OFFICE OF FINANCIAL RESEARCH

MARKETS MONITOR

August 2015
(data as of August 18)

A monthly review of financial market themes and developments

Market Sentiment Deteriorates Following China's Currency Devaluation

Risk aversion intensified in August following China's surprise renminbi (RMB) devaluation and its shift toward a more market-oriented currency regime. Uncertainty remains about the implementation of the new framework. The currency moves magnified market concerns about slowing global growth and inflation, causing pronounced sell-offs in markets for commodities, emerging market currencies, and global equities.

Recent developments:

- China devalued its currency and announced plans to establish a more market-based currency regime.
- Commodity prices, global equities, and emerging market currencies came under significant pressure on concerns that a weakening Chinese economy could diminish global growth.
- The growth concerns and market turbulence have reduced expectations for the Federal Reserve to begin raising interest rates in coming months. The market-implied probability of a rate hike in 2015 is now about 50 percent.
- Puerto Rico's Public Finance Corporation defaulted on an August debt payment, but with little spillover to broader municipal debt markets.
- Market concerns about Greece receded as its government reached an agreement with other euro area governments for a new financial support program.

China devalued its currency and continued policies to stem equity market declines.

China's central bank unexpectedly announced a significant change to its foreign exchange policy. The authorities weakened the fixing rate used to determine the daily dollar-renminbi exchange rate and implemented a new mechanism for setting the rate. Citing a desire to close the gap between the official and market exchange rates, among other factors, the central bank weakened the fixing rate by nearly 5 percent against the dollar over three days and announced that the new mechanism will be based on quotes from market-makers that take into account the prior day's market exchange rate. In response, both the onshore and offshore renminbi rates depreciated to their weakest levels since 2012. Investor demand for protection against a sharp weakening of the renminbi quickly increased, as reflected in out-of-the-money option skews (Figure 1).

Figure 1. Sharp increase in demand for RMB depreciation protection
Currency spot prices and risk reversal (percent)

Note:12-month tenor. The risk reversal is a measure of the skew in the demand for out-of-the-money options and is defined as the difference in implied volatility for call options versus put options on the base currency. An upward movement indicates an increasing cost to protect against dollar appreciation.

Source: Bloomberg L.P.

This monitor reflects the OFR staff's best interpretation of financial market developments and views. It does not necessarily reflect a consensus of market participants and does not necessarily represent official positions or policy of the OFR or the U.S. Treasury. **Contributors:** Viktoria Baklanova, Ted Berg, Soumya Kalra, Daniel Maddy-Weitzman, Rebecca McCaughrin, Adam Minson, Thomas Piontek, Warren Reed, William Shi.

The currency move and weak economic data in China deepened concerns about the Chinese economy and its contribution to global growth, leading investors to reduce risk exposures across global markets. Global equity and commodity prices fell sharply, U.S. Treasuries rallied from safe-haven flows, and commodity-linked currencies and Asian currencies with significant trade ties to China depreciated. Market participants perceived two motivations for the Chinese currency shift: (1) to stem downward pressure on Chinese exports and economic activity, and (2) to liberalize the exchange rate somewhat to qualify for inclusion in the basket of currencies used by the International Monetary Fund (IMF) to determine its SDR (special drawing rights) rate.

Separately, Chinese equities came under significant additional pressure in August. Chinese authorities have taken a number of extraordinary measures to support stock prices, but so far have had mixed results in containing market volatility. Local equity indexes are down 35-40 percent from the peak in mid-June, with sharp losses since mid-August (Figure 2). Alongside the sell-off, officially reported margin debt has declined more than 40 percent, although some market analysts report substantial margin lending not captured by the official statistics.

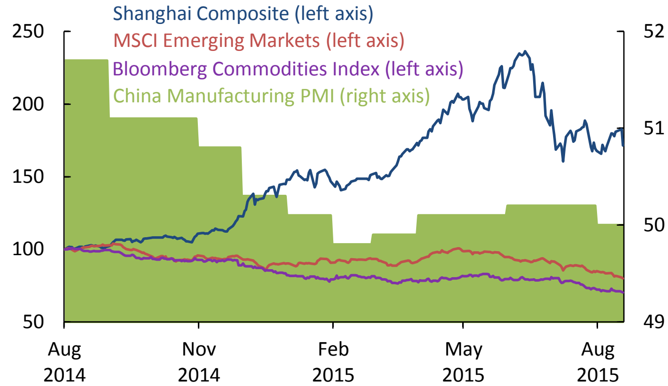
Some market participants have raised questions about the Chinese authorities' commitment to liberalizing domestic financial markets following the government's recent measures to support local equity markets. Those measures include direct and indirect stock purchases by state-owned entities, increased stock allocations for investment portfolios held by the government pension system, bans on sales by large shareholders, suspended trading of many listed shares, and allowing investors to use real estate as collateral in margin borrowing.

China slowdown fears weighed on the broader commodity complex…

Commodity prices fell sharply in recent weeks. Prices of key commodities touched multiyear lows, including those for copper, oil, gold, silver, and coal (Figure 3). Much of the rebasing in the metals and mining commodity complex has been driven by diminished Chinese demand and increased conviction about future supply growth. Oil futures prices approached lows not reached since the financial crisis, with recent declines exacerbated by concerns about a global supply glut (Figure 4).

Figure 2. Volatile Chinese equity markets persist amid weak data

Equity and commodity indexes (Index 100 = August 1, 2014)

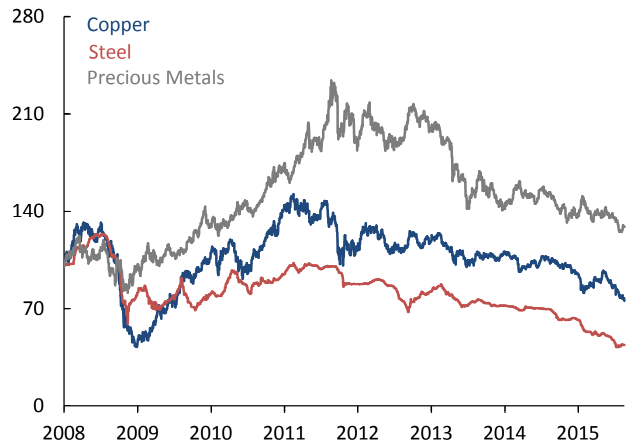


Note: Official Chinese Purchasing Managers' Index (PMI) is reported monthly. A reading at 50 indicates no change, while a reading below 50 represents a contraction and above 50 represents an expansion. The MSCI index is reported in USD terms.

Source: Bloomberg L.P.

Figure 3. Waning demand drives metals prices lower

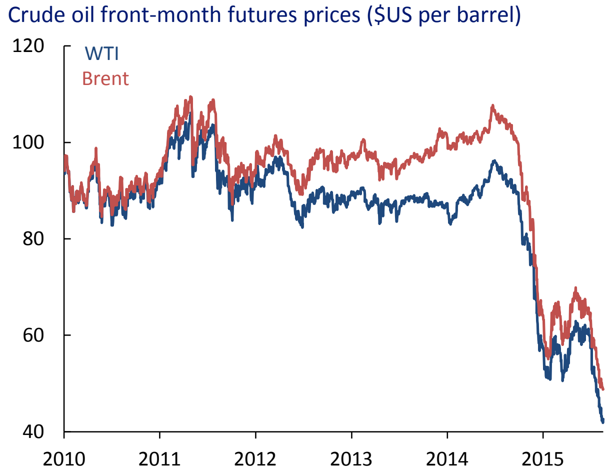
Metals spot price indexes (Index 100 = January 1, 2008)



Source: Bloomberg L.P.

Figure 4. Oil prices under pressure again

Crude oil front-month futures prices ($US per barrel)



Source: Bloomberg L.P.

...with spillovers to other risk assets.

Emerging-market assets and other risky assets sold off, consistent with commodity price declines and downside risks to the global growth outlook. Emerging market currencies continued depreciating, with currencies sensitive to commodities and China underperforming (Figure 5). Emerging market equity indexes have fallen considerably over the last three months, with markets in Malaysia, Indonesia, Colombia, Brazil, and Turkey down 10-to-20 percent in local currency terms. At the same time, mutual fund outflows from emerging markets have accelerated, led by withdrawals from Asian equity funds, as volatility in China, low commodity prices, and weak domestic demand dampened investor sentiment.

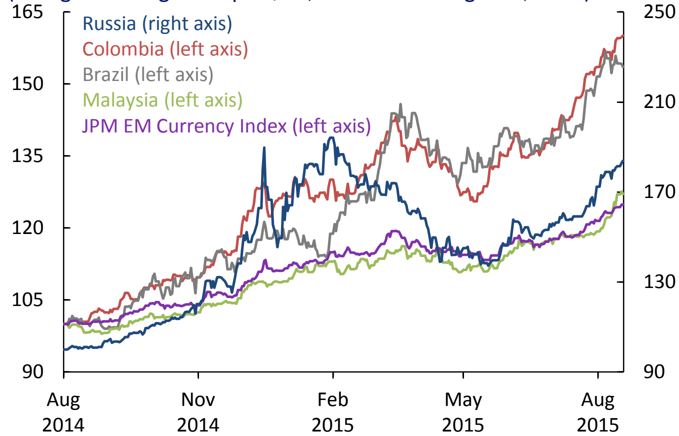
U.S. corporate bond spreads rose to multiyear highs, especially in the riskiest segment of the market. The plunge in energy prices has weighed on high-yield credits, and technical factors have pushed investment-grade credit spreads higher (Figure 6). Investment-grade corporate issuance is up 20 percent year-on-year and is on track to reach a record level this year. More than one-third of the proceeds have been used for mergers and acquisitions, stock buybacks, or dividend payments. Analysts acknowledge that high leverage and falling energy prices could undermine energy-sector credit quality, but see limited spillovers to broader corporate credit markets, given the relatively benign U.S. economic outlook.

Stock markets in advanced economies have also faced sharp losses since mid-August, associated with the broad deterioration in market sentiment. In the United States, the S&P 500 index lost nearly 9 percent in the last week, falling to a 10-month low. Many individual firms and sectors have had much larger losses. U.S. energy stocks have significantly underperformed the broader market amid sharp declines in the prices of oil and other commodities (Figure 7).

Global growth concerns and market volatility have lowered market expectations for a Federal Reserve "liftoff" this year.

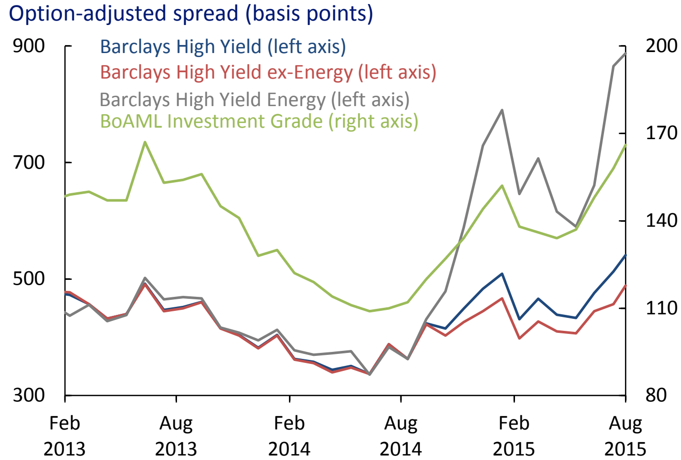
Market-implied probabilities of interest rate hikes by the Federal Reserve fell markedly in recent days. The implied probability of a September rate hike has fallen to 20-30 percent, from 50-60 percent in

Figure 5. Sell-off in emerging market currencies accelerates
(foreign exchange unit per $US, Index 100 = August 1, 2014)



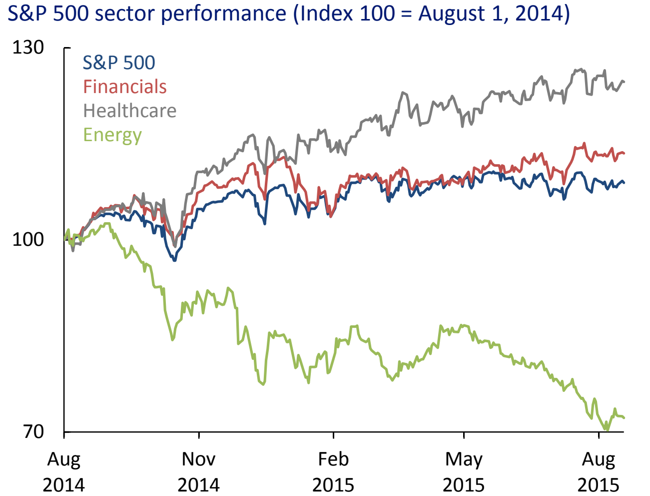
Note: The JPMorgan Chase & Co. Emerging Markets Currency Index is inverted to provide the same interpretation as other currency indexes.
Source: Bloomberg L.P.

Figure 6. Sharp drop in energy prices weighs on corporate credit
Option-adjusted spread (basis points)



Sources: Bloomberg L.P., Haver Analytics

Figure 7. Weak oil prices drive U.S. energy stocks' decline
S&P 500 sector performance (Index 100 = August 1, 2014)



Source: Bloomberg L.P.

early August. The implied-probability of a rate hike by the monetary policy meeting in December has fallen to 45-55 percent, implying an equal probability that the Fed will not liftoff in 2015. Long-term U.S. Treasury yields and the 10-year term premium remain historically low, and declined further over the last month amid weakening market-based measures of inflation expectations and safe-haven flows (Figure 8).

Puerto Rican government agency defaults on August bond payment, while Greece reaches initial deal.

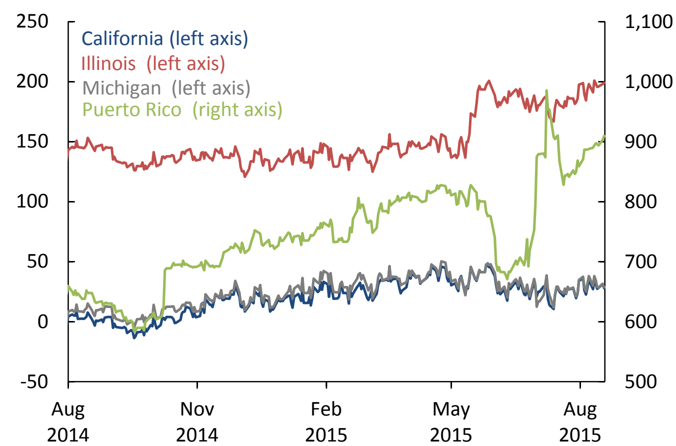
The Puerto Rican government's credit standing has further deteriorated since our last update. Puerto Rico defaulted on a $58 million bond payment issued by its Public Finance Corporation, a development widely expected by market participants. Market participants also expect missed bond repayments on other outstanding obligations. Despite the missed payment, yields for Puerto Rican general obligation bonds were little changed. Spillovers to other fiscally challenged states have been limited so far, as investors continue to view the Puerto Rico case as unique and isolated (Figure 9). Equity, bond, and credit default swap prices of monoline bond insurers with sizeable exposures to Puerto Rican debt have come under pressure, though insured bonds are still trading at a high premium over uninsured bonds. On September 1, the Puerto Rican government is scheduled to release a fiscal plan and the initial results of its negotiations to restructure about $73 billion in debt.

After an abrupt breakdown in negotiations in June, the Greek government reversed course and accepted many creditor conditions, made payments to the IMF and European Central Bank, reopened its banks, and reached agreement with euro area governments on a third financial support program. The government largely accepted the euro area governments' policy conditions to secure bridge financing and a multiyear support package worth up to €86 billion. The agreement with euro area governments has diminished market fears of a near-term Greek exit from the euro area (Figure 10), but market participants generally believe that public debt relief will also be needed.

Figure 8. Long-term U.S. yields and term premium remain low
10-year U.S. Treasury yields and term premium (percent)

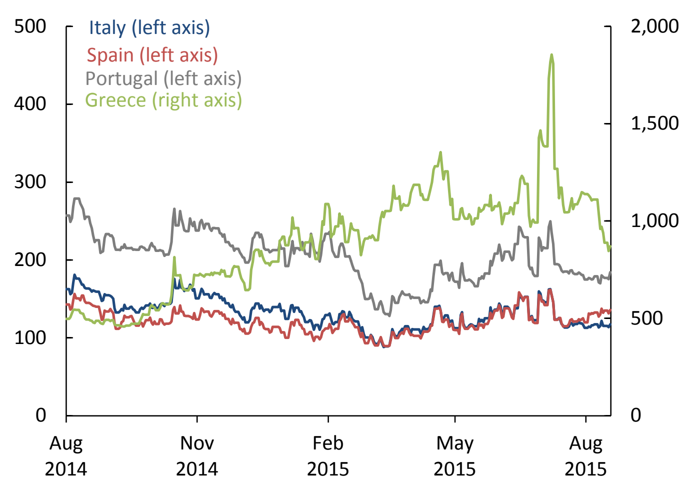
Sources: Bloomberg L.P., Federal Reserve Bank of New York

Figure 9. Limited spillovers to municipal market from Puerto Rico
General obligation spreads to 10-year Treasury (basis points)



Source: Bloomberg L.P.

Figure 10. Some relief in Greek bond markets
10-year sovereign bond spreads over German Bunds (basis points)



Source: Bloomberg L.P.

Selected Global Asset Price Developments

	LATEST LEVEL (8/18/2015)	1M CHANGE (bps or %)	1M CHANGE (standard deviations)*	YTD CHANGE (bps or %)	12-MONTH RANGE**
EQUITIES					
S&P 500	2097	-1.4%	-0.5	2%	
U.S. KBW Bank Index	78	-1.0%	-0.2	6%	
Russel 2000	1215	-4.1%	-0.9	1%	
Nasdaq	5059	-2.9%	-0.6	7%	
Euro Stoxx 50	3495	-4.8%	-1.0	11%	
Shanghai Composite	3748	-5.3%	-0.5	16%	
Nikkei 225	20554	-0.5%	-0.1	18%	
Hang Seng	23475	-7.6%	-1.1	-1%	
FTSE All World	277	-2.8%	-0.8	1%	
RATES					
U.S. 2-Year Yield	0.72%	5	0.3	5	
U.S. 2-Year Swap Rate	0.95%	2	0.1	5	
U.S. 10-Year Yield	2.19%	-15	-0.5	2	
U.S. 10-Year Swap Rate	2.27%	-17	-0.6	-2	
U.S. 30-Year Yield	2.86%	-23	-0.9	10	
U.S. 2y10y Spread	147	-21	-1.2	-3	
U.S. 5Y5Y Inflation Breakeven	1.99%	-21	-0.8	-15	
U.S. 5Y5Y Forward Rate	2.89%	-24	-0.7	13	
Germany 10-Year Yield	0.64%	-15	-0.6	10	
Japan 10-Year Yield	0.38%	-5	-0.2	5	
U.K. 10-Year Yield	1.88%	-20	-0.8	12	
Germany 5Y5Y Inflation Breakeven	1.63%	-23	-0.9	-23	
FUNDING					
1M T-Bill Yield	0.01%	-1	0.0	0	
DTCC GCF Treasury Repo	0.24%	7	0.6	-1	
3M Libor	0.33%	4	0.2	8	
Libor-OIS Spread	11	-1	-0.1	-2	
3M Eurodollar Sep 2016 Mid Yield	0.38%	2	0.2	-27	
EURUSD 3M CCY Basis Swap	-20	1	0.0	-5	
U.S. MBS					
FNMA Current Coupon	2.96%	-9	-0.3	13	
FHLMC Primary Rate	3.94%	-15	-0.6	11	
CREDIT					
CDX Investment Grade 5-Year CDS Spread	77	11	0.8	10	
CDX High Yield 5-Year CDS Spread	383	44	0.4	25	
CDX Itraxx Euro 5-Year CDS Spread	67	7	0.5	4	
U.S. 5-Year Sovereign CDS Spread	17	0	0.0	-1	
IMPLIED VOLATILITY					
VIX Index	14	15%	0.7	-28%	
V2X Index	23	19%	0.9	-14%	
VDAX Index	21	18%	0.9	9%	
MOVE Index	83	11%	0.7	20%	
3M2Y Swaption Volatility	64	16%	0.8	-6%	
3M10Y Swaption Volatility	80	1%	0.0	8%	
DB G10 FX Volatility Index	9	1%	0.0	-3%	
JPM EMFX Volatility Index	11	31%	2.3	-1%	
FOREIGN EXCHANGE & COMMODITIES					
U.S. Dollar Index***	97	-0.8%	-0.4	8%	
EUR/USD	1.10	1.8%	0.6	-9%	
USD/JPY	124	0.3%	0.1	4%	
GBP/USD	1.57	0.4%	0.1	1%	
USD/CHF	0.98	1.6%	0.6	-2%	
Brent Crude	49	-15.1%	-2.5	-24%	
Gold	1118	-1.4%	-0.4	-6%	
S&P GSCI Commodities Index	362	-10.5%	-1.7	-13%	
EMERGING MARKETS					
JPM EMFX Index	69	-5.3%	-2.3	-11%	
MSCI Emerging Market Equity Index	848	-9.9%	-1.5	-11%	
CDX EM 5-Year CDS Spread	344	48	0.9	9	

* One month 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