OFR MARKETS MONITOR
OFFICE OF FINANCIAL RESEARCH

November/December 2015
(data as of December 1)

A review of financial market themes and developments

Expectations Solidify for Federal Reserve to Lift Rates in December

The Federal Reserve's "liftoff" — its first increase in interest rates since setting them near zero during the financial crisis — is now broadly expected to occur at the December 15-16 monetary policy meeting. The shift in market expectations was fueled by very strong U.S. employment data and communications from Federal Reserve officials. The European Central Bank also announced at its December meeting a package of new easing measures, reinforcing the theme of economic and monetary policy divergence among major economies. This divergence remains a powerful driver of currencies and interest rates in these markets.

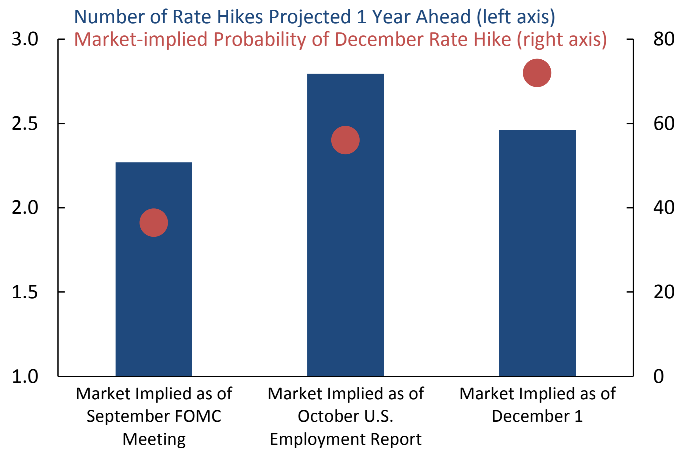
Developments since the October report

- Expectations sharply increased for the Federal Reserve (Fed) to initiate liftoff in December, while expectations persist for a very gradual pace of interest rate hikes thereafter.
- European Central Bank policymakers announced further easing measures at their December meeting.
- Policy-sensitive assets moved in line with diverging central bank expectations: the two-year U.S. and German sovereign yield spread widened, the U.S. dollar advanced, the euro weakened, and dollar funding costs increased.
- Prices of oil and other commodities approached or reached multiyear lows, weighed down by persistent oversupply and weak Chinese demand.

The market consensus is now for the Fed to lift rates in December and follow a gradual pace of tightening thereafter.

Better-than-expected U.S. employment data and communications from Fed officials sharply increased market expectations for the Fed to begin raising interest rates at its December 15-16 monetary policy meeting. The market-implied probability of a rate hike at the meeting is now approximately 75 percent, up from around 60 percent and 40 percent following the October and September meetings, respectively. Recent Fed communications also focused on the path of policy following liftoff and reinforced expectations for a gradual pace of rate increases over the next year. The market is currently pricing in two-to-three 25 basis point rate hikes in the 12 months following the first increase (Figure 1).

Figure 1. Likely December liftoff, then gradual tightening
Number of rate hikes and probability (percent)



Note: The number of rate hikes tracks the market-implied pace of rate hikes for the first 12 months after liftoff based on Eurodollar futures.
Source: Bloomberg L.P.

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The European Central Bank (ECB) enacted additional policy accommodation in December.

At its December policy meeting, the ECB announced a 10 basis point deposit rate cut, extended the asset purchase program to 2017, and added regional government debt as an eligible asset. The additional policy easing was considered less accommodative than anticipated; most analysts had expected an increase in monthly asset purchases and a larger deposit rate cut (Figure 2). Euro area financial conditions tightened considerably in response, with the euro appreciating 2-to-3 percent and bond yields rising.

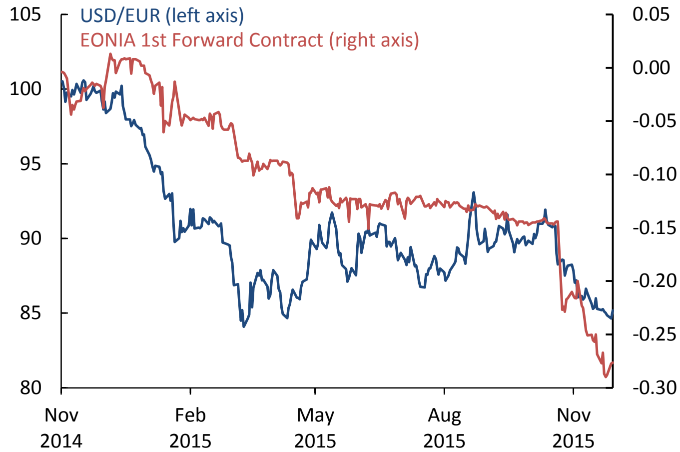
Market reaction reflects the increased expected divergence in monetary policies.

U.S. and German policy-sensitive sovereign yields deviated further, in anticipation of central bank actions in December. The U.S. two-year yield rose sharply to a six-year high as expectations increased for a December Fed rate hike, while the German two-year yield neared a record low as the ECB announced further policy accommodation. As a result, the spread between U.S. and German two-year yields has reached 129 basis points, its widest level since the financial crisis (Figure 3). Market participants forecast U.S. two-year yields to reflect greater volatility as the December Fed policy meeting approaches.

The U.S. dollar appreciated toward its strongest levels in 2015 and cross-currency basis swaps widened significantly on factors related to supply and demand rather than funding stress. The euro-dollar and dollar-yen basis swap rates, a measure of the cost to convert euro- or yen-denominated cash flows into dollars, have reached the most expensive levels since 2012 (Figure 4). Growing expectations for a continued divergence in global monetary policies have contributed to shifts in demand for U.S. dollars. There has been increased hedging demand from U.S. corporates that have issued debt in the euro area to take advantage of the widening gap between U.S. and euro area interest rates (see the March Financial Markets Monitor). Demand also increased from euro area and Japanese asset managers reportedly purchasing U.S. assets in a search for yield and funding these transactions through foreign exchange swaps. While dollar funding stress remains contained, many expect the dollar to continue appreciating, which could further pressure emerging markets and commodities.

Figure 2. Euro money market rates and currency decline

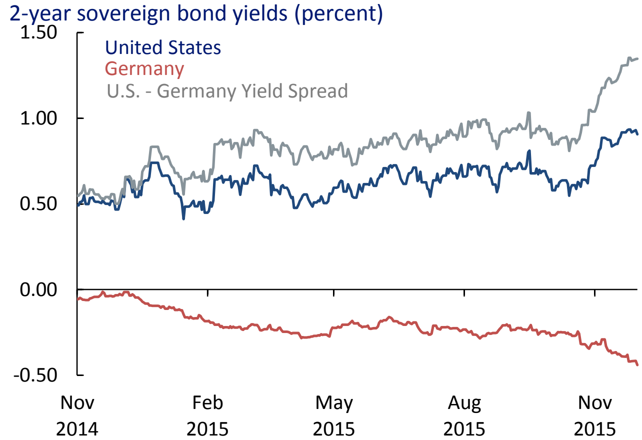
FX price (Index 100 = November 3, 2014) and yield (percent)



Source: Bloomberg L.P.

Figure 3. Widening gap in policy-sensitive sovereign yields

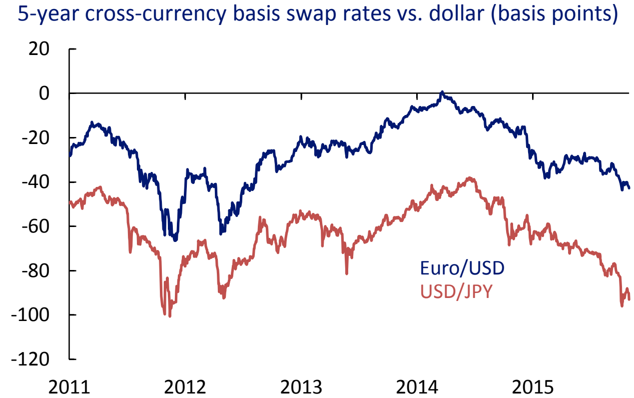
2-year sovereign bond yields (percent)



Source: Bloomberg L.P.

Figure 4. U.S. dollar cross-currency swaps become more costly

5-year cross-currency basis swap rates vs. dollar (basis points)



Note: A cross-currency basis swap is an agreement in which two parties exchange floating-rate payments in different currencies.

Source: Bloomberg L.P.

Increased expectations for the Fed to initiate liftoff, coupled with lower energy prices, renewed pressure on emerging market assets. Since the release of strong U.S. employment data in early November, broad emerging market equity indexes have fallen about 3 percent, sovereign and corporate bond spreads widened by 20-to-30 basis points, and oil-linked currencies have depreciated by 4-to-8 percent. In line with these declines, mutual fund flow data show that investors have resumed selling emerging market equities and bonds, as outflows have increased since early November (Figure 5).

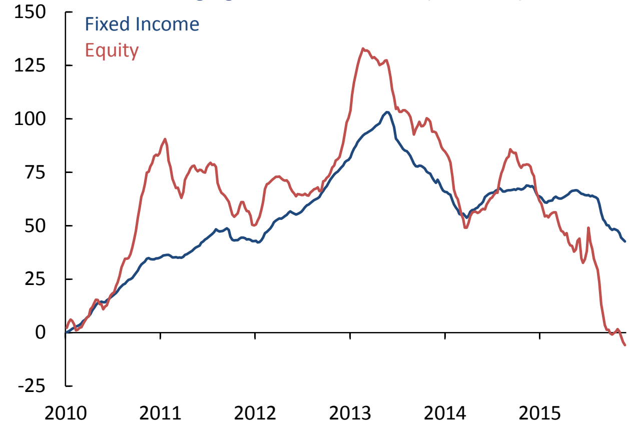
Persistent oversupply and weaker Chinese demand continues to weigh on commodity prices.

Global oil prices declined sharply in November and have approached the six-year lows reached in August. The decline is attributed to a continued buildup in U.S. crude inventories and a decision from the Organization of Petroleum Exporting Countries to maintain current production levels. In addition, key industrial metals, such as copper and steel, touched multiyear lows as oversupply and waning demand from emerging markets have pressured prices lower over recent months (Figure 6). Market participants remain attentive to the growth-and-demand outlook in emerging markets, particularly China.

Global markets were less sensitive to China's equity volatility and growth slowdown. In August, global markets sold off sharply in reaction to a Chinese currency devaluation and associated concerns about weak Chinese growth and capital outflows (see the August Financial Markets Monitor). More recent Chinese economic data indicate continued weakness, even as global and Chinese markets have been more stable since September. In addition, the latest data on Chinese foreign reserves indicate continued capital outflows (Figure 7). Separately, at its executive board meeting, the International Monetary Fund (IMF) formally approved including the Chinese currency in a select set of currencies that make up the IMF's Special Drawing Rights (SDR) basket. The short-run implications of SDR inclusion for the Chinese currency are unclear; some believe Chinese authorities will allow the currency to depreciate further and decouple from the U.S. dollar, while others believe China's central bank will avoid further substantial depreciation because it could trigger renewed capital outflows.

Figure 5. Fund outflows from emerging markets have resumed

Accumulated emerging market fund flows ($ billions)



Note: This is the sum of weekly fund flows starting 1/1/2010.

Source: Haver Analytics

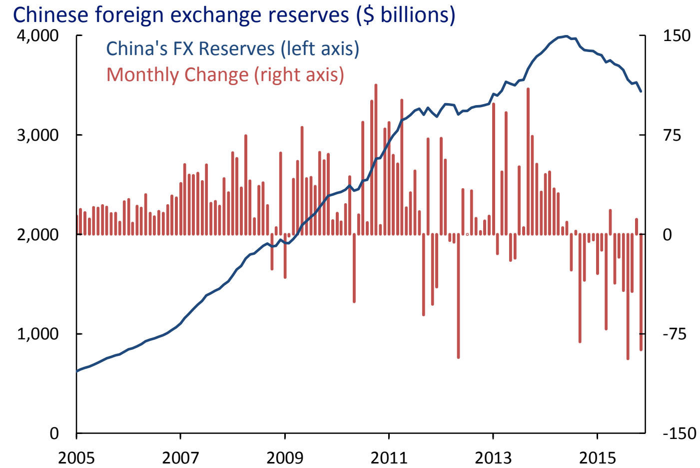
Figure 6. Oversupply and slowing demand weaken metal prices

Metals spot price indexes (Index 100 = January 1, 2008)

Source: Bloomberg L.P.

Figure 7. Chinese foreign reserve selling continues

Chinese foreign exchange reserves ($ billions)



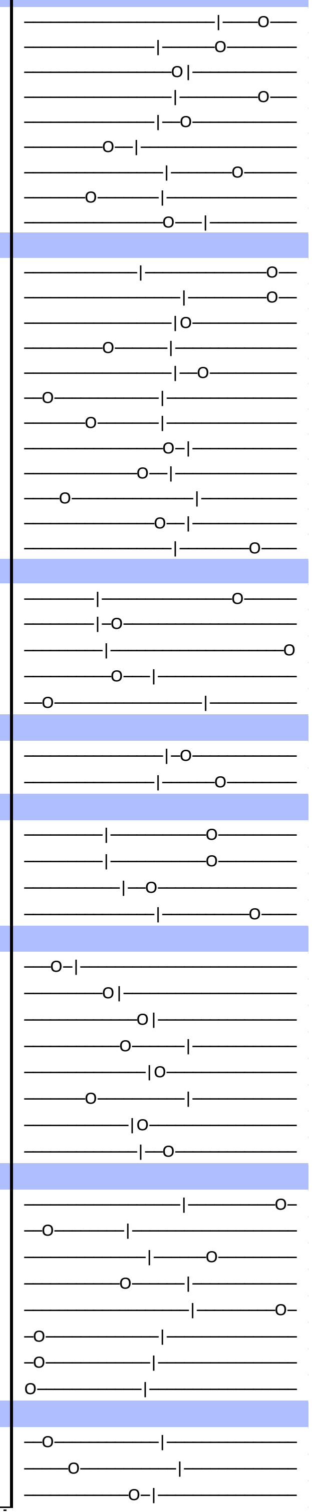
Note: Data as of November 2015

Source: Bloomberg L.P.

Selected Global Asset Price Developments

	LATEST LEVEL (12/1/2015)	30-DAY CHANGE (bps or %)	30-DAY CHANGE (standard deviations)*	YTD CHANGE (bps or %)
EQUITIES				
S&P 500	2103	-0.1%	-0.2	2%
U.S. KBW Bank Index	77	3.8%	0.5	3%
Russel 2000	1204	1.5%	0.1	0%
Nasdaq	5156	0.6%	-0.1	9%
Euro Stoxx 50	3480	1.3%	0.2	11%
Shanghai Composite	3456	3.9%	0.2	7%
Nikkei 225	20012	7.1%	1.2	15%
Hang Seng	22381	0.1%	-0.1	-5%
FTSE All World	271	-0.5%	-0.2	-1%
RATES				
U.S. 2-Year Yield	0.91%	15	0.6	24
U.S. 2-Year Swap Rate	0.97%	10	0.4	7
U.S. 10-Year Yield	2.14%	-3	-0.1	-3
U.S. 10-Year Swap Rate	2.02%	-7	-0.2	-26
U.S. 30-Year Yield	2.90%	-4	-0.1	15
U.S. 2y10y Spread	123	-18	-1.0	-27
U.S. 5Y5Y Inflation Breakeven	1.89%	-4	-0.2	-25
U.S. 5Y5Y Forward Rate	2.78%	-12	-0.4	2
Germany 10-Year Yield	0.47%	-9	-0.3	-7
Japan 10-Year Yield	0.30%	-2	0.0	-3
U.K. 10-Year Yield	1.76%	-17	-0.7	1
Euro area 5Y5Y Inflation Breakeven	1.81%	10	1.1	8
FUNDING				
1M T-Bill Yield	0.10%	10	0.4	9
DTCC GCF Treasury Repo	0.18%	7	0.6	-7
3M Libor	0.42%	9	0.4	17
Libor-OIS Spread	12	-1	-0.1	-1
EURUSD 3M CCY Basis Swap	-52	-23	-0.9	-38
U.S. MBS				
FNMA Current Coupon	2.90%	3	0.2	7
FHLMC Primary Rate	3.95%	19	0.9	12
CREDIT				
CDX Investment Grade 5-Year CDS Spread	84	5	0.4	18
CDX High Yield 5-Year CDS Spread	450	24	0.2	93
CDX Itraxx Euro 5-Year CDS Spread	69	-2	-0.1	6
U.S. 5-Year Sovereign CDS Spread	18	-1	-0.1	1
IMPLIED VOLATILITY				
VIX Index	15	4%	0.1	-24%
V2X Index	24	14%	0.6	-10%
VDAX Index	21	6%	0.2	7%
MOVE Index	71	-3%	-0.3	3%
3M2Y Swaption Volatility	63	-7%	-0.4	-8%
3M10Y Swaption Volatility	75	-6%	-0.6	1%
DB G10 FX Volatility Index	10	6%	0.5	8%
JPM EMFX Volatility Index	11	-1%	-0.1	-1%
FOREIGN EXCHANGE & COMMODITIES				
U.S. Dollar Index***	100	3.0%	1.3	11%
EUR/USD	1.06	-3.5%	-1.2	-12%
USD/JPY	123	1.7%	0.5	3%
GBP/USD	1.51	-2.2%	-0.9	-3%
USD/CHF	1.03	3.9%	1.3	3%
Brent Crude	44	-10.4%	-1.7	-33%
Gold	1069	-5.7%	-1.3	-10%
S&P GSCI Commodities Index	338	-6.3%	-1.1	-19%
EMERGING MARKETS				
JPM EMFX Index	67	-1.9%	-0.7	-14%
MSCI Emerging Market Equity Index	825	-2.9%	-0.5	-14%
CDX EM 5-Year CDS Spread	329	5	0.1	-6

12-MONTH RANGE**



* 30-day change standard deviations based on monthly data from January 1994 or earliest available thereafter.
** Trailing 12-month range. Latest (O); Mean (|).
*** Dollar index from Bloomberg (ticker: DXY); averages the exchange rates between the U.S. Dollar and major world currencies.
Sources: Bloomberg L.P., OFR analysis