity to changes in real interest rates) they also reveal greater responsiveness to temporary, unexpected inflation shocks.

Looking at Figure 7, it is clear that taking on duration risk compensated investors, including TIPS holders, due to post-crisis compression in yields along the entire term-structure. A TIPS investor faces a trade-off between inflation responsiveness, and risk-return profile of investment. A shorter-term TIPS portfolio is therefore a more appropriate inflation-sensitive investment than a longer-term TIPS for more interest-rate-risk-averse investors who want their portfolio to follow closely realized inflation over short horizons.



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UBS ETF (LU) Barclays TIPS 1–10 hedged CHF UCITS ETF	0.25%	155	CHF	Physical	No	LU1459802168	TIP1S SW
UBS ETF (LU) Barclays TIPS 1–10 hedged EUR UCITS ETF	0.25%		EUR	Physical	No	LU1459801780	TIP1E SW
UBS ETF (LU) Barclays TIPS 1–10 hedged GBP UCITS ETF	0.25%		GBP	Physical	No	LU1459801947	TIP1G SW
UBS ETF (LU) Barclays TIPS 10+ UCITS ETF	0.20%	11	USD	Physical	Yes	LU1459802754	UIMB GY

Source: UBS Asset Management as of 31 December 2016

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