DOLLARS & SENSE
TD Economics

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COMING TO AMERICA: INFLATION RISK

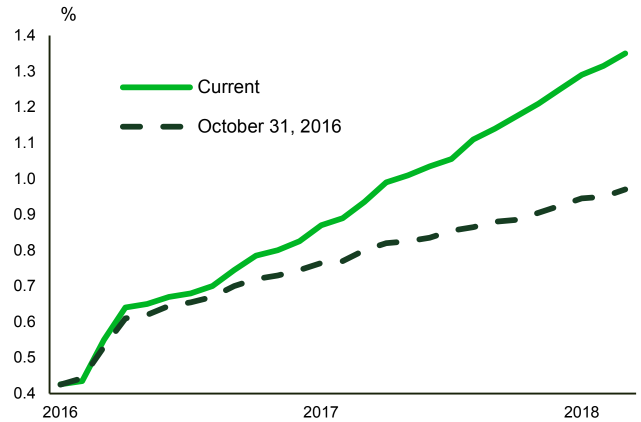
Highlights

- The move in the 10 year U.S. Treasury yield has matched its largest one week swing in volatility since the depths of the financial crisis in 2009. Yet, the current level is completely consistent with fundamentals.
- Market pricing has merely moved towards the view of most economists that U.S. inflation is returning to target. The election has very quickly solidified this reality in the eyes of investors.
- Expectations for policy rates have increased and the threat of trade barriers and excessive fiscal stimulus have caused investors to start demanding compensation for inflation and interest rate risk.

The sharp adjustment in government yields following the U.S. election has spread globally. While the U.S. 10 year yield has been the big mover - up nearly 50 bps and now exceeding the S&P 500 dividend yield – similar experiences have been mirrored by government bond yields in Germany, the UK, and Canada.

From our perspective, the current level of 10 year yields at approximately 2.2 percent is completely consistent with U.S. economic fundamentals, but the speed of the sell-off certainly qualifies as a jaw-dropper. The quick adjustment now leaves Treasuries accurately pricing an economy that is moving towards inflation targets and also some normalization of excessively low term premiums. With the vote for Donald Trump, markets could no longer discount domestic fundamentals that will likely be reinforced by policy initiatives under the new government. Every first year economics student learns that the implementation of trade barriers, fiscal spending, and tighter immigration are all inflationary, especially within an economy that is approaching full employment. Granted, there remains a hefty amount of uncertainty over the precise fiscal policies that will be enacted. But, what is certain is that markets are now keenly aware of the potential threat of an inflation overshoot.

CHART 1: MARKETS NOW BELIEVE IN THE RATE HIKING CYCLE



Source: Bloomberg, TD Economics.

What the bond market is telling us

Bond yields can be broken down into two components – the expected path of future short-term interest rates and the compensation for the risk of holding long-dated securities instead of a series of short-term securities (also known as the term premium). The first element is measured by tracing the path of the Federal Reserve's rate hiking cycle. Prior to the election, FOMC members

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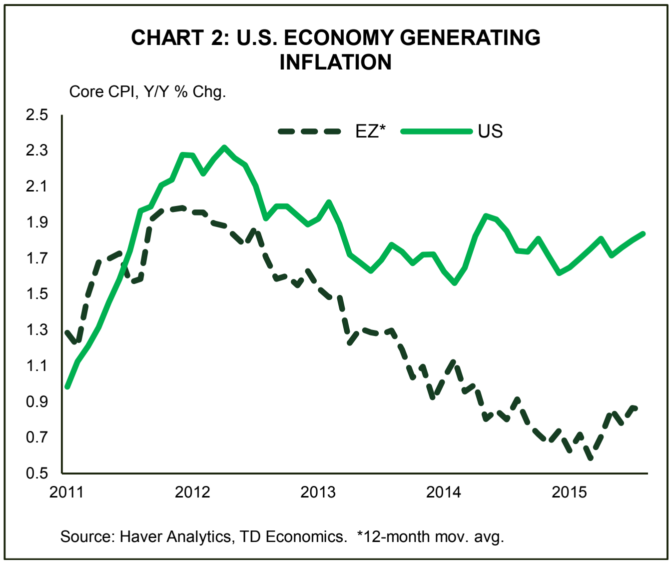


had effectively signaled their intention to raise rates by 25 bps at its December meeting. Markets were convinced, with the implied probability of a hike effectively priced as of mid-October. The issue was that markets had not yet priced a subsequent hike until the end of 2018. This has now changed, with market pricing currently matching our own forecast of a 25 bps hike every 9-12 months (Chart 1). This path is warranted based on an American economy that continues to push closer to full employment and inflation that is moving towards target. No matter who was elected, the U.S. economy was on track to reach its potential.

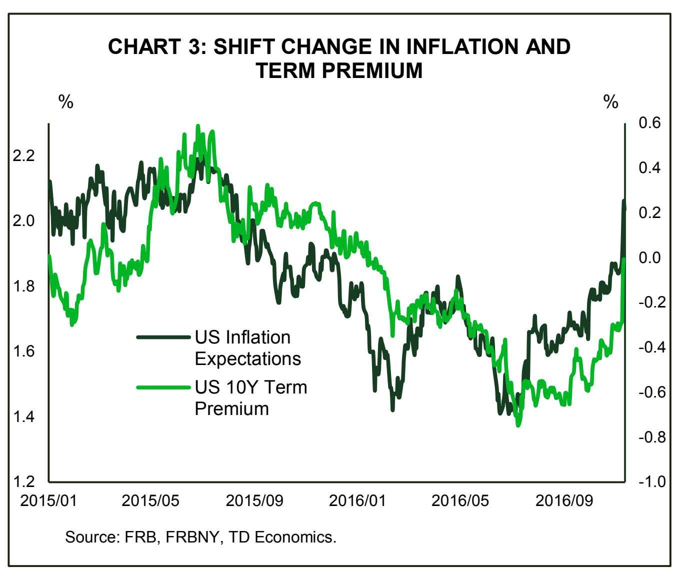
Inflation risk lifting the term premium

The term premium is the second component that makes up the yield on the U.S. 10 year Treasury. Naturally there is risk to locking into a fixed rate of interest. If realized inflation increases more than expected, this will lead to higher yields and capital losses on longer duration bonds. With inflation continuously disappointing over the last five years, the probability of a rapid rise in inflation appeared low. The underappreciation of this inflation risk acted as a weight on Treasury yields as investors stopped demanding compensation for this possibility. But, as we have communicated regularly over the last year, the underlying dynamics for inflation have been strong. It has taken the election result for these inflation dynamics to be priced into market expectations, but it is worth noting that the upward trend in inflation has been apparent for some time now (Chart 2).

Other factors that can lead investors to demand a higher term premium are increased fiscal risks and supply/demand dynamics within the Treasury market. On the fiscal front, higher potential government spending embeds greater repayment risk. For example, we have seen sharp changes in sentiment during debt ceiling debates over the last few years. If the U.S. government enacts an untested pro-cyclical spending program, the higher debt burden would warrant higher term compensation. Higher fiscal spending would also lead to a greater supply of debt.

On the other side of the equation, the demand for Treasuries is influenced by higher regulatory burdens that have resulted in banks holding a greater amount of U.S. Treasuries as a capital buffer. Increased demand also stemmed from the push lower in yields globally, which has been exacerbated by Quantitative Easing (QE). A taper of QE by the ECB or even the eventual runoff of the Federal Reserve's balance sheet would move the supply/demand balance in favor of a higher premium. Now that inflationary policies are on the table and monetary stimulus is slowing, the rationale for foregoing compensation for liquidity and inflation risk no longer appears justified.

Combining the two components of the 10-year yield, we can make inference about fair value. Based solely on the path of the Fed and a stable neutral rate of interest, pure expectations theory would warrant a yield of 2.0% today, moving to 2.25% over the next year. Layering on a historically consistent term premium would send the 10 year Treasury towards the 3% level. However, we do not expect the term premium to normalize overnight. With excess liquidity and negative interest rates prevalent in other major economies, the term premium is likely to move very slowly toward historical levels. In addition, some things didn't change with the U.S. election, as global risks remain ever present. Global term premiums can get pulled lower if a Brexit outcome lifts market expectations for additional



monetary easing within Europe, or other geopolitical events occur. Our past research has shown that international financial linkages cause movements in global longer term bond yields to be 70% explained by "common factors". As such, our expectation is for a subtle increase in term premiums largely reflecting increased inflation risk, but with ongoing bouts of volatility reflected.

The impact on the greenback

Unsurprisingly, the change in expectations for monetary policy has pushed the U.S. dollar higher. The appreciation has been particularly notable against emerging market currencies, which are the most susceptible to outflows in periods of changing Fed expectations. The most recent data on fund flows is pointing to the most significant weekly outflow from Emerging Market equities and bonds since the panic emanating from China in August 2015.

In addition to higher rates in the U.S., there is also the fact that a more insular American economy is negative for growth in its largest trading partners. For this reason, the Canadian dollar, Mexican peso, Euro, and Chinese renminbi have been four of the worst performing currencies. Here lies the uncertainty about how much further the U.S. dollar can appreciate. These currencies make up two-thirds of U.S. trade and the growth of the associated economies is heavily dependent on American demand. An adverse trade policy by the new American government would put further pressure on these currencies and push the U.S. dollar higher. The most obvious trade policy objective for the new government is to renegotiate NAFTA, and repeal it only as a last step. Most of the rhetoric has been targeted towards Mexico and the peso has responded in kind. But, Canada will be caught in the cross-fire as 75% of our exports are destined for the US market. Higher tariffs or restricted access would mean less profit for Canadian corporations and would make Canada a less attractive destination for business investment. The uncertainty surrounding the outcome adds downside risk to our forecast.

Bottom line

The current macroeconomic backdrop alone is enough to justify a gradually higher fed funds rate and slowly normalizing term premium. Wage growth is accelerating and employment growth continues to eat into slack. The fundamentals for higher inflation, in other words, have been in place for some time. The election has very quickly solidified this reality in the eyes of investors and futures markets have now moved toward our own forecast for the federal funds rate.

However, this is not the only story. Future policies, namely the potential for greater fiscal deficits, as well as increased tariffs and reduced immigration has been sufficient to move inflation expectations from below the Federal Reserve's 2.0% target to above it. As long as these risks are at the forefront, investors should look for interest rates to continue to move higher and the U.S. dollar to remain elevated.

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INTEREST RATE OUTLOOK

	Spot Rate	2016				2017				2018			
	Nov-16	Q1	Q2	Q3	Q4F	Q1F	Q2F	Q3F	Q4F	Q1F	Q2F	Q3F	Q4F
CANADA													
Overnight Target Rate	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
3-mth T-Bill Rate	0.50	0.45	0.48	0.53	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.60
2-yr Govt. Bond Yield	0.66	0.54	0.52	0.52	0.60	0.60	0.65	0.70	0.75	0.80	0.85	0.90	1.00
5-yr Govt. Bond Yield	0.94	0.68	0.57	0.62	0.95	1.05	1.10	1.15	1.15	1.25	1.35	1.45	1.55
10-yr Govt. Bond Yield	1.50	1.23	1.06	1.00	1.50	1.65	1.70	1.75	1.75	1.85	1.95	2.05	2.15
30-yr Govt. Bond Yield	2.13	2.00	1.72	1.66	2.15	2.30	2.35	2.40	2.40	2.50	2.60	2.70	2.80
10-yr-2-yr Govt Spread	0.85	0.69	0.54	0.48	0.90	1.05	1.05	1.05	1.00	1.05	1.10	1.15	1.15
U.S.													
Fed Funds Target Rate	0.50	0.50	0.50	0.50	0.75	0.75	0.75	1.00	1.00	1.00	1.25	1.25	1.25
3-mth T-Bill Rate	0.45	0.21	0.26	0.29	0.65	0.65	0.70	0.90	0.90	0.95	1.15	1.15	1.20
2-yr Govt. Bond Yield	1.00	0.73	0.58	0.77	1.00	1.05	1.15	1.25	1.30	1.40	1.50	1.55	1.65
5-yr Govt. Bond Yield	1.66	1.21	1.01	1.14	1.70	1.80	1.85	1.90	1.90	2.00	2.10	2.20	2.30
10-yr Govt. Bond Yield	2.21	1.78	1.49	1.60	2.20	2.30	2.35	2.40	2.40	2.50	2.60	2.70	2.80
30-yr Govt. Bond Yield	2.91	2.61	2.30	2.32	2.90	3.00	3.05	3.10	3.10	3.20	3.30	3.40	3.50
10-yr-2-yr Govt Spread	1.21	1.05	0.91	0.83	1.20	1.25	1.20	1.15	1.10	1.10	1.10	1.15	1.15
CANADA - U.S SPREADS													
Can - U.S. T-Bill Spread	0.05	0.24	0.22	0.24	-0.15	-0.15	-0.20	-0.40	-0.40	-0.45	-0.65	-0.65	-0.60
Can - U.S. 10-Year Bond Spread	-0.71	-0.55	-0.43	-0.60	-0.70	-0.65	-0.65	-0.65	-0.65	-0.65	-0.65	-0.65	-0.65

F: Forecast by TD Economics, November 2016; Forecasts are end-of-period; Source: Bloomberg, Bank of Canada, Federal Reserve.

GLOBAL STOCK MARKETS

	Price Nov-16	30-Day % Chg.	YTD % Chg.	52-Week High	52-Week Low
S&P 500	2,177	2.1	5.7	2,190	1,829
DAX	10,664	0.8	8.8	11,382	8,753
FTSE 100	6,750	-3.8	2.8	7,098	5,537
Nikkei	17,862	6.0	2.4	20,012	14,952
MSCI AC World Index*	410	-0.3	-1.7	424	353

*Weighted equity index including both developing and emerging markets.
Source: Bloomberg

COMMODITY PRICE OUTLOOK

	Price	52-Week	52-Week	2016				2017				2018			
	Nov-16	High	Low	Q1	Q2	Q3	Q4F	Q1F	Q2F	Q3F	Q4F	Q1F	Q2F	Q3F	Q4F
Crude Oil (WTI, $US/bbl)	46	52	26	33	45	45	50	52	52	55	55	56	56	57	57
Natural Gas ($US/MMBtu)	2.53	3.22	1.49	1.97	2.13	2.85	3.14	3.15	3.15	3.25	3.25	3.30	3.30	3.30	3.30
Gold ($US/troy oz.)	1225	1366	1051	1182	1259	1335	1260	1250	1250	1275	1280	1300	1300	1350	1350
Silver (US$/troy oz.)	17.0	20.6	13.7	14.9	16.8	19.6	17.8	17.3	17.8	18.3	18.8	19.0	19.0	19.5	19.5
Copper (cents/lb)	251	253	196	212	215	216	229	225	225	226	227	230	230	235	235
Nickel (US$/lb)	5.12	5.25	3.45	3.86	4.00	4.65	4.97	5.10	5.00	4.75	4.75	5.00	5.00	5.25	5.25
Aluminum (Cents/lb)	79	80	65	69	71	73	77	74	74	76	76	78	78	78	78
Wheat ($US/bu)*	5.86	7.95	5.58	5.89	6.06	5.73	6.25	6.20	6.20	6.25	6.30	6.30	6.35	6.40	6.50

F: Forecast by TD Economics, November 2016; Forecasts are period averages; E: Estimate. Source: Bloomberg, USDA (Haver).

FOREIGN EXCHANGE OUTLOOK														
Currency	Exchange rate	Spot Price	2016				2017				2018			
		Nov-16	Q1	Q2	Q3	Q4F	Q1F	Q2F	Q3F	Q4F	Q1F	Q2F	Q3F	Q4F
Exchange rate to U.S. dollar														
Chinese Yuan	CNY per USD	6.88	6.45	6.65	6.67	6.88	6.96	7.04	7.12	7.18	7.30	7.40	7.50	7.50
Japanese yen	JPY per USD	109	112	103	101	109	105	106	108	110	111	111	112	112
Euro	USD per EUR	1.07	1.14	1.10	1.12	1.08	1.09	1.09	1.10	1.12	1.14	1.15	1.15	1.16
U.K. pound	USD per GBP	1.24	1.44	1.32	1.30	1.22	1.22	1.22	1.24	1.29	1.33	1.35	1.36	1.37
Swiss franc	CHF per USD	1.00	0.96	0.98	0.97	1.01	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00
Canadian dollar	CAD per USD	1.34	1.30	1.30	1.31	1.34	1.34	1.34	1.34	1.34	1.33	1.32	1.31	1.31
Australian dollar	USD per AUD	0.75	0.77	0.74	0.77	0.74	0.72	0.72	0.73	0.74	0.75	0.75	0.75	0.75
NZ dollar	USD per NZD	0.71	0.69	0.71	0.73	0.67	0.65	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Exchange rate to Euro														
U.S. dollar	USD per EUR	1.07	1.14	1.10	1.12	1.08	1.09	1.09	1.10	1.12	1.14	1.15	1.15	1.16
Japanese yen	JPY per EUR	117	128	113	114	118	114	116	118	123	126	127	128	129
U.K. pound	GBP per EUR	0.86	0.79	0.83	0.86	0.89	0.89	0.89	0.88	0.87	0.86	0.85	0.85	0.85
Swiss franc	CHF per EUR	1.07	1.09	1.08	1.09	1.09	1.10	1.10	1.11	1.12	1.14	1.15	1.15	1.16
Canadian dollar	CAD per EUR	1.44	1.48	1.44	1.47	1.45	1.46	1.46	1.47	1.50	1.52	1.51	1.51	1.51
Australian dollar	AUD per EUR	1.43	1.48	1.48	1.47	1.46	1.51	1.51	1.50	1.51	1.52	1.53	1.53	1.54
NZ dollar	NZD per EUR	1.51	1.65	1.55	1.54	1.61	1.68	1.70	1.71	1.75	1.78	1.79	1.80	1.81
Exchange rate to Japanese yen														
U.S. dollar	JPY per USD	109	112	103	101	109	105	106	108	110	111	111	112	112
Euro	JPY per EUR	117	128	113	114	118	114	116	118	123	126	127	128	129
U.K. pound	JPY per GBP	136	162	136	132	133	128	129	134	142	147	150	152	153
Swiss franc	JPY per CHF	108.9	117.3	105.0	104.4	107.9	104.0	105.0	106.9	110.0	110.5	111.0	111.5	112.0
Canadian dollar	JPY per CAD	81.2	86.7	79.0	77.2	81.3	78.4	79.1	80.6	82.1	83.1	84.1	85.1	85.8
Australian dollar	JPY per AUD	81.6	86.3	76.4	77.6	80.7	75.6	76.3	78.8	81.4	82.9	83.3	83.6	84.0
NZ dollar	JPY per NZD	77.1	77.9	73.2	73.8	73.0	68.3	67.8	69.1	70.4	70.7	71.0	71.4	71.7
Exchange rate to Canadian dollar														
U.S. dollar	USD per CAD	0.74	0.77	0.77	0.76	0.75	0.75	0.75	0.75	0.75	0.75	0.76	0.76	0.77
Japanese yen	JPY per CAD	81.2	86.7	79.0	77.2	81.3	78.4	79.1	80.6	82.1	83.1	84.1	85.1	85.8
Euro	CAD per EUR	1.44	1.48	1.44	1.47	1.45	1.46	1.46	1.47	1.50	1.52	1.51	1.51	1.51
U.K. pound	CAD per GBP	1.67	1.87	1.72	1.71	1.64	1.64	1.64	1.66	1.73	1.77	1.78	1.78	1.78
Swiss franc	CHF per CAD	0.75	0.74	0.75	0.74	0.75	0.75	0.75	0.75	0.75	0.00	0.00	0.00	0.00
Australian dollar	AUD per CAD	1.00	1.00	1.03	0.99	1.01	1.04	1.04	1.02	1.01	0.00	0.00	0.00	0.00
NZ dollar	NZD per CAD	1.05	1.11	1.08	1.05	1.11	1.15	1.17	1.17	1.17	0.00	0.00	0.00	0.00

F: Forecast by TD Economics, November 2016; Forecasts are end-of-period; Source: Federal Reserve, Bloomberg.

INTERNATIONAL INTEREST RATE OUTLOOK

	Spot Rate	2016				2017				2018			
	Nov-16	Q1	Q2	Q3	Q4F	Q1F	Q2F	Q3F	Q4F	Q1F	Q2F	Q3F	Q4F
Germany													
ECB Deposit Rate	-0.40	-0.40	-0.40	-0.40	-0.50	-0.50	-0.50	-0.50	-0.50	-0.50	-0.50	-0.50	-0.50
3-mth T-Bill Rate	-0.78	-0.59	-0.68	-0.80	-0.70	-0.70	-0.70	-0.60	-0.60	-0.50	-0.50	-0.40	-0.40
2-yr Govt. Bond Yield	-0.63	-0.52	-0.66	-0.68	-0.60	-0.45	-0.45	-0.35	-0.25	-0.15	0.00	0.05	0.15
5-yr Govt. Bond Yield	-0.33	-0.33	-0.57	-0.58	-0.30	-0.20	-0.10	0.00	0.05	0.10	0.15	0.20	0.25
10-yr Govt. Bond Yield	0.30	0.15	-0.13	-0.12	0.30	0.50	0.65	0.85	0.95	1.05	1.20	1.30	1.40
30-yr Govt. Bond Yield	0.91	0.84	0.83	0.78	0.90	1.25	1.45	1.60	1.70	1.75	1.80	1.85	1.90
10-yr-2-yr Govt Spread	0.93	0.67	0.53	0.56	0.90	0.95	1.10	1.20	1.20	1.20	1.20	1.25	1.25
United Kingdom													
Bank Rate	0.25	0.50	0.50	0.25	0.25	0.25	0.25	0.25	0.05	0.05	0.05	0.05	0.05
3-mth T-Bill Rate	0.30	0.51	0.46	0.32	0.25	0.25	0.25	0.25	0.10	0.10	0.10	0.10	0.10
2-yr Govt. Bond Yield	0.19	0.44	0.10	0.10	0.30	0.35	0.30	0.25	0.20	0.20	0.20	0.20	0.20
5-yr Govt. Bond Yield	0.65	0.84	0.35	0.22	0.70	0.75	0.65	0.60	0.60	0.65	0.70	0.80	0.90
10-yr Govt. Bond Yield	1.38	1.42	0.87	0.75	1.45	1.50	1.40	1.30	1.30	1.35	1.40	1.45	1.55
30-yr Govt. Bond Yield	2.01	2.29	1.70	1.49	2.05	2.15	2.10	2.00	2.00	2.05	2.10	2.15	2.25
10-yr-2-yr Govt Spread	1.19	0.98	0.77	0.64	1.15	1.15	1.10	1.05	1.10	1.15	1.20	1.25	1.35
Australia													
Cash Target Rate	1.50	1.75	1.75	1.50	1.50	1.50	1.50	1.50	1.75	1.75	2.00	2.00	2.25
3-mth T-Bill Rate	1.59	2.04	1.69	1.53	1.75	1.75	1.75	1.75	1.95	1.95	2.20	2.20	2.45
3-yr Govt. Bond Yield	1.82	1.90	1.55	1.52	1.75	1.95	2.00	2.10	2.30	2.35	2.50	2.60	2.75
5-yr Govt. Bond Yield	2.14	2.09	1.65	1.60	2.15	2.30	2.35	2.40	2.55	2.60	2.60	2.70	2.85
10-yr Govt. Bond Yield	2.64	2.49	1.98	1.91	2.65	2.75	2.90	3.00	3.15	3.20	3.25	3.30	3.45
10-yr-3-yr Govt Spread	0.83	0.59	0.43	0.39	0.90	0.80	0.90	0.90	0.85	0.85	0.75	0.70	0.70

F: Forecast by TD Securities, November 2016; Forecasts are end-of-period; Source: Bloomberg.