

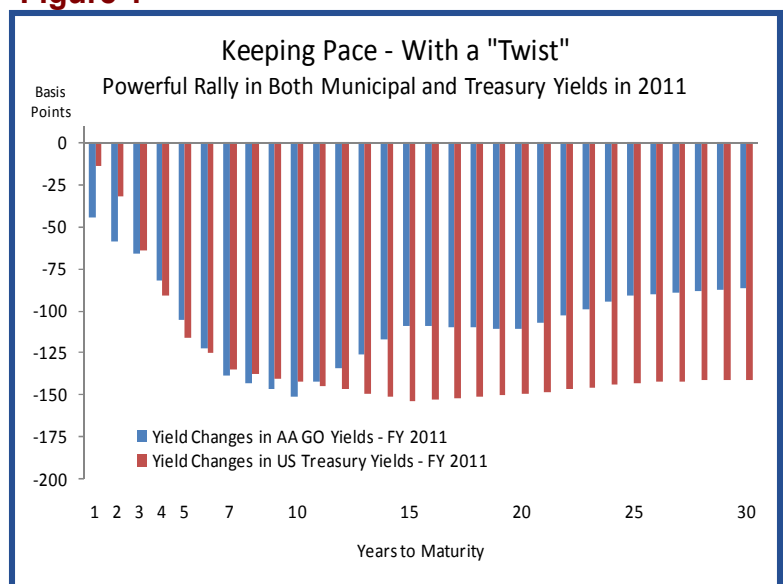


## Municipal Market Review

Fourth Quarter 2011

For the fourth consecutive quarter in a row, municipal bond yields **rallied** during the fourth quarter of 2011. Referring to **Figure 8**, we can see that while yields declined modestly across the entire municipal yield curve, resulting in a slight **parallel shift downward** in the curve, the decline in yields in the 5-to-10 year area of the yield curve were more pronounced. This slight curve reshaping is highlighted by **Figure 9** which graphs the ratio of municipal yields to Treasury yields, where we can see that the **relative value ratio** of municipals to Treasury's declined modestly below third quarter ending levels for maturities in the 5-to-10 year area. The rally in yields for the entire 2011 calendar year was nothing short of impressive. Referring to **Figure 1**, we can see that with the exception of the longest maturities, the rally in municipal yields for 2011 mirrored the **powerful rally** in Treasury yields, with the greatest decline in municipal yields occurring in the short to intermediate part of the yield curve. As a result, the **7-to-12 year maturity area** in municipals experienced the best **risk-adjusted performance** for the calendar year 2011. The decline in long-term municipal yields was less than the decline in long-term Treasury yields due to differences in the supply and demand balance in the two markets. Overall, supply and demand fundamentals were quite favorable for municipal yields as total 2011 issuance, at \$295 billion, was **down 32 percent** from the 2010 level of \$433 billion, with new issuance concentrated in long-intermediate and long-term maturities. In addition, demand for municipal securities increased markedly in the latter half of the year, as the prognostication of a certain well known analyst for **"hundreds of billions"** in municipal defaults failed to materialize. As a result municipals experienced an impressive rally in yields, with short-to-intermediate yields declining more than long-term yields due to the relative excess supply in longer maturities and an increased demand in short-to-intermediate maturities. The powerful rally in Treasury yields occurred against a backdrop of a rapidly accelerating crisis in Europe and a concomitant **"risk-off"** flight-to-safety response by investors. At the same time, the Federal Reserve inaugurated **"Operation Twist"** in September, a policy involving the sale of \$400 billion in short-term Treasuries in exchange for the same amount of longer-term bonds. While not intended to inject additional money into the economy, it is designed to lower yields on long-term bonds, while keeping short-term rates little changed. Given the severity of the crisis in Europe, this operation combined

**Figure 1**



# Municipal Market Review

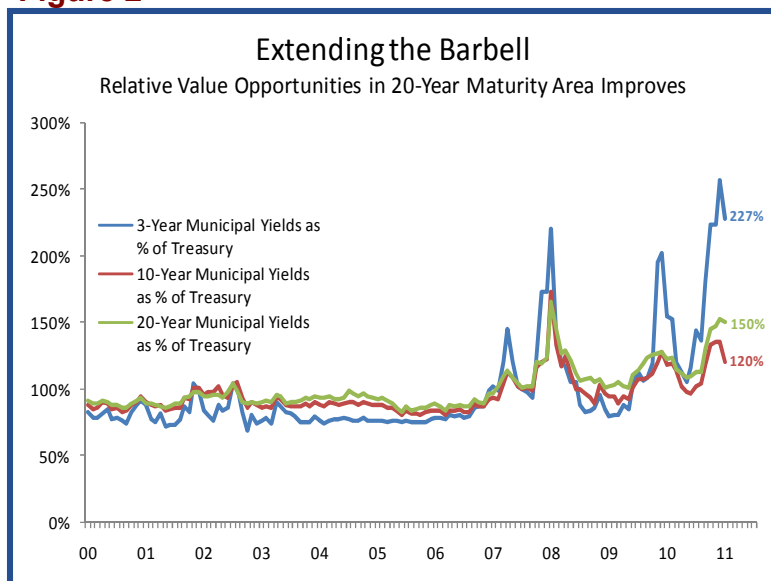
Fourth Quarter 2011

with the Fed's explicit commitment to keep short-term interest rates low through 2014, has encouraged investors to move out the yield curve in Treasury's, contributing to the impressive rally in longer-term yields versus municipals.

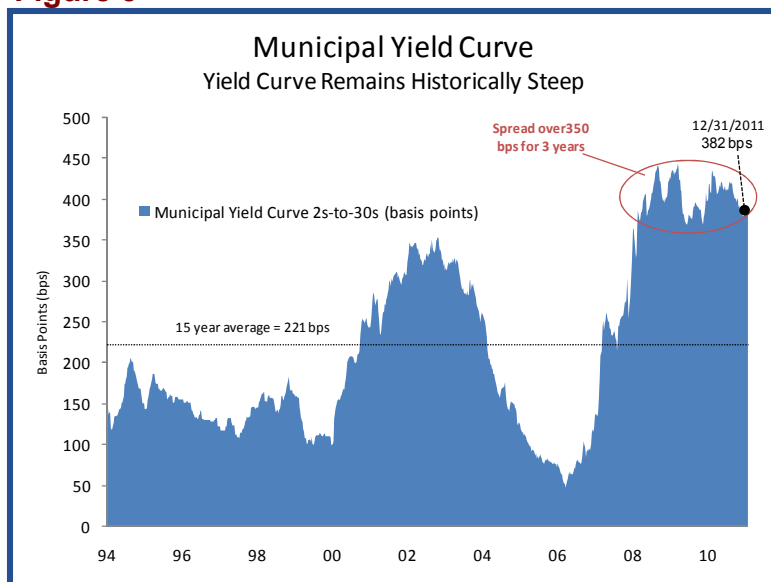
Despite the impressive rally in municipal yields during 2011, opportunities still remain for investors within the municipal bond market. The **relative value** of municipals as measured by the ratio of municipal yields to Treasury yields continues to remain above long-term trends. **Figure 2** illustrates the **relative value ratios** for 3-year, 10-year and 20-year AA GO municipal bonds versus respective Treasury yields. As we can see, for each maturity area the current ratio remains well above their 10 year averages. However with the rally in intermediate municipal yields exceeding that of long-term yields for 2011 (**Figure 1**), the relative value of longer dated municipals as represented by the **20-year ratio**, has improved compared to intermediate maturities as represented by the **declining 10-year ratio**. A declining ratio indicates relative outperformance by municipals versus Treasury's in that area. This suggests that longer maturity allocations **should be extended** from the 10-year area towards the **20-year area** in anticipation of prospective outperformance in this area. We still recommend an allocation to shorter maturities (3-year area) where relative value remains at extremes, both to mitigate an unforeseen rise in rates as well as to provide reinvestment opportunities. Such a barbell portfolio will tend to outperform either a bullet or laddered portfolio in a yield curve flattening scenario such as we had in 2011. And while some portion of the rise in municipal relative value since 2007 may be attributable to structural changes due to the loss of the **monoline insurers**, nevertheless at current elevated levels municipal yields continue to offer **good relative value** in a low nominal yield environment.

Aside from good relative value, an extremely steep municipal yield curve offers investors the opportunity to lock in **good absolute value** by **extending maturities** out the yield curve from cash. Referring to **Figure 3**, we can see that despite the bullish flattening of 2011, the overall shape of the municipal yield curve as

**Figure 2**



**Figure 3**

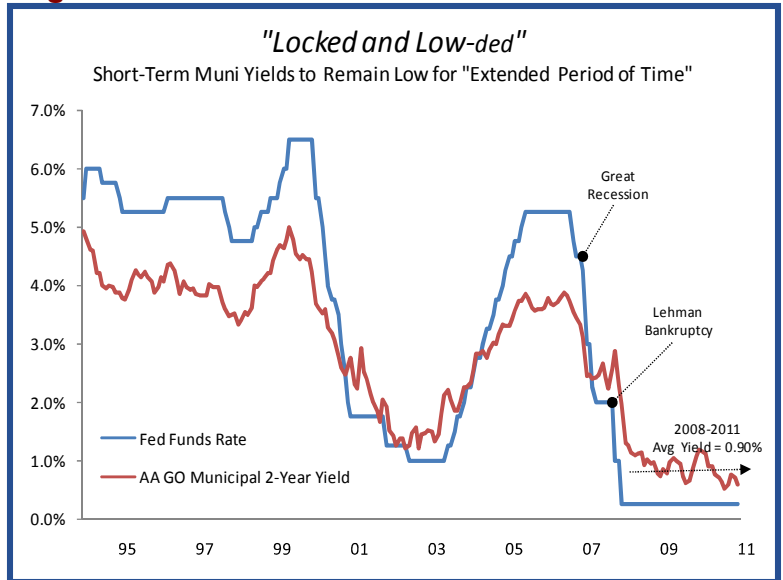


# Municipal Market Review

Fourth Quarter 2011

measured by the **2s-to-30s** yield spread, at **382 basis points**, remains historically steep when compared to the 15 year average of **221 basis points**. In fact this spread has held at or above **350 basis points** for 3 years, and as such it is without recent precedent. A steep yield curve offers investors the opportunity to lock in **higher absolute yield levels** [read income] and along with those yields, **long-term tax benefits** by extending maturities. As it stands, if Congress takes no action this year the nearly \$4 trillion in **Bush-era tax cuts** are set to expire at the end of December 2012. Congress is currently divided, with most Republicans in favor of making the tax cuts permanent while many Democrats want to exempt high-income households from the tax cuts. Of course the outcome ultimately depends upon two unpredictable factors: The state of the economy and who wins control of the House, the Senate and the White House.

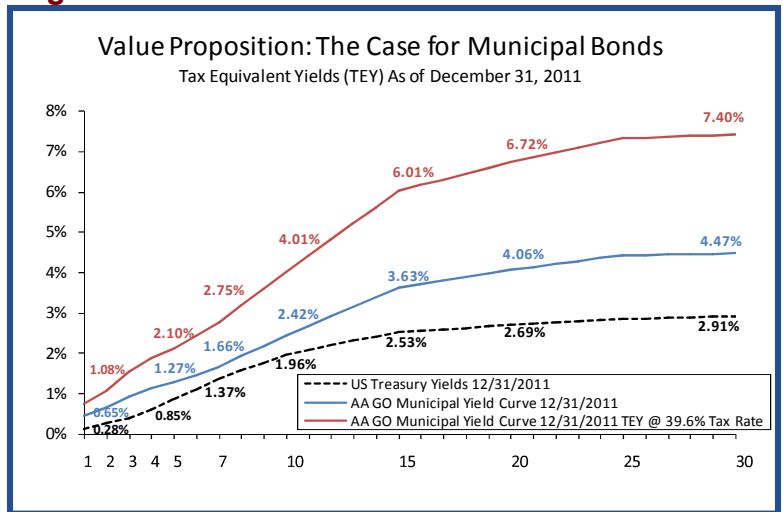
Figure 4



Referring to **Figure 4**, we can see that the primary driver of this persistently steep yield curve continues to be the Federal Reserve's zero interest rate policy or **ZIRP** whereby they remain committed to keeping short-term interest rates at or near zero for an "extended period of time." Subsequent to the onset of the **Great Recession** and the **Lehman Brothers bankruptcy**, the Fed reduced the Funds Rate to 0.25 percent, or effectively "zero" as of December of 2008. As we can see, short-term municipal yields as represented by 2-year AA GO municipal yields, has been tracking the Funds Rate, averaging just 0.90 percent for the **last 3 years**. As part of the Fed's new policy of transparency, the Fed recently publicly affirmed its commitment to ZIRP **through 2014**. As such, barring a surprisingly strong economic recovery, there is very little chance that this situation will change soon, offering investors an "extended opportunity" to benefit from this policy.

As previously stated, because the slope of the yield curve remains steep, by extending maturities to the intermediate or long-term area of the yield curve investors can significantly increase the nominal yield in their investment portfolio on a **tax-adjusted basis**. **Figure 5**, which we have updated from last quarter, illustrates the importance of this concept by comparing both **nominal** and **tax equivalent municipal yields** to nominal Treasury yields. The black line illustrates US

Figure 5



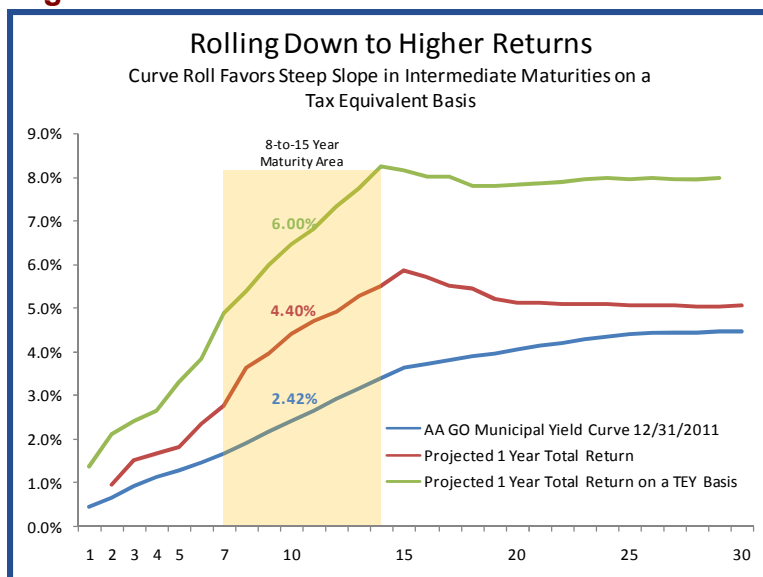
# Municipal Market Review

Fourth Quarter 2011

Treasury yields, the blue line AA GO municipal yields and the red line represents those same AA GO municipal yields on a tax equivalent basis using an effective tax rate of 39.6 percent, all as of December 31, 2011. Thanks to the unflinching commitment by the Fed to keep interest rates low, the current yield on cash remains near “zero.” However a five-year AA GO municipal bond which currently yields around 1.27% nominally, offers a **210 basis point increase over cash on a tax equivalent basis**. Likewise, a ten-year AA GO municipal bond which currently yields around 2.42%, offers a **401 basis point increase over cash on a tax equivalent basis**. As we can see from the chart, the **10-to-15 year maturity area** is currently offering the highest tax equivalent yields on a risk-adjusted basis due to the steepness of the underlying curve. In this low nominal yield environment, investors far too often focus solely on the **nominal purchased yield** and fail to consider the real value of a municipal bond, its tax adjusted yield. This is especially important when the yield curve is steep and the return on cash is zero and may reasonably be expected to remain so for an extended period of time.

In addition the persistently steep municipal yield curve continues to offer investors additional return opportunities in the form of **curve roll**. This opportunity is illustrated in **Figure 6** which graphs the year end AA GO municipal yield curve against the projected 1 year total return for each maturity (red line). By holding bond yields unchanged over a simulated 1-year holding period, we can isolate the potential increase in total returns attributable solely to curve roll. As we can see, curve roll has the greatest potential impact on those maturities in the area denoted on the chart by the highlighted rectangle. The green line presents the same 1-year projected total returns after adjusting the return from income to a **tax equivalent basis**. Again we see that the steepest part of the curve offers the greatest incremental return per unit of interest rate risk. For

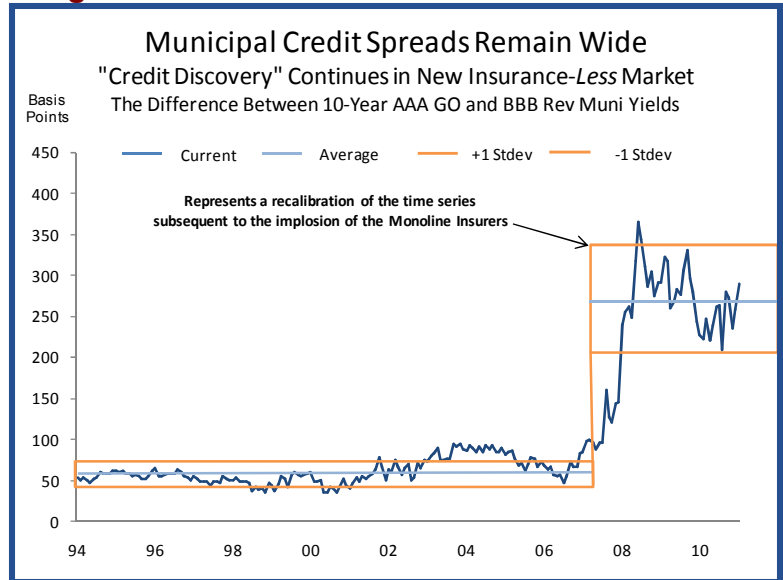
**Figure 6**



example, a **10-year AA GO municipal bond** which currently yields **2.42 percent** would generate a 1-year total return of **4.40 percent** assuming interest rates remained unchanged. The difference, **198 basis points**, is attributable to the impact of **curve roll** as the bond ages. The reason for this lies in the fact that in one year, a 10-year bond becomes a 9-year bond and assuming interest rates remain unchanged, the yield on the 10-year bond will “roll down” to the yield of a 9-year bond. Given the current shape of the municipal yield curve, that amounts to a **25 basis point** one year yield drop. Because of the fixed nature of bond coupons, bond prices rise as yields fall, causing the market value of the bond to rise by an amount approximately equal to its duration times the yield change. And when we adjust the income return to a tax equivalent basis, the 1-year projected return rises to **6.00%** or fully **358 basis points** above the nominal yield of 2.42 percent. That represents an impressive **150 percent** increase in return over and above the simple nominal yield. Given the recent flattening of the yield curve, the **8-to-15 year maturity area** of the municipal yield curve currently offers the most compelling curve roll opportunities due to annual yield drops of 25 to 30 basis points.

In yet another area of opportunity within the municipal bond market, investors are being compensated to prudently assume credit risk. **Figure 7** illustrates the extreme difference in yield between a AAA GO and a BBB revenue bond with a 10-year maturity. With the collapse of the monoline insurers came the end of the era when most municipal issues carried bond insurance. As a result the municipal market underwent a tectonic shift as the process of “**credit discovery**” replaced undifferentiated trading based on an overreliance on bond insurance. This shift is reflected in **Figure 7** by the recalibration of both the average spread and the standard deviation channel for municipal credit spreads. In the insurance era, the average yield spread between a AAA GO and BBB Revenue municipal bond was approximately **60 basis points** while under the new era of credit discovery, the average credit spread has risen to **240 basis points** with a standard deviation of **+/- 76 basis points**, reflecting the vast differences in the underlying credit profiles of the over 100,000 issuers of municipal debt. We continue to believe this recalibration in credit spreads represents an enormous opportunity for adding value for those who can evaluate the underlying credit profile.

**Figure 7**



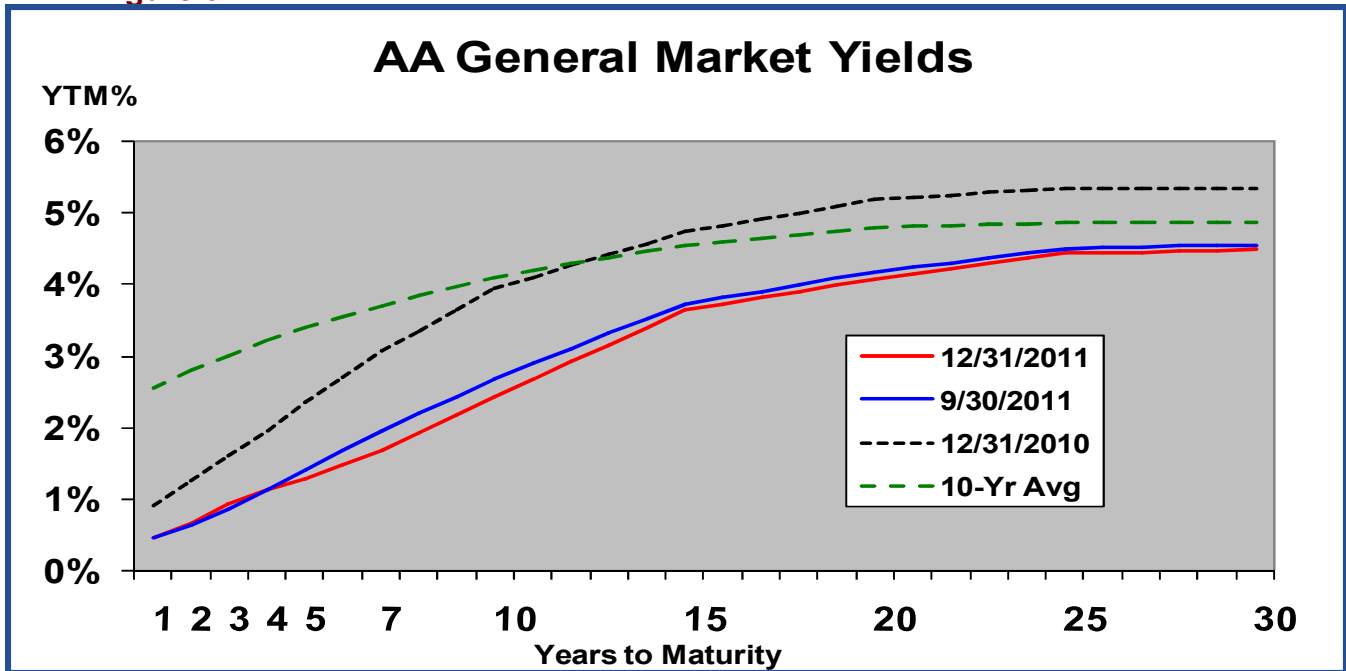
Despite the prognostication for a significant rise in debt defaults and bankruptcies, 2011 saw fewer defaults than 2010 as the municipal market survived the bluster of hurricane “Whitney”. And while the financial condition of state and local governments remains under stress, most have taken the difficult but necessary steps to balance budgets and ensure full and timely payment of their GO debt. Budget deficits from the current recessionary cycle were magnitudes larger than the previous recession. The Center on Budget and Policy Priorities reports that states closed a collective **\$535 billion** in budget gaps over FYs 2009-2012. In FY 2012 alone, states closed \$103 billion in budget gaps, or **16 percent** of their collective budgets.

Additionally it appears that the growth in municipal debt is moderating with total outstanding municipal debt **projected to decline nearly 1 percent** in 2012 after expanding a modest 3.4% in 2010. When compared with many nations, state municipal debt as a percentage of GDP is low, with the median tax-supported GO debt as a percentage of state GDP estimated at just **2.4 percent**. (Contrast that with Greece at 10.6 percent, Japan at 9.5 percent and the US at 8.7 percent) In addition, **debt service** (principal and interest) is typically **below 10 percent** of state and local revenues and has declined consistently over the past 20 years. Overall the municipal bond market remains an immense marketplace in which defaults on GO debt is still very rare. And while additional austerity measures by the federal government will further constrain state and local governments, we believe that the vast majority of GO and tax-dedicated essential service debt will remain **default-remote** as states continue to balance their budgets by cutting spending and off-loading costs to local governments.

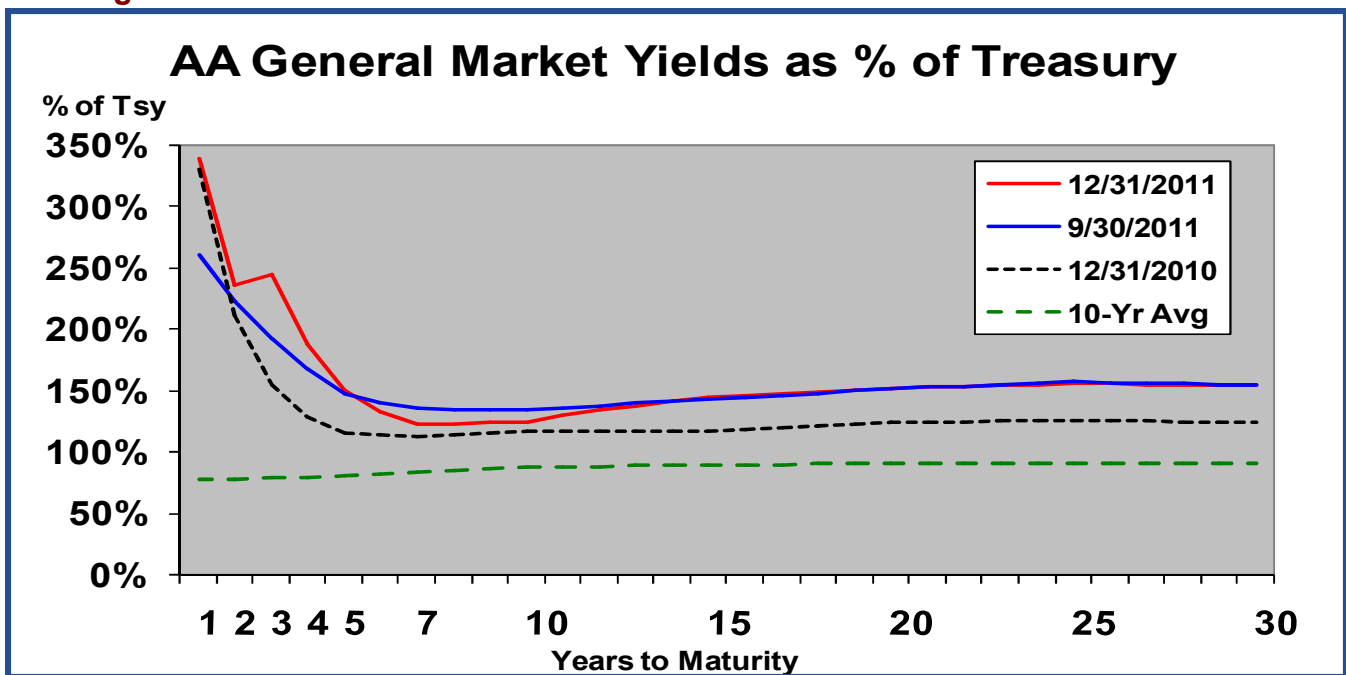
# Municipal Market Review

Fourth Quarter 2011

**Figure 8**



**Figure 9**



	10 Yr Avg	9/30/2011	12/31/2011
2-Year AA Municipal	105%	223%	236%
5-Year AA Municipal	92%	146%	149%
10-Year AA Municipal	97%	133%	124%
25-Year AA Municipal	105%	156%	155%