APPLETON *PARTNERS*, INC.

Rising Interest Rates: A Scenario Analysis

The Specter of Rising Rates

With US Treasury rates near generational lows and the prospect of an eventual termination of asset-buying programs by the Fed, there has been increasing attention paid by the media to the specter of rising interest rates and the impact they may have on bond returns. Here at Appleton, we work closely with many of our clients to help them better understand market trends and conditions. Over the past six months, the direction of questioning has gradually converged to a single query; "what will happen to my portfolio when rates rise?" This is never an easy question, but the good news is that due to both the nature of the fixed income marketplace and greater transparency on the part of the Federal Open Markets Committee (FOMC), we believe we can make some reasonable projections.

Executive Summary: Appleton Partners believes that our intermediate term positioning on the yield curve coupled with our preference for relatively high coupon bonds will offer our Intermediate Municipal and Intermediate Taxable Fixed Income strategies excellent downside protection even in an aggressive steepening rate scenario and that by trading opportunistically as relative value candidates become available, we will seek to add additional value on behalf of our clients.

Appleton Partners, Inc One Post Office Sq Boston, MA 02109 tel. 617.338.0700 www.AppletonPartners.com

When the Fed Speaks, We Listen

The policy making decisions of the Federal Open Markets Committee (FOMC) continue to be a major market driver in the US fixed income markets, and under Bernanke, the Fed has been especially clear in their message. In the minutes from the January 29th-30th FOMC meeting, the Committee reiterated its continued focus on the medium and long term market outlook, and detailed in great length both their current assessment of the markets and their assessment of market risks in coming months. The Committee currently believes that:

- *Inflation will remain subdued through 2015 (below the Committee's 2.0% target)*
- *The economy remains on a moderate growth path*
- *The housing sector is strengthening*
- *The unemployment rate is in a gradual decline, but the share of long term unemployed and the share of workers who are part time for economic reasons is not declining. The 6.5% rate target will not be a near term reality*
- *Fiscal constraint could create economic headwinds as we move through 2013*

A broad discussion continues to evolve around the efficacy of the asset purchases and the triggers that will determine the reduction or suspension of the program. However, Appleton believes that there are clear indications that both low short term rates and asset purchases will remain intact for the foreseeable future. Our belief is that in the short- to mid-term, rates will likely remain range-bound, but that we will see an initial steepening of the curve. This belief is based on three assumptions; first, that the Fed Funds rate will remain low into 2015 (a belief the FOMC notes is in line with dealer expectations), effectively anchoring the short end of the yield curve. Second, that at the first sign of a need to remove accommodation, the Fed will either reduce or suspend its longer term asset-buying programs before raising the Fed Funds rate, impacting the longer intermediate and long end of the curve (the FOMC again cites dealer expectations). And finally, it is Appleton's belief that as the FOMC begins raising the short term rate, the curve will ultimately begin to flatten.

"Nearly all participants anticipated that inflation over the medium-term would run at or below the Committee's 2 percent objective… Participants remarked on the ongoing recovery in the housing market, pointing variously to rising house prices, growth in residential construction and sales, and the lower inventory of homes for sale."

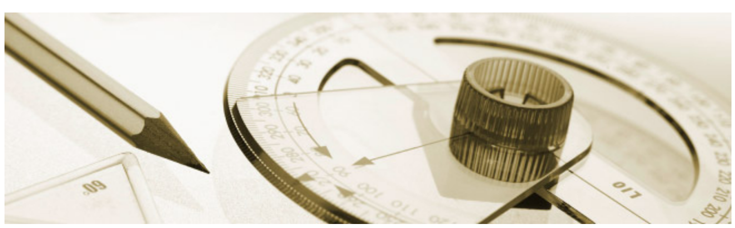
-FOMC Minutes, Jan. 29-30th[1]

[1] The full minutes to the Jan. 29-30, 2013 meeting can be found at: http://www.federalreserve.gov/monetarypolicy/fomcminutes20130130.htm

RISING INTEREST RATE SCENARIOS

As opposed to the equity markets where the timing and value of cash flows are largely unknown, fixed income investments lend themselves to modeling and scenario testing because the timing and amount of cash flows are generally known in advance with a reasonably high degree of certainty (and in situations such as bonds with call or paydown features where they are not, they can be estimated). Appleton routinely performs scenario testing as part of our fixed income management process to “stress test” our strategy against possible interest rate changes. While it is our belief that in the absence of unforeseen market events we will not see a material movement in rates before 2014, we have performed a number of scenario analyses involving rising interest rates to assess the likely impact on our strategy. The results of these stress tests are discussed below.

First, a note on methodology; we performed scenario testing on representative Intermediate Municipal and Intermediate Taxable portfolios selected as a very close proxy for our overall strategy. A series of simple “what-if” rate scenarios were then run, demonstrating the dollar and return impact of rate changes over a 12-month window. The portfolios are static over the period (i.e – there are no trades) and there is no adjustment for possible changes in credit spreads. Possible trading activity and/or changes in credit spreads are two variables that we cannot predict, but we can demonstrate a discrete rate change on an existing portfolio. We looked at a number of interest rate scenarios, from no change to a uniform 100 basis point increase (representing a potential result of both the asset purchase cessation and Fed Funds rate increases within a twelve month span), to aggressive steepening of the curve, up to 250 basis points at the ten year maturity.

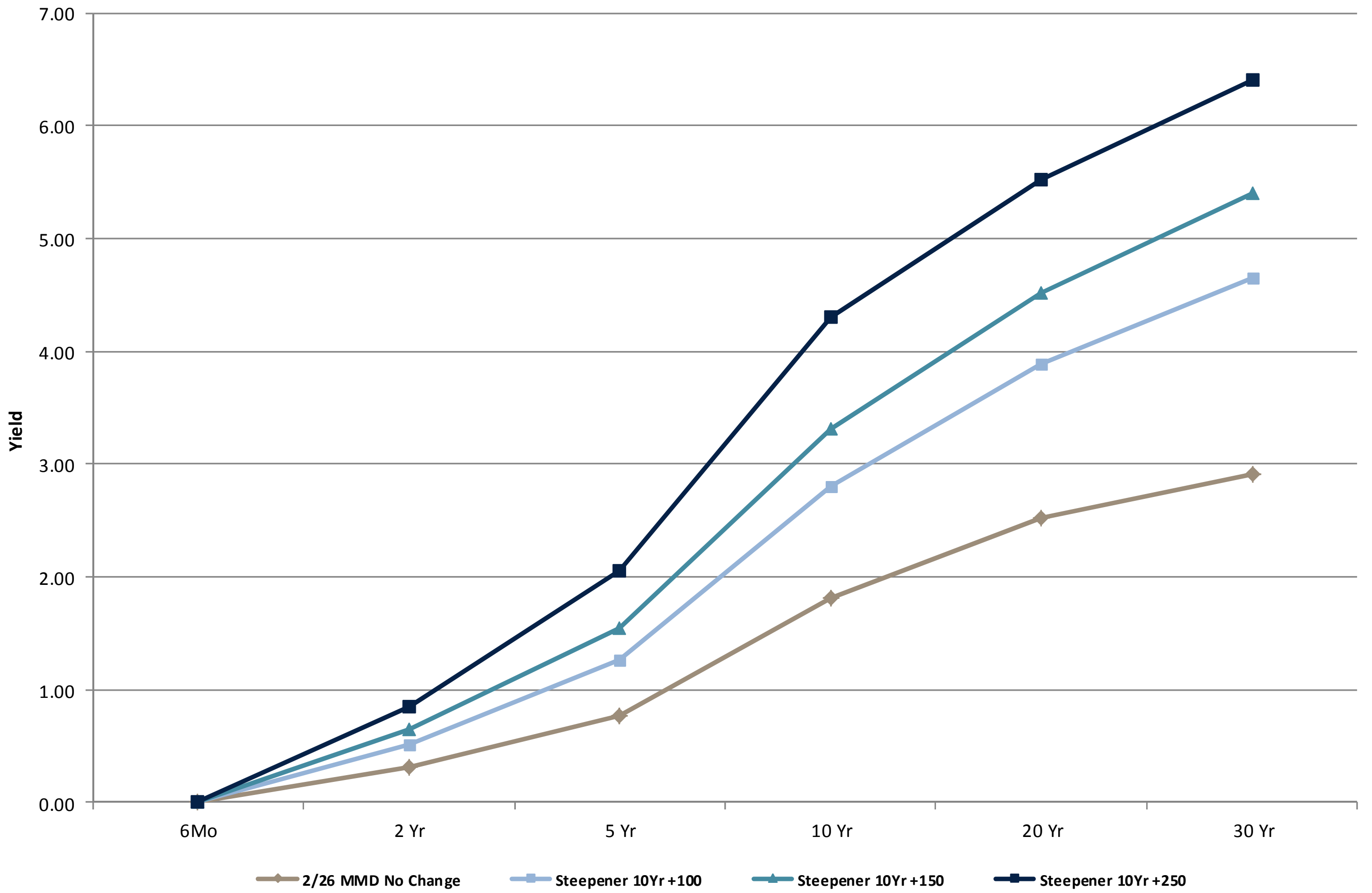


“Results from the Desk's survey of primary dealers conducted prior to the January meeting showed that dealers continued to view the third quarter of 2015 as the most likely time of the first increase in the target federal funds rate. In addition, the median dealer continued to see the first quarter of 2014 as the most likely time for the Committee's asset purchases to conclude, although fewer dealers than in December expected those purchases to continue beyond 2014.”

-FOMC Minutes, Jan. 29-30th[2]

[2] The full minutes to the Jan. 29-30, 2013 meeting can be found at: http://www.federalreserve.gov/monetarypolicy/fomcminutes20130130.htm

YIELD CURVE SCENARIOS DRIVING SIMULATIONS



Source: Investortools and MMD

While rates will remain range-bound in the near term, more extreme scenarios can occur over time. We believe large steepeners, as depicted here, will have a minimal return impact over a 12 month horizon, and the active manager can add value to mitigate the impact of higher rates as relative value opportunities present themselves and the portfolio turns over in the new rate environment.

Appleton Partners Intermediate Municipal Scenario Analysis 2/26/2013 MMD Yield Curve

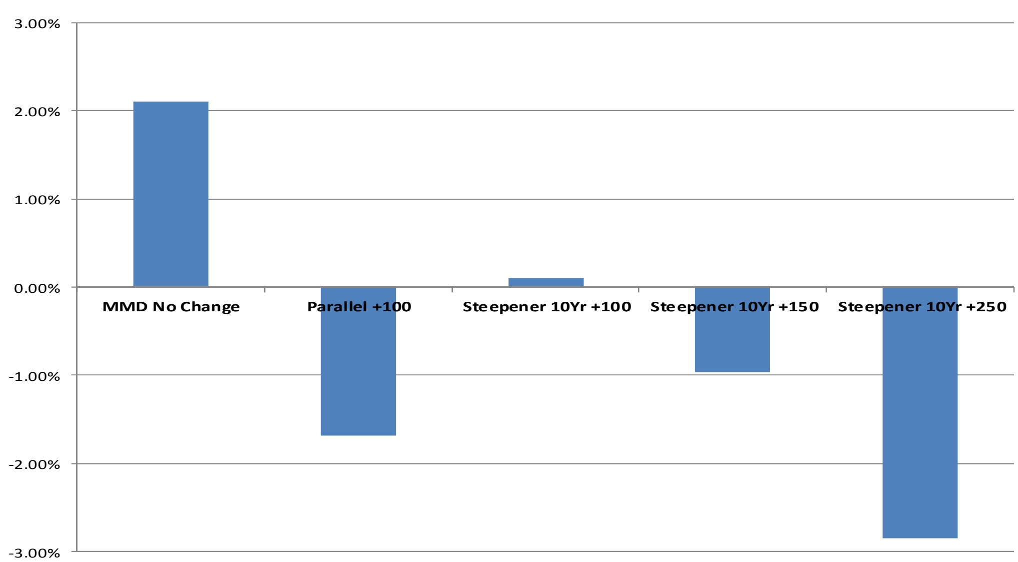
	Static Portfolio **12 mo; No Change** Current Holdings	*Static Portfolio* **12 mo; Plus 100** Current Holdings	*Static Portfolio Steepener* **12 mo; 10 yr +100 bps** Current Holdings	*Static Portfolio Steepener* **12 mo; 10 yr +150 bps** Current Holdings	*Static Portfolio Steepener* **12 mo; 10 yr +250 bps** Current Holdings
Beg Cash	7,611.23	7,611.23	7,611.23	7,611.23	7,611.23
Beg Par -- incl cash	1,397,611.23	1,397,611.23	1,397,611.23	1,397,611.23	1,397,611.23
Average Coupon	4.954	4.954	4.954	4.954	4.954
Beg Mkt Value -- plus acc int	1,662,304.43	1,662,304.43	1,662,304.43	1,662,304.43	1,662,304.43
End Total Value	1,697,393.95	1,634,370.05	1,664,000.11	1,646,330.66	1,614,948.26
Beg Market Price	117.644	117.644	117.644	117.644	117.644
End Market Price	115.163	110.638	112.769	111.501	109.251
Beg Market Yield	**1.327**	**1.327**	**1.327**	**1.327**	**1.327**
End Market Yield	**1.156**	**2.146**	**1.556**	**1.783**	**2.172**
Beg Modified Duration	**4.774**	**4.774**	**4.774**	**4.774**	**4.774**
End Modified Duration	**3.998**	**3.922**	**3.946**	**3.918**	**3.867**
Total Return $	***35,089.52***	***-27,934.38***	***1,695.68***	***-15,973.77***	***-47,356.17***
Total Return %	***2.111%***	***-1.680%***	***0.102%***	***-0.961%***	***-2.849%***

Basis Point Changes Driving Scenarios

	MMD No Change	**MMD +100**	**Steepener +100**	**Steepener +150**	**Steepener +250**
2 year:	0	+100	+20	+34	+54
5 year:	0	+100	+50	+77	+128
10 year:	0	+100	+100	+150	+250
20 year:	0	+100	+137	+200	+300
30 year:	0	+100	+175	+250	+350

Source: MMD and Investortools Perform

Scenario Returns on the Intermediate Municipal Strategy: A Static Portfolio in a 12 Month Horizon



Source: MMD and Investortools Perform

Appleton Partners, Inc One Post Office Sq Boston, MA 02109 tel. 617.338.0700 www.AppletonPartners.com

Appleton Partners Intermediate Taxable Scenario Analysis 3/1/2013 Treasury Curve

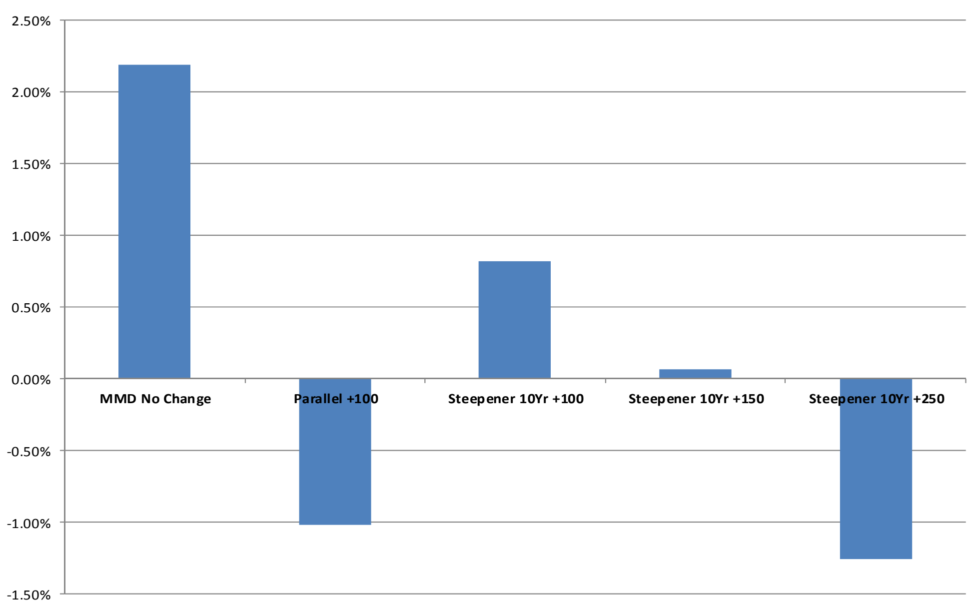
	Static Portfolio 12 mo; No Change Current Holdings	Static Portfolio 12 mo; Plus 100 Current Holdings	Static Portfolio Steepener 12 mo; 10 yr +100 bps Current Holdings	Static Portfolio Steepener 12 mo; 10 yr +150 bps Current Holdings	Static Portfolio Steepener 12 mo; 10 yr +250 bps Current Holdings
Beg Cash	36,213.86	36,213.86	36,213.86	36,213.86	36,213.86
Beg Par -- incl cash	886,213.86	886,213.86	886,213.86	886,213.86	886,213.86
Avg Coupon	4.559	4.559	4.559	4.559	4.559
Beg Mkt Value -- plus acc int	991,056.09	958,301.09	977,183.74	969,434.59	956,106.14
End Total Value	1,032,242.33	999,769.44	1,018,405.00	1,010,685.69	997,392.28
Beg Market Price	112.873	112.873	112.873	112.873	112.873
End Market Price	110.724	107.028	109.159	108.284	106.781
Beg Market Yield	**1.523**	**1.523**	**1.523**	**1.523**	**1.523**
End Market Yield	**1.349**	**2.342**	**1.694**	**1.898**	**2.239**
Beg Modified Duration	**4.167**	**4.167**	**4.167**	**4.167**	**4.167**
End Modified Duration	**3.384**	**3.338**	**3.358**	**3.344**	**3.319**
Total Return $	***22,144.94***	***-10,327.95***	***8,307.61***	***588.30***	***-12,705.11***
Total Return %	***2.192%***	***-1.022%***	***0.822%***	***0.058%***	***-1.258%***

Basis Point Changes Driving Scenarios

	Treas No Change	Treas +100	Steepener +100	Steepener +150	Steepener +250
2 year:	0	+100	+20	+34	+54
5 year:	0	+100	+50	+77	+128
10 year:	0	+100	+100	+150	+250
20 year:	0	+100	+137	+200	+300
30 year:	0	+100	+175	+250	+350

Source: Bloomberg and Investortools Perform

SCENARIO RETURNS ON THE INTERMEDIATE TAXABLE STRATEGY: A STATIC PORTFOLIO IN A 12 MONTH HORIZON



Source: Bloomberg and Investortools Perform

APPLETON PARTNERS, INC ONE POST OFFICE SQ BOSTON, MA 02109 TEL. 617.338.0700 WWW.APPLETONPARTNERS.COM