NAIC National Association of Insurance Commissioners & The Center for Insurance Policy and Research
Capital Markets Special Report

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## Recent Municipal Bond Capital Market Developments and Noteworthy 2010 Municipal Bond Allocation Changes by the U.S. Insurance Industry

### Introduction

State and municipal securities represented $479.9 billion (or 9.5%) of cash and invested assets of the U.S. insurance industry at Dec. 31, 2010, and also represented 13.0% of the $3.7 trillion municipal bond market. This NAIC Capital Markets Bureau Special Report reviews recent capital market developments affecting municipal bonds and some notable 2010 changes in the composition of municipal investments held by the U.S. insurance industry.

During the first three quarters of 2011, there were generally positive developments in the municipal bonds held by the U.S. insurance industry. The par value of monetary defaults in the municipal bond market in general declined to $1.5 billion in the first 10 months of 2011 from $2.7 billion during all of 2010. However, due to ratings migration of bonds held by insurers, investment grade municipal bonds as a percentage of total municipal bond investments declined slightly, from 99.8% to 99.7%. Migration from AAA ratings to AA ratings occurred, in part, due to the U.S. government downgrade by Standard & Poor's, and there was a slight migration from BB ratings to B ratings. Absolute yields decreased while yield spreads widened relative to Treasuries. The prices of municipal bonds held increased 5.3% during the first nine months of 2011 as interest rates declined. At the same time, new investments in municipal bonds offered more attractive yield spreads relative to U.S. Treasury bonds and relative to corporate bonds when compared to their historical relationships. Some maturities of tax-exempt AAA general obligations offered yields above taxable AAA corporate bonds, even though municipal bonds provided tax-exempt interest and had long histories of lower defaults for comparably rated bonds.

In 2010, the U.S. insurance industry increased its investment in municipal securities 4.7% to $479.9 billion. Even though the property/casualty insurance industry reduced its exposure to municipal bonds, acquisitions by life insurance companies offset property/casualty company dispositions. Net acquisitions by the U.S. insurance industry in 2010 were largely attributable to an increase in municipal investments by the life insurance industry, especially in taxable Build America Bonds.

### 2011 Municipal Bond Yield Spreads

In the first 11 months of 2011, yield spreads increased as municipal bond yields declined, but not to the same degree that Treasury yields declined. At Nov. 30, 2011, 20-year AAA general obligation yield spreads widened to positive 99 basis points over the Treasury rate, as yields on government bonds declined to 2.93% from 4.22% at the start of the year due to investors focusing their attention on a restructuring of Greek sovereign debt, the solvency of European banks and a potentially slowing global economy. During the same 11 months, 20-year AAA general obligation yields declined to 3.92% from 4.57%.

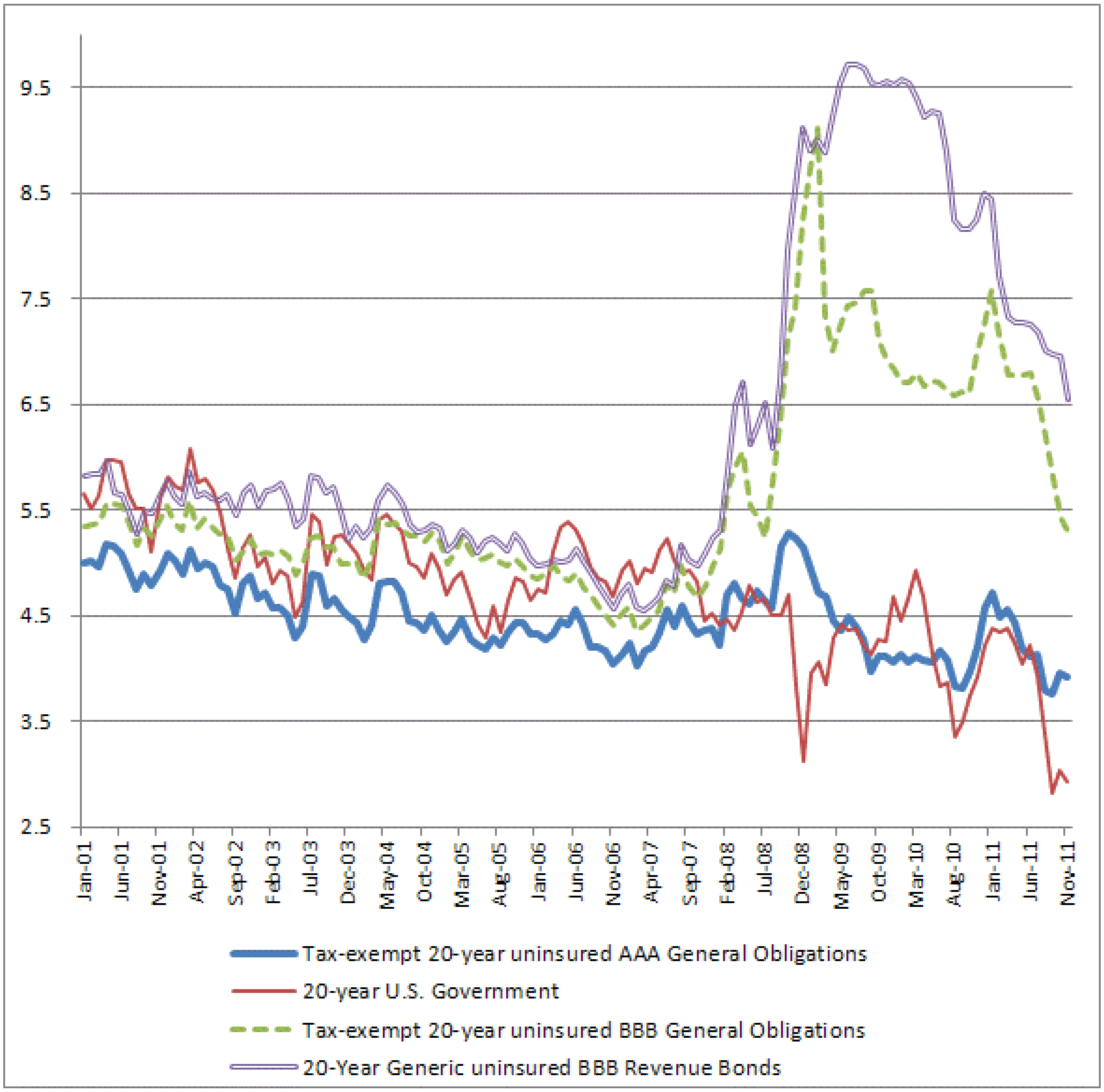
### Municipal Yield Spreads Have Been Volatile Since the 2008 Financial Crisis

In this low interest-rate environment, state and municipal bond yields remain attractive relative to Treasury yields. This is especially true when compared to yield spreads in years prior to the financial crisis. From 2001 through 2007, 20-year tax-exempt AAA general obligations typically had an average annual yield spread of negative 50 basis points to negative 75 basis points. Due to market conditions during the period and a federal income-tax exemption on their interest payments, these high credit quality municipal bonds had negative yield spreads relative to Treasuries. However, this average spread relationship changed significantly in 2008. Despite the benefit of tax-exempt interest, 20-year AAA general obligations yield spreads have fluctuated significantly since the 2008 financial crisis and have generally maintained a positive yield spread over the comparable maturity Treasury, rather than a negative yield spread. Volatility in AAA general obligation yield spreads during the past four years has been driven by a variety of factors:

- Yield spreads became volatile in January 2008, when financial guarantor MBIA announced a quarterly loss of $2.3 billion related to the subprime mortgage crisis, raising concerns about the health of municipal bond insurers. The following month, auction rate municipal securities failed their auctions, further focusing attention on municipal finance. Hedge funds, a significant investor in municipal bonds at the time, began to unwind trades, causing yield spreads to turn positive as 20-year AAA general obligation yields increased relative to 20-year Treasury yields.
- By Dec. 31, 2008, yield spreads peaked at positive 201 basis points when the 20-year Treasury rate declined to 3.1% from 4.7% at Oct. 31, 2008, in a global flight to the safety of U.S. Treasury bonds. During the same two-month period, yields of 20-year AAA general obligations only declined to 5.1% from 5.3%.
- As investors became more optimistic in 2009, 20-year Treasury rates increased, and 20-year AAA general obligations yields declined.
- Yield spreads once again turned negative in September 2009, in part because Build America Bonds expanded the demand for municipal securities to nontraditional investors. To the extent taxable Build America Bonds replaced tax-exempt municipal financings, reduced supply of tax-exempt issuances contributed to relatively flat tax-exempt yields during a period of time when Treasury yields were increasing. In early 2010, Treasury yields rose significantly and, by March 31, 2010, yield spreads were negative 81 basis points.
- However, in April 2010, Standard and Poor's downgraded Greece from BBB+ to BB+, reducing investor expectations for global economic recovery. Treasury yields subsequently declined and have remained below 20-year AAA general obligation yields since May 2010. Yield spreads widened as the Treasury yields declined in a global flight to the safety of U.S. Treasury bonds and in response to the Federal Reserve's "QE2" and "Operation Twist."
- Municipal yields did not decline as much as Treasury yields due, in part, to investor focus on state and municipal budget changes addressing a slow economic recovery and the phase-out of federal subsidies from the American Recovery and Reinvestment Act of 2009.
- Although it can be resolved over a longer period of time, investors also had heightened interest in funding and benefit decisions addressing underfunded public pension obligations.

Due to reduced demand for lower-rated bonds, BBB bonds experienced even more volatility than higher-rated municipal bonds, as can be seen in the chart below. From 2001 to 2007, 20-year tax-exempt BBB general obligations generally traded in line with Treasuries. However, at the end of November 2011, BBB general obligations traded at a yield spread of 236 basis points over the Treasury rate. BBB revenue bond yields have risen significantly more than BBB general obligation yields. From 2001 to 2007, 20-year BBB generic revenue bonds averaged 25 basis points over 20-year tax-exempt BBB general obligations. However, at the end of November 2011, BBB revenue bonds traded at a yield spread of 125 basis points over 20-year BBB general obligations.

**Yields: Jan. 31, 2001 to Nov. 30, 2011**

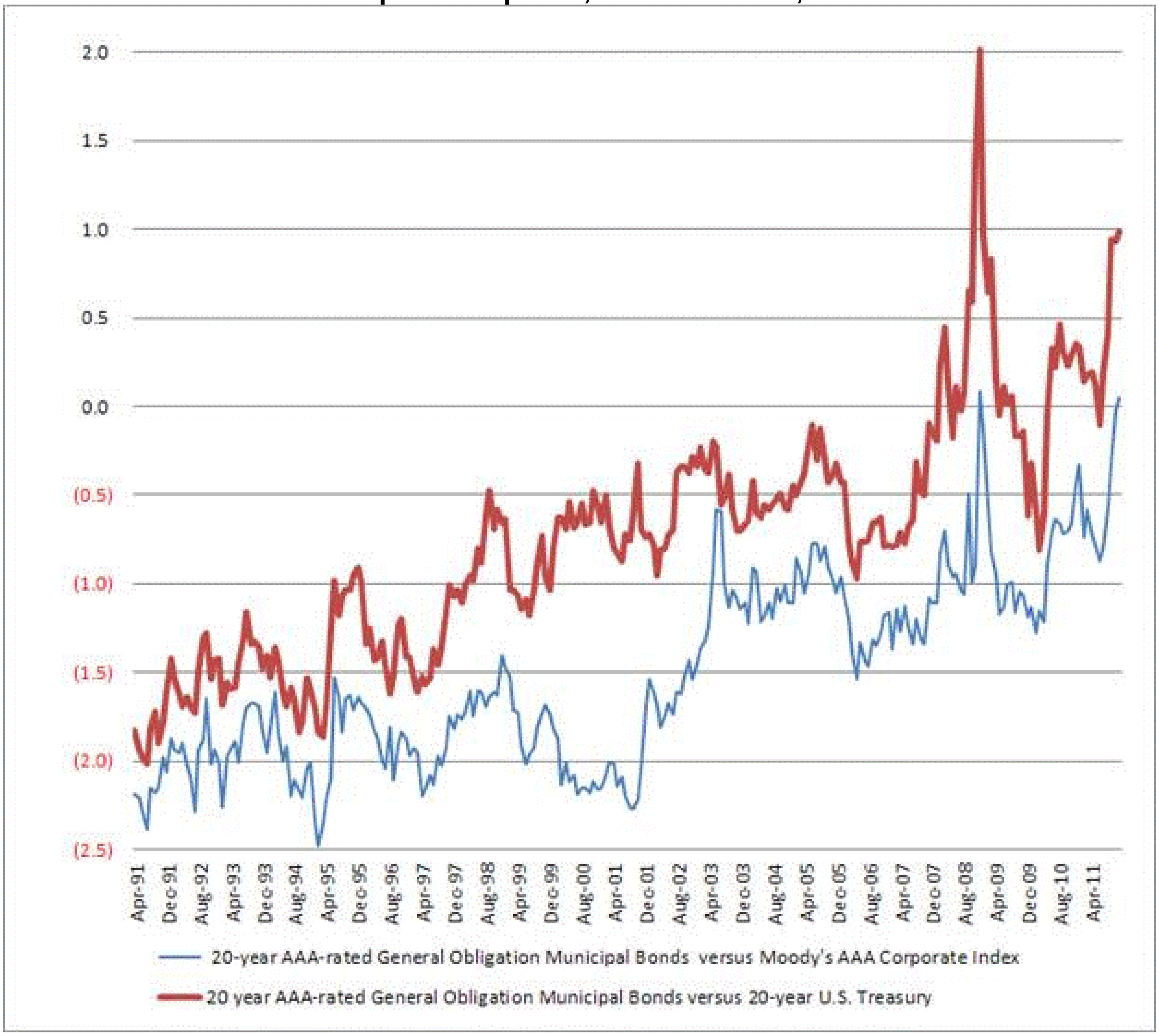



**Note:** AAA general obligations represented 12.3% of municipal bonds held by the U.S. insurance industry at Dec. 31, 2010, BBB revenue bonds represented 3.1% and BBB general obligations represented 0.5%.

**Note:** 20-year BBB general obligation yields presented in the chart have been volatile due to a reduced demand for lower credit quality bonds and the relatively small size of the $4.9 billion 20-year BBB general obligation market. Within the municipal bond market, at least one rating agency rated $277.4 billion revenue bonds as BBB, $266 billion general obligations as AAA and $21.2 billion general obligations as BBB.

Over the past two decades, municipal yield spreads relative to U.S. government and corporate bonds have been trending upward. The table below depicts the yield spreads of 20-year AAA corporate bonds and 20-year U.S. Treasury bonds relative to the yield of uninsured tax-exempt 20-year AAA general obligation municipal bonds. Yield spreads for 20-year tax-exempt AAA general obligations swung 282 basis points, from 183 basis points below the Treasury yield on April 30, 1991, to 99 basis points above the 20-year Treasury yield on Nov. 30, 2011. During the same period, 20-year AAA general obligation municipal bond yield spreads moved 224 basis points, from 219 basis points below the Moody's AAA Corporate bond index to 5 basis points above the corporate bond index.

**Yield Spreads: April 30, 1991 to Nov. 30, 2011**




**Note:** The Bloomberg 20-year AAA general obligation consisted of uninsured equally weighted tax-exempt general obligation bonds issued by U.S. states and political subdivisions of states.
**Note:** Moody's AAA Corporate Index is an equally weighted average of 90 seasoned bonds with remaining maturities of at least 20 years.

**Higher Call Risk and Potential Credit Improvement from Refundings**

As municipal yields decline, issuing entities often benefit by issuing new bonds to refund existing bonds. In a refunding, the proceeds of the new bonds fund the escrow, which pays the principal, interest and any call premium of an outstanding bond issue. The escrowed proceeds are typically invested in U.S. government securities as permitted by the bond indenture. Refundings are either to maturity (bonds escrowed to maturity) or, more typically, to a scheduled call date (prerefunded bonds). Bonds called in a lower yield environment expose investors to reinvestment risk. However, investors often benefit from improved creditworthiness when refunded bonds are escrowed with U.S. government debt. Refunded bonds currently comprise 7.0% of the municipal bond market and represented $41.9 billion or 8.8% of municipal bonds held by the U.S. insurance industry at Dec. 31, 2010.

From the issuer's perspective, the indenture of the outstanding debt is defeased in a refunding, and the debt is removed from the issuer's balance sheet. Although the old bonds remain outstanding (paying the original coupon until call or maturity), investors are repaid from the bond's escrow fund and, thereby, lose claim to the revenues of the municipal issuer.
In cases where issuers cannot currently call bonds, they can take advantage of refinancing opportunities at lower interest rates by prerefunding the bonds to the next applicable call date.
U.S. insurers held $286.5 billion in callable municipal bonds at Dec. 31, 2010, representing 59.9% of municipal bonds held. Insurers' exposure to callable bonds was less than the municipal bond market, which consisted of 68.2% of bonds that were currently callable.

**Par Value of Municipal Bond Market Defaults Declined in 2011**

Municipal bond market defaults declined to $1.5 billion through Nov. 10, 2011, from $2.7 billion during all of 2010. Although the par value of bonds entering default declined, the number of defaulting bonds increased. Through Nov. 10, 2011, there were 187 municipal bond defaults, which was up from 111 defaults in all of 2010. The higher number of defaults was primarily due to an increase in multifamily housing defaults and, to a lesser degree, an increase in medical bond defaults.

**Municipal Bond Monetary Defaults**
**January 1, 2011 to November 10, 2011**

| ($ in millions) Bond Type | Par Value | % | Issues | % |
|---|---|---|---|---|
| Development | $302 | 20.7 | 44 | 23.5 |
| Multifamily Housing | 281 | 19.3 | 49 | 26.2 |
| Special Assessment | 241 | 16.5 | 15 | 8.0 |
| Medical | 336 | 23.0 | 38 | 20.3 |
| Retirement | 133 | 9.1 | 12 | 6.4 |
| Special Tax | 33 | 2.2 | 5 | 2.7 |
| Other | 134 | 9.2 | 24 | 12.8 |
| **Total** | **$1,460** | **100.0** | **187** | **100.0** |

**2010 Municipal Bond Monetary Defaults**

| ($ in millions) Bond Type | Par Value | % | Issues | % |
|---|---|---|---|---|
| Development | $859 | 31.8 | 62 | 55.9 |
| Indian | 753 | 27.9 | 6 | 5.4 |
| Medical | 583 | 21.6 | 13 | 11.7 |
| Transportation | 191 | 7.1 | 1 | 0.9 |
| Solid Waste | 88 | 3.3 | 6 | 5.4 |
| Multifamily Housing | 87 | 3.2 | 10 | 9.0 |
| Other | 139 | 5.1 | 13.0 | 11.7 |
| **Total** | **$2,700** | **100.0** | **111** | **100.0** |

**Note:** The tables above include only monetary defaults. Technical defaults (covenant violations) were not included. The monetary defaults listed include bonds insured by financial guarantors.
Municipal defaults were lower and recoveries were higher when compared to Moody's rated corporate defaults during its 1970–2009 study period. For example, the average five-year historical cumulative default rate for investment-grade municipal debt was 0.03%, compared to 0.97% for investment grade corporate issuers. Although the sample size of municipal defaults was small, Moody's estimated that average historical recovery rate for defaulted U.S. municipal bonds was 59.9% of par, higher than the average 37.5% recovery rate for defaulted senior unsecured corporate bonds.
It is noteworthy that general obligation defaults and resulting losses have been extremely rare events. Due to support from financial guarantors, support from the states to local municipalities, the full taxing authority of the issuing entity and the continuing need for municipal entities to maintain access to capital markets, general obligation investors tended to experience full recovery of their investment in defaulted municipal general obligation bonds.

**Rating Migration of U.S. Insurance Industry Holdings in 2011**

The following table shows the $3.7 trillion municipal bond market and the long-term municipal bond rating distribution at Oct. 31, 2011. Nearly a quarter of municipal bonds outstanding had no long-term credit rating and $176.0 billion (or 4.8%) of the $3.7 trillion municipal bonds outstanding were scheduled to mature within 12 months.

**Municipal Bond Market and Par Value of Long-Term Credit Ratings at Oct. 31, 2011**

| ($ in millions) Long-term Credit Rating October 31, 2010 | Moody's | % | Standard & Poor's | % | Fitch | % |
|---|---|---|---|---|---|---|
| AAA | $415,575 | 14.7 | $484,757 | 17.4 | $301,575 | 17.4 |
| AA | 1,620,453 | 57.4 | 1,443,010 | 51.7 | 821,623 | 47.5 |
| A | 550,072 | 19.5 | 601,575 | 21.5 | 448,482 | 25.9 |
| BBB | 188,215 | 6.7 | 223,339 | 8.0 | 96,170 | 5.6 |
| BB | 13,935 | 0.5 | 24,697 | 0.9 | 28,439 | 1.6 |
| B | 25,905 | 0.9 | 10,245 | 0.4 | 31,600 | 1.8 |
| CCC | 5,910 | 0.2 | 1,846 | 0.1 | 178 | 0.0 |
| CC/C/D | 1,869 | 0.1 | 2,837 | 0.1 | 1,508 | 0.1 |
| **Total** | **$2,821,934** | **100.0** | **$2,792,306** | **100.0** | **$1,729,577** | **100.0** |

**Note:** The presentation above includes revenue and general obligation bonds.

Of the rated bonds outstanding in the municipal bond market, Moody's rated 98.3% investment grade; Standard and Poor's, 98.6%; and Fitch, 96.4%. The U.S. insurance industry held 99.7% investment grade bonds at Sept. 30, 2011, indicating a preference for higher-quality bonds than generally offered in the municipal bond market.

Bonds held by the U.S. insurance industry experienced a slight downward rating migration during the first nine months of 2011. The table below presents the nine-month ratings migration of the U.S. state and municipal bonds held by the U.S. insurance industry at Dec. 31, 2010.

**Insurance Industry Municipal Bond Ratings Migration**

| ($ in millions) December 31, 2010 Rating | December 31, 2010 Statement Value | % of December 31, 2010 Statement Value | % Ratings Migration based on Available September 30, 2011 NRSRO Ratings | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | AAA | AA | A | BBB | BB | B | CCC | CC/C/D |
| AAA | $99,949 | 21.2 | 89.7 | 10.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| AA | 288,070 | 61.2 | 0.4 | 97.5 | 2.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| A | 64,045 | 13.6 | 0.0 | 2.2 | 96.0 | 1.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| BBB | 17,330 | 3.7 | 0.0 | 1.0 | 2.5 | 95.0 | 0.8 | 0.6 | 0.0 | 0.0 |
| BB | 911 | 0.2 | 0.0 | 0.3 | 0.0 | 3.5 | 69.8 | 25.4 | 1.0 | 0.0 |
| B | 147 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 0.6 | 97.4 | 0.0 | 0.0 |
| CCC | 53 | 0.0 | 0.0 | 6.3 | 0.0 | 4.6 | 0.0 | 4.2 | 82.2 | 2.7 |
| CC/C/D | 20 | 0.0 | 0.0 | 9.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 90.8 |
| **Total Available** | **$470,526** | **100.0** | **19.2** | **62.4** | **14.5** | **3.7** | **0.2** | **0.1** | **0.0** | **0.0** |

**Note:** The percentages above are approximations based on available ratings by nationally recognized statistical ration organizations (NRSROs). Ratings were unavailable for $7.6 billion municipal bonds held at Dec. 31, 2010, and $17 billion at Sept. 30, 2011.

**Note:** Percentages may not total due to rounding.

NAIC-1 designated bonds declined slightly, from 96.1% to 96.0% of bonds held, and investment grade bonds declined just as slightly from 99.8% to 99.7%. There was some migration from AAA ratings to AA due, in part, to the U.S. government downgrade and a slight migration from BB to B ratings.

NAIC-1 designations were generally unaffected by the Standard and Poor's one-notch downgrade of the U.S. government on Aug. 2, 2011, from AAA to AA+. Standard and Poor's municipal bond downgrades related to the Aug. 2 downgrade of the U.S. government were limited to credits directly linked to the U.S. government's credit rating — such as prerefunded municipal bonds and bonds escrowed to maturity with U.S. Treasury bonds, municipal housing bonds backed by federal agencies and bonds backing federal leases. Despite the one-notch downgrade, these bonds maintained their NAIC-1 designation. Ratings would need to have dropped to a BBB before there would be a change to the NAIC designation.

**U.S. Insurance Industry's 2010 Municipal Bond Allocation Changes**

As life insurers increased their investment and the largest property/casualty companies decreased their exposure, the U.S. insurance industry's investment in municipal bonds became slightly less concentrated in 2010. While the top 63 insurance groups continued to own 77.0% of the insurance industry's municipal bonds, the five largest insurance groups decreased their municipal exposure slightly to $157.0 billion at Dec. 31, 2010, from $163.2 billion at the end of 2009. The top five insurance groups held 32.8% of the U.S. insurance industry's investment in municipal bonds at Dec. 31, 2010, which was down from 35.6% at the end of 2009. Allstate dramatically reduced its percentage allocation to municipal bonds during 2010 to 13.5% of cash and invested assets from 19.3% at year-end 2009. However, although AIG and Travelers decreased their investments in municipal bonds in dollar terms, both AIG and Travelers increased their allocation to U.S. state and municipal bonds as a percentage of the groups' reduced cash and invested assets. In contrast, State Farm increased its investment in municipal bonds $4.4 billion in 2010, and Chubb & Son Inc. increased its exposure $269.5 million.

**Insurance Groups with the Largest Municipal Bond Investments as a Percentage of Cash and Invested Assets**

| ($ in millions)<br>Insurance Groups with the Largest Municipal Bond Investments | 2010 State and Municipal Bonds | Municipal Bonds as % Cash and Invested Assets | 2009 State and Municipal Bonds | Municipal Bonds as % Cash and Invested Assets |
|---|---|---|---|---|
| American International Group | $44,684 | 15.9 | $48,062 | 14.0 |
| State Farm Group | 44,579 | 23.9 | 40,142 | 22.9 |
| Travelers Group | 37,918 | 51.5 | 39,243 | 51.2 |
| Chubb & Son Inc. Group | 16,435 | 42.4 | 16,165 | 42.4 |
| Allstate Insurance Group | 13,378 | 13.5 | 19,546 | 19.3 |
| | **$156,994** | | **$163,159** | |

The entire U.S. insurance industry increased its exposure to state and municipal bonds by $21.7 billion (or 4.7%) in 2010.

**Insurance Industry Municipal Bond and Short-Term Notes Exposure as a Percentage of Cash and Invested Assets**

| ($ in millions) | State and Municipal Bonds at December 31, 2010 | State & Municipal Bonds as % of Cash and Invested Assets | State and Municipal Bonds at December 31, 2009 | State & Municipal Bonds as % of Cash and Invested Assets | % Change in Muncipal Bonds from 2009 to 2010 |
|---|---|---|---|---|---|
| Property/Casualty | $354,543 | 23.5 | $371,765 | 25.7 | **(4.6)** |
| Life | 105,014 | 3.2 | 69,898 | 2.2 | **50.2** |
| Health | 14,543 | 10.3 | 12,906 | 10.1 | **12.7** |
| Fraternal | 4,163 | 4.2 | 2,055 | 2.2 | **102.6** |
| Title | 1,600 | 21.4 | 1,520 | 19.4 | **5.3** |
| **Total** | **$479,863** | **9.5** | **$458,145** | **9.5** | **4.7** |

Although the property/casualty industry decreased its municipal bond investments by 4.6% in 2010, each of the other insurance industries increased their holdings by a significant percentage. Most notably, the life insurance industry increased its holdings of municipal bonds by $35.1 billion (or 50.2%) as the allocation to municipal bonds increased from 2.2% to 3.2% of cash and invested assets.

Of the $35.1 billion increase in municipal bonds held by the life insurance industry during 2010, $21.0 billion (or 59.7%) were Build America Bonds. Life companies have low allocations to municipal bonds because they do not fully benefit from tax-exempt interest. A life insurance company's taxable income is generally reduced by the amount credited to policyholders. As such, the after-tax yield of tax-exempt municipal bonds is generally not high enough for life insurers to find them attractive. However, Build America Bonds, which are taxable municipal bonds, were offered in more plentiful quantities relative to other taxable municipal bonds and were offered at attractive yield spreads relative to corporate bonds. For example, on Nov. 14, 2011, the yield on taxable Build America Bonds was 5.4%, compared to 3.9% for the Moody's AAA Corporate Bond Index. Taxable yields were high enough to entice the property/casualty industry, which acquired $13.1 billion in Build America Bonds ($6.8 billion in 2010), partially offsetting maturities, redemptions and other dispositions by the industry. The U.S. federal government subsidizes 35% of Build America Bonds taxable interest payments. Build America Bonds were created under the American Recovery and Reinvestment Act of 2009, and the bond program expired Dec. 31, 2010. The U.S. insurance industry purchased $60.5 billion (or one-third) of the total $180.4 billion Build America Bonds issued in 2009 and 2010.

Taxable municipal bonds represented approximately 5% of municipal issuance for the 20 years prior to the Build America Bonds program, 19.2% in 2009 and 27.0% in 2010. Since the end of the Build America Bonds program, taxable issuance of municipal bonds decreased to $15.1 billion in the first six months of 2011, from $56.5 billion in the first six months of 2010 and $117.3 billion for all of 2010. At Oct. 30, 2011, $466.2 billion in taxable municipal bonds represented 12.6% of the $3.7 trillion municipal bond market, and Build America Bonds represented 38.7% of taxable municipal bonds outstanding. Expanding the municipal investor base to life insurers, foreign investors and other non-traditional municipal investors with Build America Bonds increased demand for municipal bonds issuance, which tended to reduce pressure on municipal yields to follow Treasury yields higher in late 2009 and early 2010 and generally contributed to lower municipal yields.

Investments in Build America Bonds by the insurance industry were primarily revenue bonds that financed infrastructure improvements. However, 40.7% of public improvements, highway improvements, school improvements and other Build America Bonds not associated with revenue projects were general obligations of states and municipal entities.

**Build America Bonds as of Dec. 31, 2010**

| ($ in millions)<br>Build America Bonds Held at December 31, 2010 | Revenue | State Political Subdivision General Obligation | U.S. State General Obligation | Total Build America Bonds | % |
|---|---|---|---|---|---|
| Life Insurance | $28,034 | $10,472 | $6,302 | $44,808 | 74.0 |
| Property/Casualty | 6,743 | 3,306 | 3,066 | 13,115 | 21.7 |
| Fraternal | 901 | 1,117 | 225 | 2,243 | 3.7 |
| Health | 155 | 51 | 96 | 302 | 0.5 |
| Title | 32 | 8 | 7 | 46 | 0.1 |
| Total Build America Bonds | $35,864 | $14,953 | $9,696 | $60,513 | 100.0 |
| **% of Total** | **59.3** | **24.7** | **16.0** | **100.0** | |

The U.S. insurance industry held $478.1 billion state and municipal bonds at Dec. 31, 2010, issued by 12,785 entities. (The insurance industry also invested $1.7 billion in short-term municipal notes representing 0.4% of total municipal investments.) Of the $478.1 billion total bonds, $286.4 billion (or 59.9%) were revenue bonds. General obligation bonds are secured by the full faith, credit and taxing power of a governmental entity and present the lowest historical default risk and the lowest loss, given default. In contrast, the source of repayment of revenue bonds is restricted to specified revenue, which is derived from the operation of a financed project, a dedicated stream of revenue, discretionary appropriations, grants or a dedicated specialized tax.

**Insurance Industry Municipal Bond and Short-Term Notes Held**

| ($ in millions)<br>Bond Type at December 31, 2010 | Property/ Casualty Statement Value | Life Statement Value | Health Statement Value | Fraternal Statement Value | Title Statement Value | Insurance Industry Statement Value |
|---|---|---|---|---|---|---|
| Revenue | $203,518 | $70,725 | $9,352 | $1,900 | $864 | $286,358 |
| State Political Subdivision G.O. | 94,865 | 20,946 | 2,625 | 1,663 | 453 | 120,552 |
| State General Obligation | 54,998 | 13,232 | 2,326 | 371 | 283 | 71,210 |
| **Long-Term Municipal Bonds** | **$353,381** | **$104,902** | **$14,302** | **$3,934** | **$1,600** | **$478,120** |
| Short-term State and Municipal | 1,162 | 112 | 240 | 229 | 0 | 1,743 |
| **Total** | **$354,543** | **$105,014** | **$14,543** | **$4,163** | **$1,600** | **$479,863** |

Together, property/casualty and life insurers held $460.0 billion (or 95.8%) of the U.S. insurance industry's investment in municipal bonds. The property/casualty industry held 73.9% of municipal investments at Dec. 31, 2010, down from 81.1% at Dec. 31, 2009. Life insurers held 21.9% of the U.S. insurance industry's municipal bonds at Dec. 31, 2010, up from 15.3% at Dec. 31, 2009. Insurers had minimal exposure, $1.7 billion, to short-term municipal securities.

**Insurance Industry Municipal Bond and Short-Term Notes Held as a Percentage of Statement Value**

| Bond Type at December 31, 2010 | % of Property/ Casualty Statement Value | % of Life Statement Value | % of Health Statement Value | % of Fraternal Statement Value | % of Title Statement Value | % of Insurance Industry |
|---|---|---|---|---|---|---|
| Revenue | 57.4 | 67.3 | 64.3 | 45.6 | 54.0 | 59.7 |
| State Political Subdivision G.O. | 26.8 | 19.9 | 18.0 | 39.9 | 28.3 | 25.1 |
| State General Obligation | 15.5 | 12.6 | 16.0 | 8.9 | 17.7 | 14.8 |
| Short-term State and Municipal | 0.3 | 0.1 | 1.7 | 5.5 | 0.0 | 0.4 |
| **Total** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** |

Although the majority of state and municipal bonds held by the U.S. insurance industry were revenue bonds, those bonds held primarily financed projects supporting essential services. Bonds financing utility and transportation infrastructure projects represented 41.7% of revenue bonds held, which was significantly higher than the 26.3% allocation to these bond types among all revenue bonds issued in the municipal bond market.

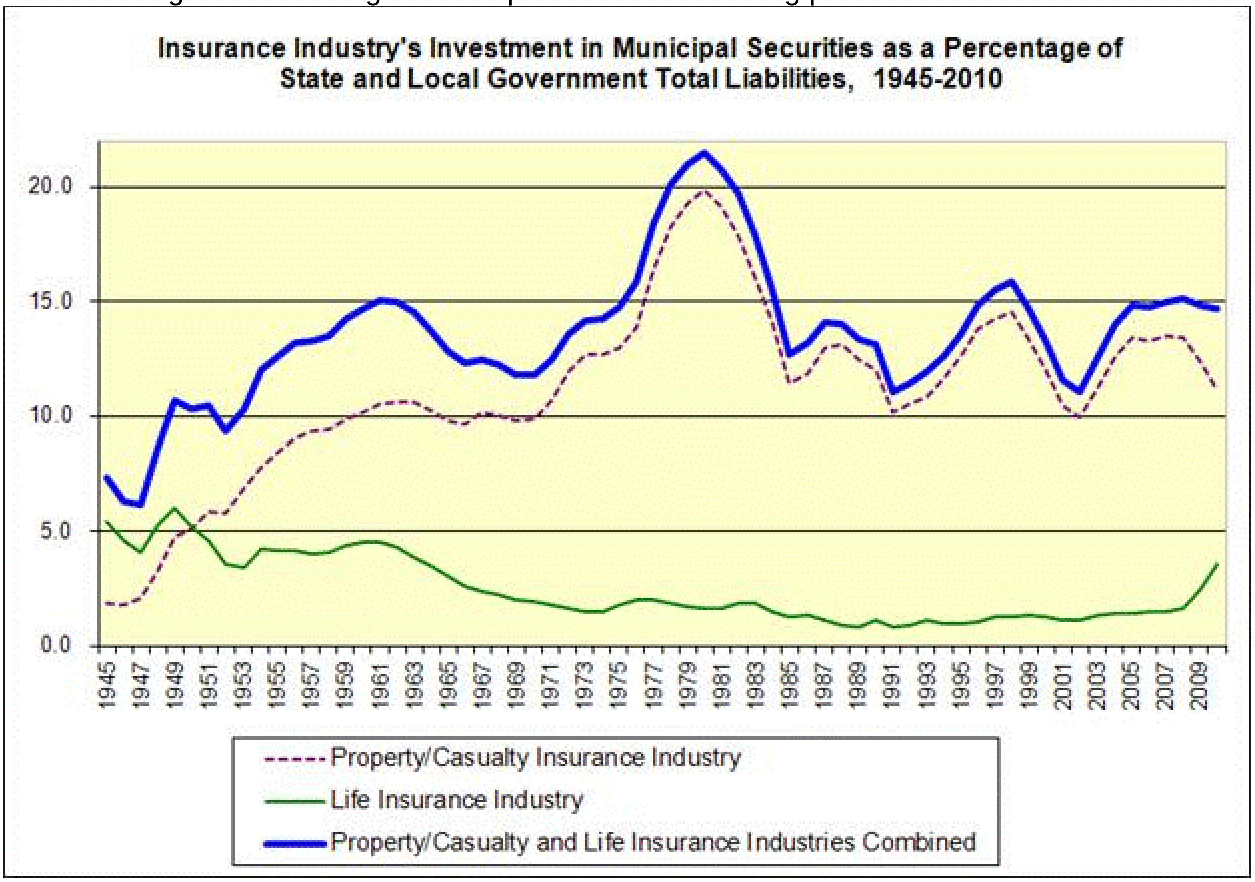
**Insurance Industry's Revenue Bond Holdings**

| ($ in millions) U.S. Insurance Industry Revenue Bond Type | December 31, 2010 Statement Value | % of Revenue Bonds |
|---|---|---|
| Transportation, Transit & Highway | $45,388 | 15.8 |
| Water and Sewer | 42,567 | 14.9 |
| Electrical and Gas Utilities | 31,439 | 11.0 |
| Higher Education | 20,736 | 7.2 |
| Housing and Development | 18,980 | 6.6 |
| School District and Education | 15,362 | 5.4 |
| Medical and Nursing Home | 13,985 | 4.9 |
| Other | 97,902 | 34.2 |
| **Total** | **$286,358** | **100.0** |

In 2010, the U.S. insurance industry decreased its exposure to the types of bonds with the highest historical default rates (i.e., housing, development and medical and nursing home bonds). Exposure to housing bonds decreased to $19.0 billion at Dec. 31, 2010, from $22.8 billion at Dec. 31, 2009. Housing bonds consisted of $11.7 billion single-family and other housing bonds, and, to a lesser degree, $4.0 billion development bonds, and $3.2 billion multifamily housing bonds. It should be noted that much of these municipal housing bonds benefited from guarantees by U.S. agency and government-sponsored enterprises. Medical and nursing home bond exposure also declined, to $14.0 billion at Dec. 31, 2010, from $14.5 billion at Dec. 31, 2009. Together, housing, development, medical and nursing home bonds represented $33.0 billion (or only 6.9%) of total state and municipal bonds at Dec. 31, 2010, down from $37.2 billion (or 8.1%) at Dec. 31, 2009. Only $20.7 million of the decrease was attributable to other than temporary impairments and only $547,664 matured in 2010. The conclusion is that, in 2010, the U.S. insurance industry cautiously decreased its exposure through dispositions to the highest risk municipal bonds types from the already low levels in 2009.

**Property/Casualty Industry Tends to Reduce Municipal Exposure in Recessions**

The property/casualty industry has historically reduced its exposure to U.S. state and municipal bonds in the year or two following recessions, periods when government interest rates tend to decline and corporate bond spreads tend to increase offering opportunities for reallocation of investments. The chart below depicts municipal bond exposure as a percentage of total state and municipal liabilities for both the property/casualty insurance industry and the life insurance industry over the past 66 years. Despite these cyclical reallocations, the insurance industry has committed significant funding to municipal entities over a long period of time.




**Note:** The chart above depicts the property/casualty insurance industry and the life insurance industry's municipal securities as a percentage of total liabilities of state and local governments as estimated by the Federal Reserve. In addition to municipal securities, total liabilities of state and local governments includes bank loans and other liabilities, excluding public employee retirement funds.

**Summary**

While there were positive developments in municipal bond yields and yield spreads during the first 11 months of 2011, some risks associated with municipal investments increased. As the market values of existing holdings increased, call risk and reinvestment risk also increased. Nevertheless, new municipal investments provided more attractive yield spreads relative to Treasuries and corporate bonds. While there was a decrease in the par value of municipal bond market defaults, there was an increased number of defaults. Bonds held by the U.S. insurance industry had a slight downward ratings migration, primarily within the NAIC-1 designation. Although unemployment remains high, industrial production and national income have been growing since June 2009, supporting revenue for municipal entities, as well as their revenue bond projects. The improving economy's positive effect on revenue — combined with significant expense reductions by states and municipal entities — have, to varying degrees, reduced the fiscal stress affecting general obligations and revenue bonds. Nevertheless, continuing weakness in residential real estate prices will tend to pressure property tax revenue, which is a significant source of revenue for local municipalities. States and municipalities also have had to respond to the phase-out of federal support from the American Recovery and Reinvestment Act of 2009. Recent fears of a slowing global economy have led to higher yield spreads, with Treasury yields declining more than municipal yields. Political uncertainty internationally has also affected investor confidence. Due to a failure by the U.S. Congress to reach agreement on federal deficit reductions, federal support to the states and municipalities will be reduced as automatic sequestered expenditure cuts are implemented beginning in 2013.

Significant fluctuations in yield spreads since the 2008 financial crisis, fiscal stresses on the sources of repayment and a reduction of credit support previously provided by financial guarantors has generally required more thorough analysis of municipal bonds. At the same time, life insurers have found it worthwhile to expand their investment in taxable Build America Bonds.

The NAIC Capital Markets Bureau will continue to monitor municipal bond investments and publish additional research on this topic as deemed appropriate.

| December 30, 2011<br>Major Insurer Share Prices | | Close | Change % Week | Change % QTD | Change % YTD | Prior Week | Prior Quarter | Prior Year |
|---|---|---|---|---|---|---|---|---|
| Life | Aflac | $43.26 | 0.4 | 23.8 | (23.3) | $43.08 | $34.95 | $56.43 |
| | Ameriprise | 49.64 | (1.9) | 26.1 | (13.7) | 50.61 | 39.36 | 57.55 |
| | Genworth | 6.55 | 1.4 | 14.1 | (50.2) | 6.46 | 5.74 | 13.14 |
| | Lincoln | 19.42 | (1.5) | 24.2 | (30.2) | 19.72 | 15.63 | 27.81 |
| | MetLife | 31.18 | 0.3 | 11.3 | (29.8) | 31.10 | 28.01 | 44.44 |
| | Principal | 24.60 | (1.4) | 8.5 | (24.4) | 24.95 | 22.67 | 32.56 |
| | Protective | 22.56 | (0.0) | 44.3 | (15.3) | 22.57 | 15.63 | 26.64 |
| | Prudential | 50.12 | (1.6) | 7.0 | (14.6) | 50.92 | 46.86 | 58.71 |
| | UNUM | 21.07 | (1.1) | 0.5 | (13.0) | 21.30 | 20.96 | 24.22 |
| PC | ACE | $70.12 | (0.5) | 15.7 | 12.6 | $70.47 | $60.60 | $62.25 |
| | Axis Capital | 31.96 | (2.0) | 23.2 | (10.9) | 32.62 | 25.94 | 35.88 |
| | Allstate | 27.41 | (0.8) | 15.7 | (14.0) | 27.62 | 23.69 | 31.88 |
| | Arch Capital | 37.23 | (0.7) | 13.9 | 26.8 | 37.50 | 32.68 | 29.35 |
| | Cincinnati | 30.46 | (0.3) | 15.7 | (3.9) | 30.56 | 26.33 | 31.69 |
| | Chubb | 69.22 | (0.9) | 15.4 | 16.1 | 69.87 | 59.99 | 59.64 |
| | Everest Re | 84.09 | (2.1) | 5.9 | (0.9) | 85.91 | 79.38 | 84.82 |
| | Progressive | 19.51 | 1.2 | 9.9 | (1.8) | 19.28 | 17.76 | 19.87 |
| | Travelers | 59.17 | (0.3) | 21.4 | 6.2 | 59.35 | 48.73 | 55.71 |
| | WR Berkley | 34.39 | 0.8 | 15.8 | 25.6 | 34.11 | 29.69 | 27.38 |
| | XL | 19.77 | (2.5) | 5.2 | (9.4) | 20.27 | 18.80 | 21.82 |
| Other | AON | $46.80 | (0.1) | 11.5 | 1.7 | $46.86 | $41.98 | $46.01 |
| | AIG | 23.20 | (4.1) | 5.7 | (51.9) | 24.20 | 21.95 | 48.27 |
| | Assurant | 41.06 | (0.4) | 14.7 | 6.6 | 41.22 | 35.80 | 38.52 |
| | Fidelity National | 15.93 | (0.9) | 4.9 | 16.4 | 16.08 | 15.18 | 13.68 |
| | Hartford | 16.25 | (3.3) | 0.7 | (38.7) | 16.80 | 16.14 | 26.49 |
| | Marsh | 31.62 | (0.4) | 19.1 | 15.7 | 31.74 | 26.55 | 27.34 |
| Health | Aetna | $42.19 | (2.8) | 16.1 | 38.3 | $43.40 | $36.34 | $30.51 |
| | Cigna | 42.00 | (2.6) | 0.1 | 14.6 | 43.13 | 41.94 | 36.66 |
| | Humana | 87.61 | (2.2) | 20.5 | 60.0 | 89.60 | 72.73 | 54.74 |
| | United | 50.68 | (1.3) | 9.9 | 40.3 | 51.35 | 46.12 | 36.11 |
| | WellPoint | 66.25 | (2.6) | 1.5 | 16.5 | 68.05 | 65.28 | 56.86 |
| Monoline | Assured | $13.14 | (5.8) | 19.6 | (25.8) | $13.95 | $10.99 | $17.70 |
| | MBIA | 11.59 | (5.4) | 59.4 | (3.3) | 12.25 | 7.27 | 11.99 |
| | MGIC | 3.73 | (2.6) | 99.5 | (63.4) | 3.83 | 1.87 | 10.19 |
| | Radian | 2.34 | 4.0 | 6.8 | (71.0) | 2.25 | 2.19 | 8.07 |
| | XL Capital | 19.77 | (2.5) | 5.2 | (9.4) | 20.27 | 18.80 | 21.82 |

| December 30, 2011<br>Major Market Variables | | Close | Change % Week | Change % QTD | Change % YTD | Prior Week | Prior Quarter | Prior Year |
|---|---|---|---|---|---|---|---|---|
| Dow Jones Ind | | 12,217.56 | (0.6) | 12.0 | 5.5 | 12,294.00 | 10,913.38 | 11,577.51 |
| S&P 500 | | 1,257.60 | (0.6) | 11.2 | (0.0) | 1,265.33 | 1,131.42 | 1,257.64 |
| S&P Financial | | 175.23 | (1.3) | 10.2 | (18.4) | 177.55 | 159.05 | 214.77 |
| S&P Insurance | | 170.17 | (1.1) | 11.3 | (9.6) | 172.02 | 152.88 | 188.22 |
| US Dollar $ | | | Change % | | | Prior | | |
| | / Euro | $1.30 | (0.6) | (3.2) | (3.2) | $1.30 | $1.34 | $1.34 |
| | / Crude Oil bbl | 98.83 | (0.9) | 25.4 | 7.2 | 99.68 | 78.80 | 92.22 |
| | / Gold oz | 1,566.80 | (2.4) | (3.4) | 10.3 | 1,604.70 | 1,621.20 | 1,420.78 |
| Treasury Ylds % | | % | Change | | | % | % | % |
| | 1 Year | 0.11 | (0.01) | (0.01) | (0.17) | 0.11 | 0.11 | 0.27 |
| | 10 Year | 1.88 | (0.15) | (0.04) | (1.42) | 2.03 | 1.91 | 3.30 |
| | 30 Year | 2.90 | (0.16) | (0.02) | (1.44) | 3.06 | 2.91 | 4.34 |
| Corp Credit Spreads -bp | | | Change % | | | Prior | | |
| | CDX.IG | 113.83 | (4.1) | (7.9) | 33.9 | 118.71 | 123.58 | 85.00 |

The bond table below depicts changes between December 16, 2011 and January 3, 2012.

**January 3, 2012**
**Major Insurer Bond Yields**

| | Company | Coupon | Maturity | Price: Current | Price: Change | Price: Yield | Spread: B.P. | Spread: Change |
|---|---|---|---|---|---|---|---|---|
| Life | Aflac | 8.500% | 5/15/2019 | $123.42 | $0.22 | 4.70% | 309 | (17) |
| | Ameriprise | 5.300% | 3/15/2020 | $107.99 | ($0.53) | 4.14% | 242 | 0 |
| | Genworth | 6.515% | 5/15/2018 | $93.89 | $2.76 | 7.75% | 628 | (83) |
| | Lincoln National | 8.750% | 7/15/2019 | $121.98 | $0.33 | 5.17% | 352 | (17) |
| | MassMutual | 8.875% | 6/15/2039 | $145.31 | ($2.08) | 5.62% | 268 | (4) |
| | MetLife | 4.750% | 2/15/2021 | $108.10 | $0.39 | 3.69% | 179 | (18) |
| | Mutual of Omaha | 6.800% | 6/15/2036 | $114.46 | ($1.02) | 5.70% | 296 | (7) |
| | New York Life | 6.750% | 11/15/2039 | $128.50 | ($4.49) | 4.87% | 194 | 14 |
| | Northwestern Mutual | 6.063% | 3/15/2040 | $117.73 | ($2.51) | 4.90% | 192 | (6) |
| | Pacific Life | 9.250% | 6/15/2039 | $135.86 | ($0.25) | 6.45% | 354 | (14) |
| | Principal | 6.050% | 10/15/2036 | $105.12 | ($0.81) | 5.66% | 284 | (7) |
| | Prudential | 4.500% | 11/15/2020 | $101.17 | ($0.07) | 4.34% | 243 | (13) |
| | TIAA | 6.850% | 12/15/2039 | $128.01 | ($1.36) | 4.98% | 200 | (10) |
| P&C | ACE INA | 5.900% | 6/15/2019 | $118.87 | ($0.02) | 3.05% | 147 | (9) |
| | Allstate | 7.450% | 5/15/2019 | $121.96 | $0.05 | 3.98% | 241 | (12) |
| | American Financial | 9.875% | 6/15/2019 | $117.43 | ($0.41) | 6.85% | 519 | (5) |
| | Berkshire Hathaway | 5.400% | 5/15/2018 | $117.33 | $0.80 | 2.44% | 103 | (31) |
| | Travelers | 3.900% | 11/15/2020 | $106.34 | ($0.37) | 3.07% | 123 | (5) |
| | XL Group | 6.250% | 5/15/2027 | $101.87 | $0.40 | 6.06% | 379 | (16) |
| Other | AON | 5.000% | 9/15/2020 | $109.88 | ($0.17) | 3.67% | 187 | (8) |
| | AIG | 5.850% | 1/15/2018 | $98.41 | $0.40 | 6.17% | 488 | (19) |
| | Fidelity National | 7.875% | 7/15/2020 | $108.69 | $1.44 | 6.53% | 481 | (39) |
| | Hartford | 5.500% | 3/15/2020 | $100.93 | $0.07 | 5.36% | 360 | (15) |
| | Marsh | 9.250% | 4/15/2019 | $131.96 | ($0.87) | 4.12% | 255 | (2) |
| | Nationwide | 9.375% | 8/15/1939 | $119.32 | ($1.83) | 7.68% | 472 | (7) |
| Health | Aetna | 3.950% | 9/15/2020 | $103.74 | ($0.69) | 3.45% | 158 | (4) |
| | CIGNA | 5.125% | 6/15/2020 | $107.74 | $0.11 | 4.03% | 226 | (14) |
| | United Healthcare | 3.875% | 10/15/2020 | $106.03 | ($0.42) | 3.09% | 124 | (1) |
| | Wellpoint | 4.350% | 8/15/2020 | $108.83 | $0.33 | 3.17% | 134 | (17) |

Questions and comments are always welcome. Please contact the Capital Markets Bureau at **CapitalMarkets@naic.org**.

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