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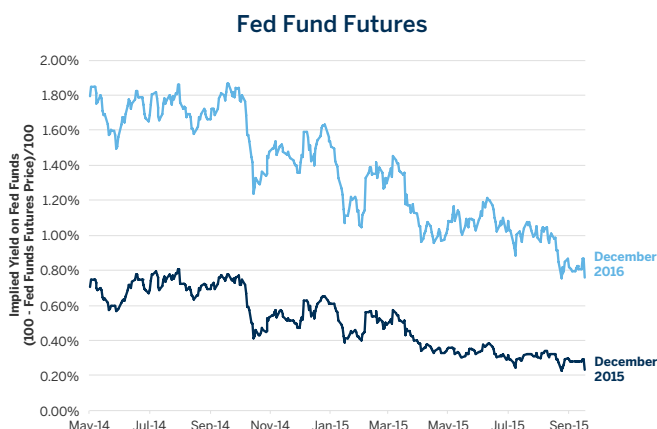
# Why Fed Rate Hikes Might Benefit Germany

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At a time when most of its peers, including the European Central Bank (ECB) and the People's Bank of China (PBoC), are aggressively easing policy, the U.S. Federal Reserve (Fed) is vociferously contemplating moving in the opposite direction. The mere suggestion that the Fed might tighten has sent the U.S. dollar (USD) soaring. The possibility of higher rates and the reality of a stronger dollar also contributes downward pressure on commodity prices, at least when viewed from a USD perspective.

Our assessment is that lower commodity prices and a stronger dollar are probably good — maybe even very good — for Europe and Germany. To the extent that actual Fed tightening drives USD higher and commodity prices lower, we see Germany and Europe as net beneficiaries of tighter Fed policy. There are, of course, risks: the Fed might not tighten as much or as quickly as the central bank's rhetoric suggests. In fact, Fed Funds Futures have been busily de-pricing rate hikes for over a year now (Figure 1). By contrast, the Fed could raise more than expected and upset markets, harming global growth.

**Figure 1.**



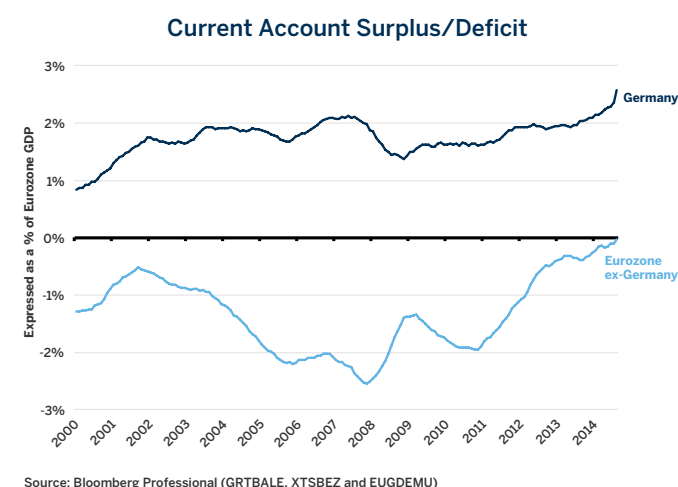
Source: Bloomberg Professional (Codes: FFZ5 and FFZ6)

## Why Higher U.S. Rates Might Benefit Germany

Germany's economy is in essence pretty simple: the country imports large quantities of natural resources and unfinished goods and creates high value-added products out of them, many of which are exported. Expressed as a percentage of GDP, exports came to around 35% in 2013 and 2014, while imports were around 29%. This left Germany with a trade surplus of about 6% of GDP, which has since expanded to over 8% of GDP largely as a consequence of the collapse in petroleum prices. Germany, which produces almost none of its own crude oil, imported the equivalent of 4.5% of GDP worth of it in 2013, a fuel bill that falling oil prices have since cut in half.

Germany's exports are highly differentiated and sophisticated and hence show relatively little sensitivity to the strength of the euro (EUR). The same cannot be said of exports from the other 18 countries with which Germany shares the common currency. For the most part, the rest of Europe produces much less differentiated products that suffered as the euro nearly doubled between 2000 and 2008 when it peaked at nearly 1.60 versus the dollar. For much of this period, the Eurozone excluding Germany ran substantial trade deficits. Only during the past few years, with a collapse in import demand in southern Europe, the benefits of a weaker currency and, recently, lower crude oil import bills, have the Eurozone, excluding Germany, begun to move from a current account deficit into surplus. Put another way, Germany accounts for the entirety of the Eurozone's recent current account surplus (Figure 2).

**Figure 2.**



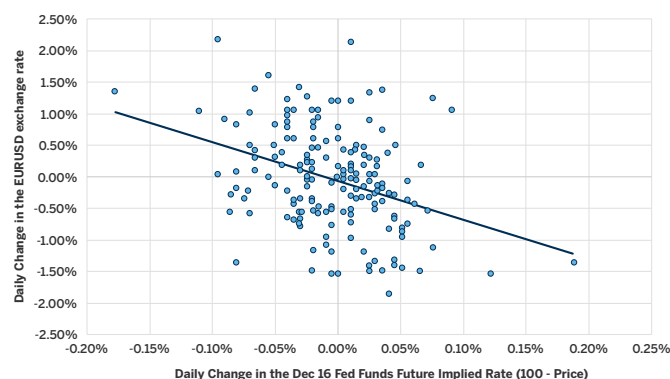
Given that about 40% of Germany's exports –roughly equivalent to 15% of German GDP — are sold to the other eighteen members of the Eurozone, what happens in the rest of Europe is of enormous consequence to Germany and its economy. The other countries of the Eurozone, including the largest economies, France, Italy and Spain, stand to benefit a great deal if the euro weakens further against the USD and other currencies but could be harmed if the euro rebounds.

Evolving expectations for Fed rate hikes is one of the key drivers of the EURUSD exchange rate. So far in 2015, the daily change in the December Fed Funds Futures contract implied rate (100 – price) correlates at -0.35 with the daily

change in the EURUSD futures contract. What this means is that when Fed Futures falls in price, it implies higher rates in the U.S. going forward, which in turn depresses EUR versus USD. By contrast, when Fed Funds Futures rise in price, this means that the implied effective Fed Funds rate is estimated to be lower in the future and tends to boost EUR versus USD. In a nutshell, rising U.S. rate expectations support the dollar versus the euro and vice versa.

**Figure 3. Year-to-Date Correlation**

**EURUSD and Fed Funds Expectations have  
a -0.35 correlation so far in 2015**



Source: Bloomberg (FFZ6 and EC1)

In fact, a large part of the reason why EUR stopped falling versus USD earlier this year has to do with the fact that rate hike expectations in the United States have diminished so dramatically since March. When EUR hit its low point of 1.05 versus USD on March 13, December 16 Fed Funds were pricing that the Fed Funds effective rate would average 1.365% in December 2016. By September 22, December 16 Fed Funds priced the effective rate averaging 0.705% by December 16 and EUR was trading back up at 1.12 versus USD.

There is a significant risk that actual Fed rate hikes exceed what Fed Funds Futures currently price:

- 1) Total U.S. labor income (average hours worked x average hourly earnings x number of workers) is expanding at around 4.5% annually and should underpin strong growth in consumer spending.
- 2) Commodity prices, whose decline has temporarily depressed the headline rate of inflation, won't fall forever. When the disinflationary decline in oil prices rolls off the back end of the year-on-year window, the headline rate of inflation will likely start moving back towards 2%. This will happen between November and January.

- 3) The Fed would like to bring rates up towards the core rate of inflation — currently 1.8% on CPI and 1.2% using the core-PCE deflator — to bring negative real rates to an end.

As such, we think that there is a greater than 50% chance that by the end of 2016, the Fed Funds effective rate will be well above the market's current pricing of around 70 basis points (bps). It wouldn't surprise us if it rose towards the 1.00–1.75% range by the end of next year. If so, the reality of higher-than-expected rates will likely support USD and could push EUR down through parity. A weaker euro would be only marginally helpful for Germany's exports outside of the eurozone but it would be a godsend to the rest of the countries that use EUR as their currency and would thus indirectly benefit Germany. Germany could also benefit to the extent that higher U.S. rates push commodity prices lower.

### The Fed, the Euro and European versus US Fixed Income

While it comes as no surprise that daily changes in Fed Funds futures correlate highly with daily changes in U.S. bond futures — +0.62 correlation at the long end and +0.95 at the short end — movements in Fed Funds futures are a major risk factor for German bonds as well, especially the longer maturities. Schatz futures correlate at +0.22 with Fed Funds Futures, BOBL at +0.35, Bund at +0.38 and the BUXL at +0.38 (Figure 4).

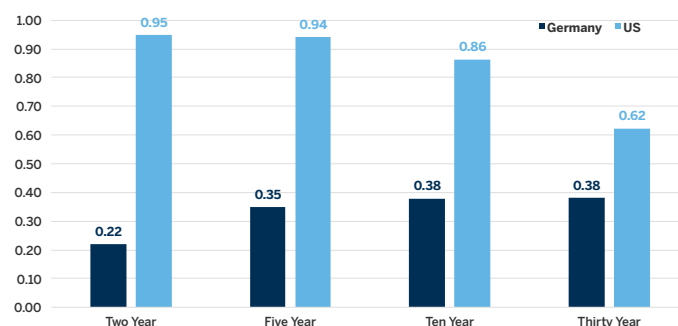
What is also interesting is that year-to-date there is a positive correlation between daily changes in the EURUSD and daily changes in U.S. Bond futures prices — prices move inversely from yield — whereas the correlation is negative for German bonds (Figure 5). We interpret this as meaning that interest rates drive the movement of the currency rather than the other way around. When U.S. bond yields are rising, their price is falling and in turn the EUR tends to fall versus the USD. By contrast, when European bond yields rise, their price falls and this correlates — less strongly — to a higher EUR versus USD.

One could easily imagine the correlation the other way around: a stronger EUR means more disinflationary pressures coming into the eurozone from abroad, which in turn lower bond yields in Europe and raise them in the United States. That is not, however, what actually occurs.

In addition to movements in Fed Funds Futures being a major risk factor for both the euro and German bonds, there are other reasons for Germans — and Europeans more generally — to take an interest in the debate over whether, when and by how much the Fed will raise rates. First, there remains a wide interest rate gap between European (especially German) and U.S. bonds, which offers a possibility to earn higher yield as well as, in some cases, higher credit ratings by crossing the Atlantic Ocean (Figures 6 and 7). Second, the debate over Fed policy is boosting volumes in the United States which contrasts sharply with generally stagnant or falling volumes on European rates futures products (Figures 8 – 12). Basically, there isn't much reason to expect the ECB to even think about raising rates until at least 2017, at the very earliest.

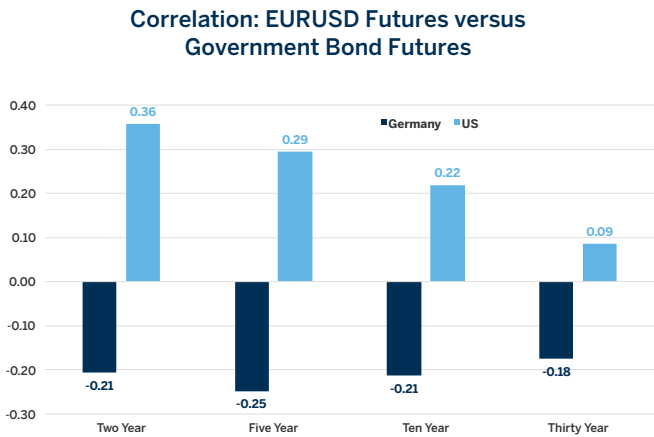
**Figure 4. Year-to-Date Correlation**

**Correlation: Daily Changes in Futures Contracts on Government Bonds versus Fed Fund Futures**



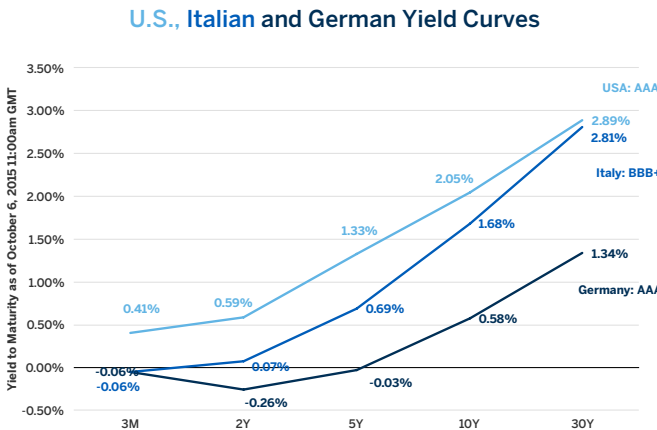
Source: Bloomberg (FFZ6, DU1, TU, OE1, FV1, RX1, TY1, UB1 and US1), with CME Economics Research Calculations

Figure 5. Year-to-Date Correlation



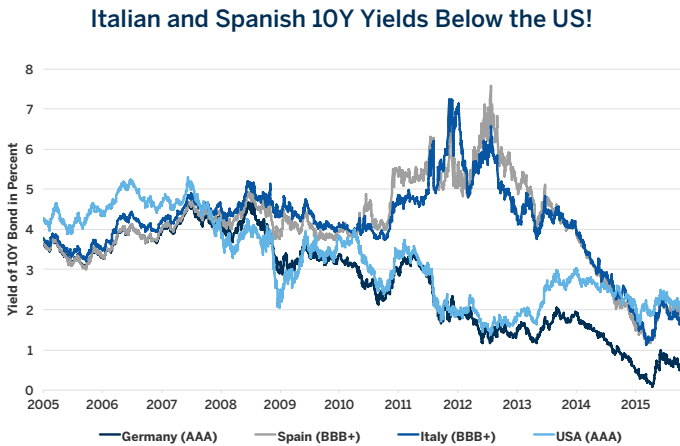
Source: Bloomberg (EC1, DU1, TU, OE1, FV1, RX1, TY1, UB1 and US1), with CME Economics Research Calculations

Figure 7. AAA-rated U.S. Yields are higher than Italy; German yields are still negative up to five years!



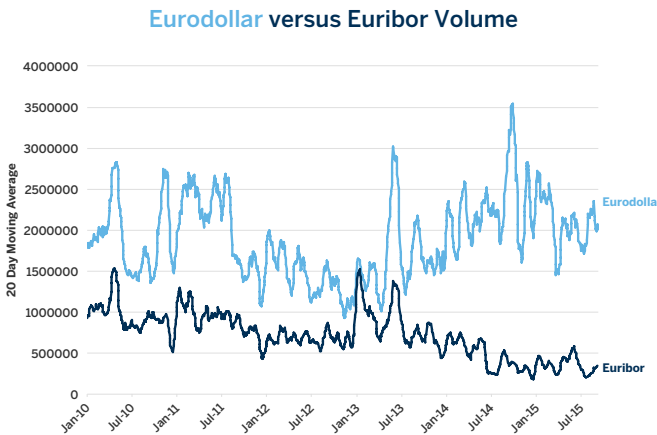
Source: Bloomberg Professional (WBCV, ED1 and ER1)

Figure 6.



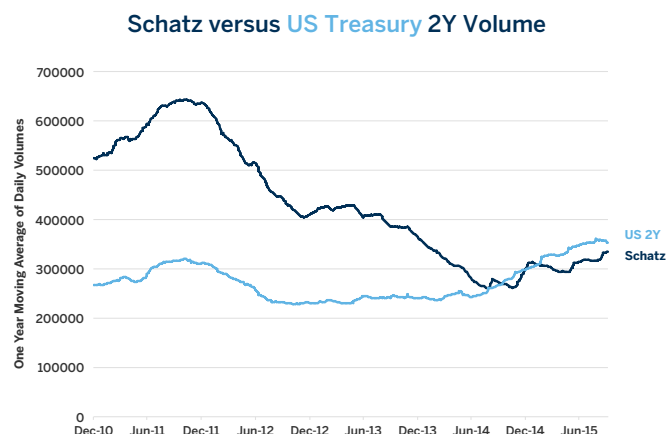
Source: Bloomberg Professional (GTDEM10Y, GTESP10Y, GTITL10Y, USGG10Y)

Figure 8.

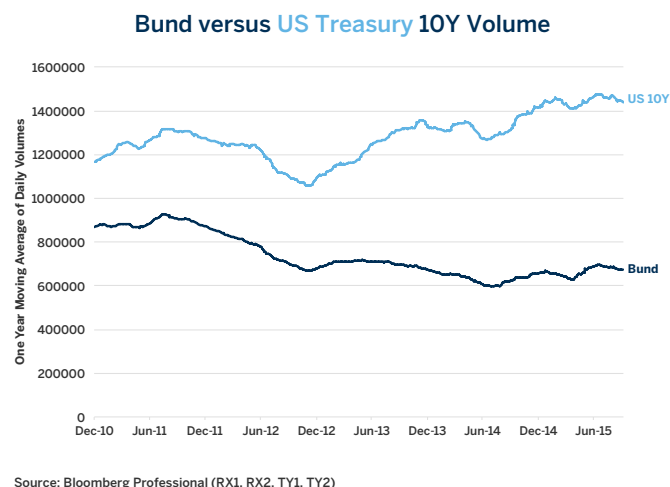


Source: Bloomberg Professional (ED1 through ED12 and ER1 through ER12)

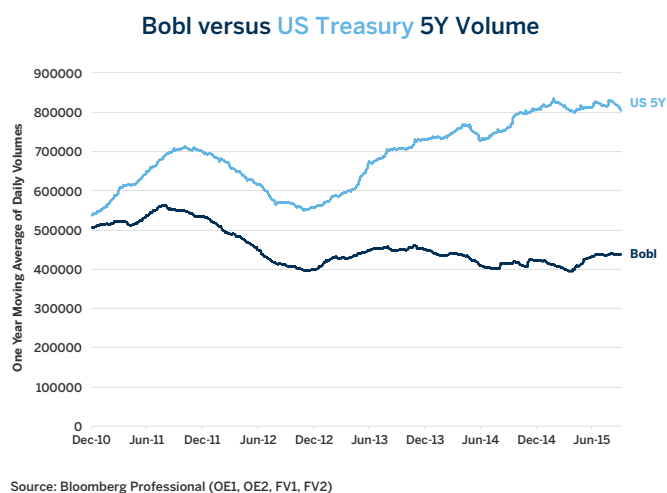
**Figure 9. U.S. Two Year Overtakes Schatz on Average Daily Volume**



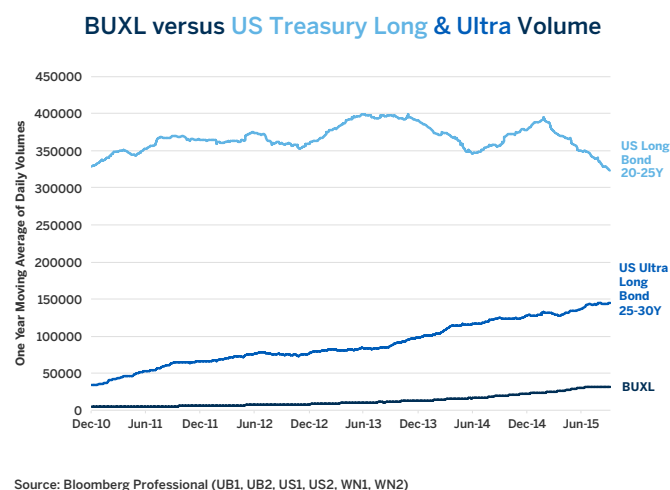
**Figure 11.**



**Figure 10.**



**Figure 12. Liquidity in U.S. Long and Ultra-Long Bond Futures is without Comparison**





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