# DOLLARS & SENSE

# TD Economics

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## THE FEDERAL RESERVE'S EXIT STRATEGY

### Highlights

- The Federal Reserve's exit from quantitative easing hinges on the progression of the economic recovery. Benign inflationary pressures over the medium term and an acceleration in growth should allow the central bank to begin paring back its large scale asset purchases in the coming months.
- We expect 10-year treasury yields to rise by roughly 100 basis points by the end of next year and continue to trek upwards. But, the path of adjustment is unlikely to be smooth, as markets recalibrate expectations on the Fed's actions and the impact on the economy.
- There are two broadly-defined risks associated with the central bank's hyper-stimulative monetary policy: inflation and financial instability. Inflationary pressures could emerge over the long term given the dramatic increase in base money in recent years. Meanwhile, concerns are being raised that the loose monetary policy has led to a misallocation of capital or a mispricing of risk. The potential gravity of these risks cannot be understated, but they are not likely enormous, at least not yet.

The end of the Federal Reserve's large scale asset purchase program is nearing. A speech from Chairman Bernanke last month suggested that the Fed could begin tapering its purchases within "the next few meetings", sending markets reeling in response. Within a matter of weeks in May, the yield on 10-year Treasuries spiked by 54 basis points and the trade-weighted US dollar rose by 3.5%. Given the importance of quantitative easing (QE) in supporting asset valuations over the last 5 years, the sharp reaction was unsurprising. However, the recalibration in May highlights the significant challenge faced by the Federal Reserve in orchestrating its exit strategy.

Our base case expectation of the Fed's exit is outlined in the table on page 2. Beginning in September or October, we anticipate that the Fed to begin paring back the rate of purchases by roughly $10-20 billion per month, split between mortgage-backed securities and Treasuries. Once the purchases have ended, the Fed will maintain the size of its balance sheet by reinvesting maturing debt into new assets. Reinvestment will occur until the final months of 2014 at which point the balance sheet will naturally contract through as bonds mature. See TD Economics Special Report "The Fed's exit strategy: how will it unfold" for a more fulsome discussion.

The effect of the Fed exiting QE will be mostly felt through the Treasury market. Estimates of how high yields could rise vary. In our forecast (detailed in the following tables on page 3), we project that the end of QE will cause the yield on 10-year Treasuries to rise by roughly 1 percentage point between now and the end of 2014. This is consistent with the central bank's own view that QE likely lowered the 10-year yield by between 0.8 to 1.2 percentage points.

Admittedly, the degree of uncertainty surrounding our outlook is significant. In early 2012, the Federal Reserve introduced an explicit 2% inflation target and linked the future path of monetary policy to the unemployment rate and the inflation outlook. This new policy stance implies that the timing and pace of the exit hinges on the progress of the recovery. In our view, the pace of growth so far this year has been materially constrained by fiscal drag. However, as the impact of government spending cuts wane,

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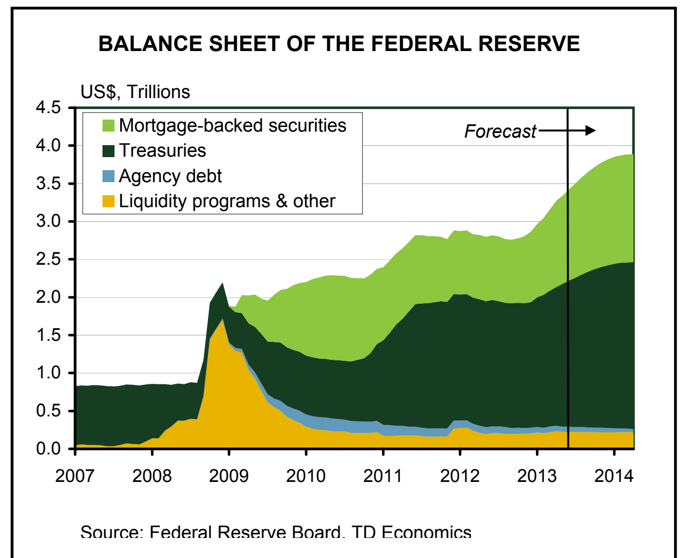
economic growth should accelerate. This will translate into stronger job growth and improvement in the unemployment rate. Meanwhile, inflationary pressures are expected to remain benign over the medium term. These factors will allow the Fed to begin unwinding QE. However, any stalling or deterioration in economic conditions could delay that withdrawal. Fed officials have made it explicit that the pace of asset purchases could increase, decrease, stop, or restart in response to the economy. In other words, the end of QE may not move in a straight line.

We would also be remiss if we did not discuss the risks associated with QE. The most obvious hazard of printing money and purchasing assets is the risk of creating an inflationary episode in the future. To illustrate that danger, consider that in less than 5 years, the amount of base money in the US economy has increased by US$2.2 trillion – a 256% gain and the largest increase of any country in history.

However, inflation is unlikely to be an issue in the next few years. Inflation by any metric is well-below the Fed's 2% target. Economic slack in the US economy remains significant and expectations of future inflation (the best indicator available for predicting actual future inflation) remain well-anchored. The increase in base money has also not yet found its way into the real economy. Of the US$2.2 trillion increase, US$1.8 billion currently sits outside the economy as excess reserves at the Fed.

The potential for inflation to rear its head lies beyond the next couple of years. When slack is eventually absorbed or if the flow of money rapidly accelerates, inflationary pressures could emerge. How much inflation will depend on how surgically precise the Federal Reserve is controlling the flow

| THE FEDERAL RESERVE'S EXIT STRATEGY | |
|---|---|
| **Description** | **Timeline** |
| 1. Asset purchases are reduced at a rate of $10-20 billion per month split between Treasuries and mortgage-backed securities | September-October 2013 |
| 2. Asset purchases are ceased | Q1 2014 |
| 3. Maturing principal is reinvested in order to maintain the size of the Fed's balance sheet | Q1 2014 - Q3 2014 |
| 4. Principal payments are no longer reinvested and the Fed's balance sheet is run off through maturing assets | Q4 2014 |
| 5. Fed funds rate begins to increase, interest on excess reserves will also rise | Q3 2015 |
| Optional: Should economic conditions warrant, the Federal Reserve could consider selling assets to normalize the balance sheet more rapidly | Beyond 2015 |
| Source: Federal Reserve Board | |




of funds. The Fed does have several tools to achieve this goal, including the interest paid on excess reserves and the forward guidance in its communications. However, the risk of policy error could be high, given that we are in entirely uncharted territory.

The other risk that many have raised is that the Federal Reserve's actions may have promoted excessive risk-taking among financial markets. The usual suspects, such as equities and commodities, do not flash any immediate warnings signs. Price-to-earnings ratios on equity indexes are not significantly above long-term averages. Commodity markets did record a significant run-up post-recession, but have since pulled back substantially. The at-risk markets that have so far been identified are high-yield bonds and agency real estate investment trusts. The evidence suggests that these sectors have seen a disproportionate share of capital inflows, despite their riskier nature. At this point, however, the risks associated with these market segments have not reached a systemic level. Regulators in the U.S. have also greatly increased their oversight capabilities, enforced larger capital buffers held by financial institutions, and instituted more stringent collateral requirements through the Dodd-Frank Act.

Ultimately, TD Economics is confident in the view that the Fed will begin scaling back QE this coming Fall and will end it shortly thereafter. However, the slow extraction from loose monetary policy will be delicate balancing act. The central bank will juggle supporting economic growth, amidst increased potential for inflationary pressures and asset misallocations that may undermine the expansion and market confidence. The gravity of these challenges cannot be understated.

## INTEREST & FOREIGN EXCHANGE RATE OUTLOOK

| | | Spot Rate | 2012 | | | | 2013 | | | | 2014 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Jun-18 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2F | Q3F | Q4F | Q1F | Q2F | Q3F | Q4F |
| **Interest Rates** | | | | | | | | | | | | | | |
| Fed Funds Target Rate | | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| 3-mth T-Bill Rate | | 0.05 | 0.07 | 0.09 | 0.10 | 0.05 | 0.07 | 0.05 | 0.10 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 2-yr Govt. Bond Yield | | 0.27 | 0.33 | 0.33 | 0.23 | 0.25 | 0.25 | 0.25 | 0.30 | 0.40 | 0.45 | 0.60 | 0.70 | 0.90 |
| 5-yr Govt. Bond Yield | | 1.08 | 1.04 | 0.72 | 0.62 | 0.72 | 0.77 | 0.90 | 1.15 | 1.30 | 1.35 | 1.55 | 1.70 | 1.85 |
| 10-yr Govt. Bond Yield | | 2.21 | 2.23 | 1.67 | 1.65 | 1.78 | 1.87 | 2.00 | 2.30 | 2.45 | 2.50 | 2.75 | 2.90 | 3.00 |
| 30-yr Govt. Bond Yield | | 3.37 | 3.35 | 2.76 | 2.82 | 2.95 | 3.10 | 3.15 | 3.50 | 3.70 | 3.80 | 4.00 | 4.10 | 4.10 |
| 10-yr-2-yr Govt Spread | | 1.94 | 1.90 | 1.34 | 1.42 | 1.53 | 1.62 | 1.75 | 2.00 | 2.05 | 2.05 | 2.15 | 2.20 | 2.10 |
| **Exchange rate to U.S. dollar** | | | | | | | | | | | | | | |
| Japanese yen | JPY per USD | 96 | 82 | 80 | 78 | 87 | 94 | 98 | 100 | 100 | 102 | 102 | 105 | 110 |
| Euro | USD per EUR | 1.34 | 1.33 | 1.27 | 1.29 | 1.32 | 1.28 | 1.35 | 1.35 | 1.30 | 1.28 | 1.25 | 1.22 | 1.20 |
| U.K. pound | USD per GBP | 1.56 | 1.60 | 1.57 | 1.61 | 1.63 | 1.52 | 1.59 | 1.59 | 1.55 | 1.52 | 1.49 | 1.49 | 1.46 |
| Swiss franc | CHF per USD | 0.92 | 0.90 | 0.95 | 0.94 | 0.92 | 0.95 | 0.93 | 0.96 | 1.00 | 1.02 | 1.04 | 1.07 | 1.08 |
| Canadian dollar | CAD per USD | 1.02 | 1.00 | 1.02 | 0.98 | 1.00 | 1.02 | 1.06 | 1.06 | 1.09 | 1.11 | 1.11 | 1.09 | 1.08 |
| Australian dollar | USD per AUD | 0.95 | 1.04 | 1.02 | 1.04 | 1.04 | 1.04 | 0.96 | 0.97 | 0.96 | 0.95 | 0.94 | 0.92 | 0.91 |
| NZ dollar | USD per NZD | 1.34 | 0.82 | 0.80 | 0.83 | 0.83 | 0.84 | 0.81 | 0.83 | 0.83 | 0.82 | 0.80 | 0.78 | 0.78 |
| **Exchange rate to Euro** | | | | | | | | | | | | | | |
| U.S. dollar | USD per EUR | 1.34 | 1.33 | 1.27 | 1.29 | 1.32 | 1.28 | 1.35 | 1.35 | 1.30 | 1.28 | 1.25 | 1.22 | 1.20 |
| Japanese yen | JPY per EUR | 128 | 104 | 103 | 98 | 105 | 122 | 132 | 135 | 130 | 131 | 128 | 128 | 132 |
| U.K. pound | GBP per EUR | 0.86 | 0.84 | 0.81 | 0.79 | 0.81 | 0.85 | 0.85 | 0.85 | 0.84 | 0.84 | 0.84 | 0.82 | 0.82 |
| Swiss franc | CHF per EUR | 1.23 | 1.21 | 1.20 | 1.20 | 1.21 | 1.23 | 1.25 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 |
| Canadian dollar | CAD per EUR | 1.36 | 1.31 | 1.30 | 1.25 | 1.29 | 1.33 | 1.44 | 1.44 | 1.41 | 1.42 | 1.39 | 1.33 | 1.29 |
| Australian dollar | AUD per EUR | 1.41 | 1.24 | 1.27 | 1.21 | 1.25 | 1.27 | 1.41 | 1.39 | 1.35 | 1.35 | 1.33 | 1.33 | 1.32 |
| NZ dollar | NZD per EUR | 1.67 | 1.60 | 1.62 | 1.55 | 1.58 | 1.58 | 1.67 | 1.63 | 1.57 | 1.56 | 1.56 | 1.56 | 1.54 |
| **Exchange rate to Japanese yen** | | | | | | | | | | | | | | |
| U.S. dollar | JPY per USD | 96 | 82 | 80 | 78 | 87 | 94 | 98 | 100 | 100 | 102 | 102 | 105 | 110 |
| Euro | JPY per EUR | 128 | 104 | 103 | 98 | 105 | 122 | 132 | 135 | 130 | 131 | 128 | 128 | 132 |
| U.K. pound | JPY per GBP | 149 | 125 | 127 | 124 | 131 | 143 | 156 | 159 | 155 | 155 | 152 | 156 | 161 |
| Swiss franc | JPY per CHF | 103.6 | 86.2 | 85.6 | 81.7 | 87.3 | 99.2 | 105.8 | 103.8 | 100.0 | 100.4 | 98.1 | 98.5 | 101.5 |
| Canadian dollar | JPY per CAD | 93.6 | 79.2 | 79.3 | 79.0 | 82.0 | 91.5 | 92.1 | 94.0 | 92.0 | 91.8 | 91.8 | 96.6 | 102.3 |
| Australian dollar | JPY per AUD | 90.5 | 83.7 | 80.9 | 81.7 | 84.5 | 95.8 | 94.1 | 97.0 | 96.0 | 96.9 | 95.9 | 96.6 | 100.1 |
| NZ dollar | JPY per NZD | 76.4 | 64.9 | 63.4 | 63.6 | 66.9 | 77.0 | 79.4 | 83.0 | 83.0 | 83.6 | 81.6 | 81.9 | 85.8 |

F: Forecast by TD Bank Group as at June 2013; All forecasts are end-of-period: Source: Federal Reserve, Bloomberg, TDBG.

## GLOBAL STOCK MARKETS

| | Jun-18 | 30-Day % Chg. | YTD % Chg. | 52-Week High | 52-Week Low |
|---|---|---|---|---|---|
| S&P 500 | 1,639 | -1.7 | 14.9 | 1,669 | 1,314 |
| DAX | 8,218 | -2.1 | 8.0 | 8,531 | 6,132 |
| FTSE 100 | 6,384 | -5.0 | 8.2 | 6,840 | 5,447 |
| Nikkei | 13,007 | -14.1 | 25.1 | 15,627 | 8,366 |
| MSCI AC World Index* | 366 | -3.1 | 7.8 | 380 | 300 |

* Is a weighted equity index including both developing and emerging markets

Source: Bloomberg

## COMMODITY PRICE FORECASTS

| | Price | 52-Week | 52-Week | 2012 | | | | 2013F | | | | 2014F | | | | Annual Average | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jun-18 | High | Low | Q1 | Q2 | Q3 | Q4 | Q1 | Q2F | Q3F | Q4F | Q1F | Q2F | Q3F | Q4F | 2012 | 2013F | 2014F |
| Crude Oil (WTI, $US/bbl) | 98 | 99 | 78 | 103 | 93 | 92 | 88 | 94 | 92 | 93 | 95 | 95 | 92 | 95 | 95 | 94 | 94 | 94 |
| Natural Gas ($US/MMBtu) | 3.78 | 4.37 | 2.48 | 2.45 | 2.28 | 2.88 | 3.40 | 3.48 | 4.07 | 3.85 | 4.05 | 3.90 | 4.00 | 3.90 | 4.25 | 2.75 | 3.86 | 4.01 |
| Gold ($US/troy oz.) | 1373 | 1790 | 1348 | 1690 | 1612 | 1655 | 1717 | 1632 | 1440 | 1475 | 1375 | 1335 | 1325 | 1275 | 1325 | 1668 | 1481 | 1315 |
| Silver (US$/troy oz.) | 21.8 | 35.0 | 21.7 | 32.6 | 29.5 | 30.0 | 32.6 | 30.1 | 23.8 | 24.0 | 22.0 | 21.3 | 21.0 | 20.1 | 20.9 | 31.17 | 24.96 | 20.83 |
| Copper (cents/lb) | 320 | 379 | 307 | 376 | 357 | 350 | 359 | 360 | 330 | 345 | 335 | 335 | 325 | 325 | 315 | 361 | 343 | 325 |
| Nickel (US$/lb) | 6.48 | 8.50 | 6.38 | 8.91 | 7.77 | 7.42 | 7.70 | 7.85 | 6.95 | 7.65 | 8.00 | 8.00 | 8.60 | 8.50 | 8.20 | 7.95 | 7.61 | 8.33 |
| Aluminum (Cents/lb) | 84 | 100 | 82 | 99 | 90 | 87 | 91 | 91 | 88 | 98 | 96 | 96 | 96 | 100 | 100 | 92 | 93 | 98 |
| Wheat ($US/bu) | 9.01 | 10.89 | 8.77 | 9.54 | 9.36 | 9.90 | 10.05 | 9.32 | 9.10 | 9.25 | 9.30 | 9.35 | 9.25 | 9.00 | 8.75 | 9.71 | 9.24 | 9.09 |

F: Forecast by TD Bank Group as at June 2013; All forecasts are period averages; Source: Bloomberg, USDA (Haver).

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