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## U.S. Municipal Bond Ratings Remain Stable Despite Turmoil

In 2013, Detroit's Chapter 9 bankruptcy filing and the market's concerns surrounding ultimate recovery rates on Detroit municipal bonds resulted in overall municipal bond market weakness. Going into 2014, an additional overhang for the municipal bond market was the financial stress in Puerto Rico, whose municipal debt rating was lowered to non-investment grade in February 2014. Consequently, these events resulted in a decrease in municipal bond issuance, lower returns, fund outflows, negative rating transitions, and a pickup in defaults in the municipal bond market in 2013 and first half of 2014. Despite the volatility, municipal bond credit ratings have remained relatively stable. Detroit's bankruptcy plan approval and Puerto Rico's avoidance of a default in the second half of 2014 (as it was able to refinance but at a high cost) helped the municipal bond market gain 9.05% in 2014 (as per Barclays Municipal Bond Index). This special report reviews and discusses the U.S. insurance industry's exposure to the municipal bond market as of year-end 2013, the stability in municipal bond credit ratings, and recent trends and developments in the municipal bond market.

### Municipal Bond Industry Exposure and Market Trends

The \$3.7 trillion municipal bond market experienced its third consecutive year of decline in 2013 in terms of debt outstanding. Table 1 shows municipal bonds outstanding grew each year from 2008–2010, even during the 2008 financial crisis, but began to drop in 2011. In Q1 2014, there was a 1.8% decrease year-over-year, followed by a 1.6% drop in Q2 2014, and another 1.5% in Q3 2014.

Table 1: Municipal Bond Industry Outstanding

In \$ billions	2008	2009	2010	2011	2012	2013	Q1/2014 vs.	Q2/2014 vs.	Q3/2014 vs.
							Q1/2013	Q2/2013	Q3/2014
Total	\$ 3,517.2	\$ 3,672.5	\$ 3,772.1	\$ 3,719.4	\$ 3,714.4	\$ 3,671.2	\$ 3,660.8	\$ 3,661.4	\$ 3,631.1
Growth (%)	2.7%	4.4%	2.7%	-1.4%	-0.1%	-1.2%	-1.8%	-1.6%	-1.5%

Source: Federal Reserve Statistical Release Dec.11,2014, Securities Industry and Financial Markets Association (SIFMA) data

### U.S. Insurers' Municipal Bond Holdings

A very large proportion of municipal bonds are highly rated in terms of credit quality, and insurers' portfolios are reflective of that universe (see Table 2). Fitch Ratings (Fitch) data shows that in 2013, the investment grade municipal bonds comprised 97% of total Fitch-rated public finance securities outstanding, compared to 98% in 2012. Per year-end 2013 Securities Industry and Financial Markets Association (SIFMA) data, 87.2% of the total municipal bond market had investment grade ratings: AAA (9.1%), AA (43.4%), A (27.2%) and BBB (7.5%), while 2.9% was below investment grade, and 9.9% was non-rated. The credit ratings were based on the lowest long-term rating assigned to the bond by Fitch, Moody's or Standard & Poor's (S&P), with any split-rated debt included in the high-yield category.

At year-end 2013, the U.S. insurance industry held \$537 billion in book/adjusted carrying value (BACV) of municipal bonds, or 14.6% of the municipal bond market's total outstanding of \$3.7 trillion. According to Federal Reserve Statistical release data as of year-end 2013, municipal bond ownership was distributed among individuals (44.3%), mutual funds (27.7%), insurance

companies (12.7%), banks (12.1%), and other (3.1%). Data in Table 2 and Table 3 shows no significant changes between 2012 and 2013 in terms of NAIC designations and insurer type mix. In general, despite a decrease in municipal bonds outstanding, insurers' total holdings of municipal bonds increased by 2.8% in 2013 vs. 2012. The distribution of NAIC designations was basically unchanged, with 99.8% rated investment grade in 2013 (compared to 99.6% in 2012) and the majority composed of bonds carrying a NAIC 1 designation (97.1%).

**Table 2: 2013 Insurers' Municipal Bond Holdings with NAIC Designations**

BACV \$ millions	P/C	Life	Health	Fraternal	Title	Total	% Total
<b>NAIC 1</b>	\$335,851.7	\$156,785.1	\$20,697.5	\$6,289.9	\$1,532.6	<b>\$521,156.9</b>	<b>97.1%</b>
<b>NAIC 2</b>	8,861.8	4,762.8	552.3	91.1	26.7	<b>14,294.7</b>	<b>2.7%</b>
<b>NAIC 3</b>	309.0	286.3	30.0	16.6	0.1	<b>642.1</b>	<b>0.1%</b>
<b>NAIC 4</b>	135.3	190.9	26.4	1.2	-	<b>353.7</b>	<b>0.1%</b>
<b>NAIC 5</b>	127.7	47.1	22.6	0.4	-	<b>197.8</b>	<b>0.0%</b>
<b>NAIC 6</b>	264.1	14.1	1.6	0.2	-	<b>279.9</b>	<b>0.1%</b>
<b>N/A</b>	5.6	-	-	-	0.1	<b>5.7</b>	<b>0.0%</b>
<b>Total</b>	<b>\$345,555.2</b>	<b>\$162,086.4</b>	<b>\$21,330.5</b>	<b>\$6,399.3</b>	<b>\$1,559.5</b>	<b>\$536,930.8</b>	<b>100%</b>
<b>% of total</b>	<b>64.4%</b>	<b>30.2%</b>	<b>4.0%</b>	<b>1.2%</b>	<b>0.3%</b>	<b>100%</b>	

**Table 3: 2012 Insurers' Municipal Bond Holdings with NAIC Designations**

BACV \$ millions	P/C	Life	Health	Fraternal	Title	Total	% Total
<b>NAIC 1</b>	\$333,257.2	\$143,559.1	\$19,320.1	\$6,513.2	\$1,503.2	<b>\$504,152.8</b>	<b>96.5%</b>
<b>NAIC 2</b>	10,746.3	4,938.6	655.4	77.7	25.4	<b>16,443.4</b>	<b>3.1%</b>
<b>NAIC 3</b>	358.1	322.0	11.4	28.0	0.2	<b>719.8</b>	<b>0.1%</b>
<b>NAIC 4</b>	171.9	238.3	20.8	1.7	0.2	<b>432.9</b>	<b>0.1%</b>
<b>NAIC 5</b>	198.1	19.8	26.3	0.2	0.0	<b>244.4</b>	<b>0.0%</b>
<b>NAIC 6</b>	349.4	5.6	-	0.3	-	<b>355.3</b>	<b>0.1%</b>
<b>N/A</b>	6.1	-	0.6	-	0.2	<b>6.9</b>	<b>0.0%</b>
<b>Total</b>	<b>\$345,087.0</b>	<b>\$149,083.4</b>	<b>\$20,034.7</b>	<b>\$6,621.2</b>	<b>\$1,529.2</b>	<b>\$522,355.5</b>	<b>100%</b>
<b>% of total</b>	<b>66.1%</b>	<b>28.5%</b>	<b>3.8%</b>	<b>1.3%</b>	<b>0.3%</b>	<b>100%</b>	

### ***Municipal Bond Issuance***

Municipal bond issuance has been volatile in recent years as evidenced in Table 4. Issuance dropped dramatically in 2011 by 32%, rebounded 30% in 2012, and dropped again in 2013 by 12.4%. Reasons for the declines in issuance include general market turmoil in 2011 due to the global political crisis, the fear that the Greek debt crisis could lead to the breakup of the euro, the Detroit bankruptcy and the beginning of the Puerto Rican debt crisis (both in 2013).

Concerns about the impact of Detroit's bankruptcy on the future of the municipal market had dampened issuance from 2013 until the first half of 2014. However, in 2014, despite a year-over-year drop of 14.4% in the first half of the year, issuance grew 14.9% year-over-year in the second half, with Q4 2014 posting an especially strong 25.8% year-over-year increase. Overall in 2014, issuance dropped only 0.9% from 2013.

"We expect municipal issuance to remain mostly flat to up slightly in 2015, with bank lending continuing to provide borrowers with an alternative to public bond issuance," said Michael Decker, one of the heads of SIFMA municipal securities group in a survey of its members released on Dec. 4, 2014.

Any issuance growth is expected to come from long-term (maturing in 10 or more years) municipal bond issuance that could reach a forecasted \$315 billion in 2015, compared to an estimated \$305.3 billion in 2014. Higher interest rates on municipal bonds at the end of 2013

and the beginning of 2014 led to less refinancing, so issuance was down 14.4% as of the first half of 2014 compared to the same period in 2013 (Thomson Reuters/SIFMA data). As the yield on the 10-year U.S. Treasury dropped, and Detroit emerged from bankruptcy after Federal court approval, issuance picked up during the second half of 2014, to end the year down only 0.9%. General obligation (GO) bonds comprised 40% of issuance in 2014, revenue bonds accounted for 54.9%, and private placements accounted for 5.1% (no information as to whether they are revenue or GO bonds). Revenue bond debt service payments to investors depend on the specific revenue stream of issuers such as utilities and toll roads, and are viewed by some as riskier than GO bonds, which are supported by states' and municipalities' power to raise revenue from a broad range of means, such as property or sales taxes.

**Municipal Bond Funds Flows**

Investment Company Institute (ICI) data shows municipal bond funds had outflows of \$11.6 billion in 2011, inflows of \$50.2 billion in 2012, outflows of \$58.5 billion in 2013, and inflows of \$20.6 billion year-to-date through Oct. 31, 2014. Since 2007, municipal bond fund outflows occurred only twice (2011 and 2013), and experienced only three negative return years since 1999. Negative events such as those that occurred in Detroit and Puerto Rico caused municipal bond prices to drop, which in turn led to fund outflows in 2013.

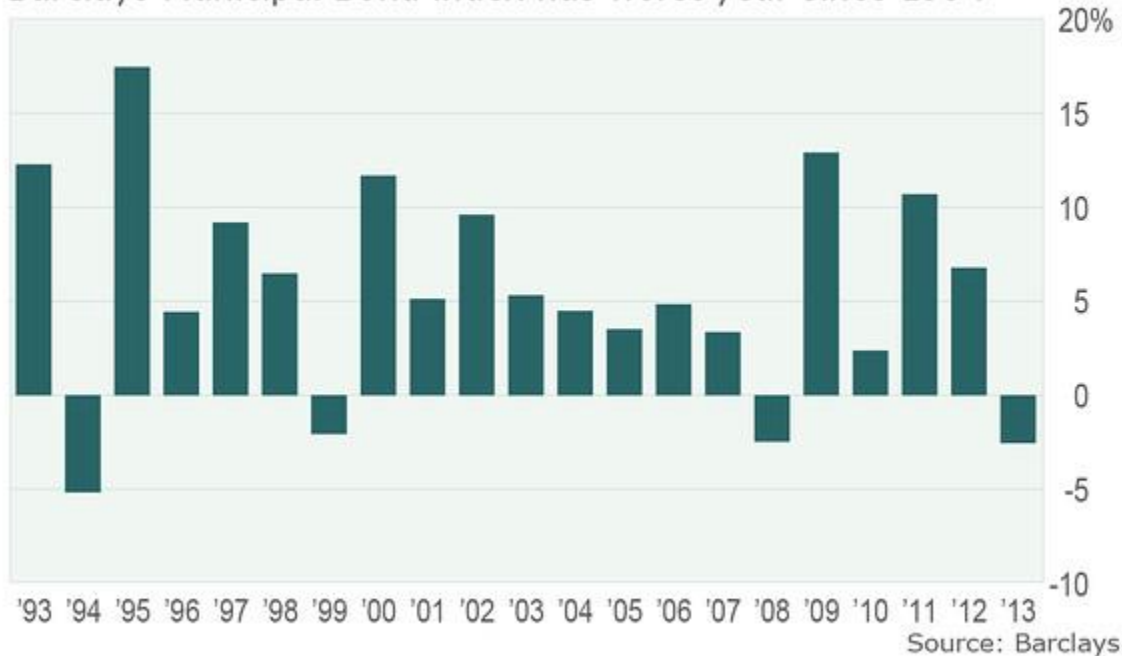
**Municipal Bond Returns**

Municipal bonds returned negative 2.6% in 2013 (based on the Barclays U.S. Municipal Bond Index shown in Chart 1 below), the worst return since 1994 due to Detroit's bankruptcy and its potential negative implications for the assessment of credit risk within the municipal bond market. In the last 20 years, municipal bonds experienced negative returns only in 1994, 1999, 2008 and 2013.

**Chart 1: Municipal Bond Index Returns**

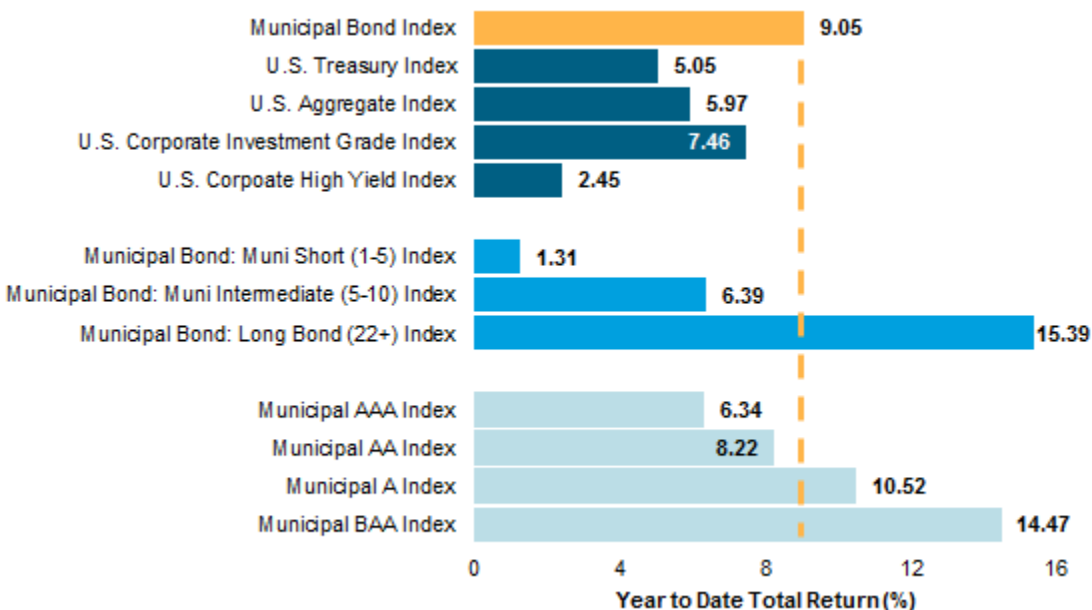
**Muni bonds tumble**

Barclays Municipal Bond index has worst year since 1994



In 2014, however, the Barclays U.S. Municipal Bond Index returned 9.05% and outperformed most other fixed income sectors, as shown in Chart 2 below.

**Chart 2: Barclays Municipal Bond Index Return in 2014 vs. Other Fixed Income Investments**



Source: Barclays, as of Dec. 31, 2014. The short, intermediate, long, AAA, AA, A and BAA municipal indexes are all sub-indexes of the Municipal Bond index.

**Municipal Bond Rating Transitions and Defaults**

U.S. municipal bond credit ratings were relatively stable in 2013. Fitch’s report on U.S. public finance one-year transition rates dated March 13, 2014, showed very little change in ratings in 2013. That is, more than 95% of the AAA, AA and A-rated municipal bonds’ ratings remained unchanged in 2013, and ratings on nearly 90% of BBB and BB-rated municipal bonds remained unchanged. All of the municipal bond ratings on Fitch’s B-rated securities were unchanged; only the CCC and below-rated municipal bonds experienced large changes, with 60% downgraded to default, all of which were due to Detroit municipal bonds being downgraded as the city filed for Chapter 9 bankruptcy.

In 2013, for a third consecutive year, soft economic growth, modest recovery in the labor market, and constrained state and local government finances translated into more downgrades than upgrades by a 2-to-1 margin for U.S. municipal bonds, according to Fitch’s aforementioned March 2014 report. Total Fitch-rated U.S. municipal bond rating downgrades comprised 5.2% and upgrades made up 2.6%, with 92.1% of overall ratings remaining unchanged for 2013. For 2012, the percentage of downgrades and upgrades were similar at 4.9% and 2.4%, respectively. The top three states with the most downgrades in 2013 were California, Florida and Michigan.

**Municipal vs. Corporate Issuer Average Annual Transition Rates**

Over the long run, according to Moody’s data from 1970–2013, average annual transition rates show the majority of municipal bond ratings remained stable, especially for investment grade bonds. Also, according to Moody’s data for the same time period, corporate bond ratings were less stable than municipal bond ratings and were more likely to transition to a lower rating category. The Moody’s transition table also shows the average percentage of ratings downgraded to default was also higher for corporate bonds than municipal bonds. For example, 78.8% of municipal bonds that were rated Caa to C at the beginning of the year ended the year with ratings unchanged, while 6.13% went into default. For corporate bonds, the percentages were somewhat worse at 64.2% and 15.1%, respectively. Table 5 shows a Moody’s comparison

between the average annual rating transition rates of municipal vs. corporate issuers from 1970–2013. The yellow highlights the percentage of ratings that remained the same.

**Table 5: Moody's U.S. Municipal vs. Corporate Issuers Average Annual Transition Rates: 1970–2013**

Municipal (%)	Aaa	Aa	A	Baa	Ba	B	Caa-C	Default	Withdrawn	Total
Aaa	94.63	1.63	0.21	0.05	0.01	-	-	-	3.48	100
Aa	0.42	95.60	1.48	0.04	0.01	-	-	-	2.45	100
A	0.03	1.64	93.19	0.69	0.06	0.01	-	-	4.37	100
Baa	0.02	0.05	1.52	91.45	0.52	0.05	0.01	0.01	6.36	100
Ba	0.04	0.06	0.45	4.11	83.82	2.74	0.42	0.16	8.20	100
B	-	0.11	0.61	1.29	3.61	81.68	4.18	2.24	6.27	100
Caa-C	-	0.02	0.45	0.72	1.37	1.81	78.80	6.13	10.70	100
Corporate (%)										
Aaa	87.09	8.32	0.62		0.03				3.93	100
Aa	0.90	84.51	8.45	0.51	0.07	0.02	0.01	0.02	5.51	100
A	0.05	2.42	86.06	5.56	0.55	0.11	0.04	0.06	5.15	100
Baa	0.04	0.17	3.96	85.20	3.93	0.73	0.17	0.17	5.63	100
Ba	0.01	0.05	0.33	5.59	75.72	7.32	0.65	1.05	9.29	100
B	0.01	0.03	0.11	0.30	4.50	73.54	6.52	3.68	11.32	100
Caa-C		0.01	0.02	0.09	0.37	7.97	64.19	15.13	12.20	100

Source: Moody's Investors Service

### Municipal Bond Defaults

As Moody's data shows in Table 6, there have been only 80 municipal bond defaults from 1970–2013, which averages 1.81 defaults per year in its rated universe. Housing and hospitals/health care were the two largest sectors where defaults occurred, comprising 72.2% of the total number of municipal bond defaults.

**Table 6: Municipal Bond Defaults by Sector from 1970–2013**

Purpose	# of Defaults	
	# of Defaults	%
Housing	29	40.3%
Hospitals & Healthcare	23	31.9%
Infrastructure	9	12.5%
Education	4	5.6%
Cities	4	5.6%
Counties	3	4.2%
<b>Subtotal Non-General Obligation</b>	<b>72</b>	<b>100%</b>
<b>Non-General Obligation</b>	<b>72</b>	<b>90%</b>
<b>General Obligation</b>	<b>8</b>	<b>10%</b>
<b>Total</b>	<b>80</b>	<b>100%</b>

Source: Moody's U.S. Municipal Bond Defaults and Recoveries, 1970–2013

Per Bank of New York Mellon data, the total number of municipalities filing for U.S. Chapter 9 bankruptcy (Table 7), which includes unrated municipalities, averaged 7.8 per year from 1980–2009. Chapter 9 bankruptcies increased to 10.3 per annum in the 2010–2012 periods due to the negative impact of the 2008 financial crisis on municipal budgets. Note that Chapter 9

bankruptcies are filed by municipalities; a municipality can file for Chapter 9, but if they continue to pay interest and principal on a particular bond, that bond is not considered to be in default. Conversely, if a municipal bond defaults due to non-payment, it does not necessarily mean the municipality is in, or will declare, Chapter 9 bankruptcy.

**Table 7: Municipalities Filing Chapter 9 Bankruptcy**

Time Period	Chapter 9 Filings	Annual Average
1980-1989	71	7.1
1990-1999	95	9.5
2000-2009	69	6.9
2010-2012	31	10.3

Source: Bank of New York Mellon

## Risks in the Municipal Bond Market

### ***Detroit***

Detroit filed for Chapter 9 bankruptcy July 18, 2013, in the largest municipal bankruptcy filing in U.S. history, with estimated debt outstanding of \$18 billion—including general obligation and revenue bonds, approximately \$3.5 billion in unfunded pension obligations and \$6.4 billion in other unfunded employee benefits. Detroit’s bankruptcy and the initial treatment of unlimited-tax general obligation (UTGO) bond holders as unsecured creditors (behind unsecured city pensioners) led to market fears and negative municipal bond industry returns in 2013. As this unfavorable precedent would have led to recoveries of only 15% to 20% of the principal value of UTGO bonds, Detroit subsequently reversed course and classified UTGO bonds as secured with a lien on the city’s ability to raise taxes by the amount needed to pay debt service. UTGO investors are thus expected to receive 74 cents on the dollar, more in line with recent recovery rates for other UTGO bonds and better than the 64% historical average recovery rate on all defaulted municipal bonds, according to Moody’s. Holders of Detroit’s limited-tax general obligation (LTGO) bonds, which are similar to UTGO bonds but are capped in terms of their ability to raise taxes to pay interest or principal, will receive 34 cents on the dollar. Detroit’s general retirees’ pension will be cut by 4.5% and will lose cost-of-living increases, while retired police officers and firefighters will give up part of their annual cost-of-living increases, from 2.25% down to 1%. The bankruptcy recovery plan was approved by the Federal bankruptcy court judge on Nov. 7, 2014, a relief to the market that, in turn, helped the municipal bond market achieve positive returns in 2014. For more details, please refer to our special report dated July 24, 2013, titled “Addendum – Municipal Bond Exposure in the U.S. Insurance Industry: City of Detroit Bankruptcy.”

### ***Puerto Rico***

Because of Puerto Rico’s financial crisis, more than \$70 billion (1.9%) of the \$3.7 trillion U.S. municipal bond market) is in jeopardy of possible default (as payments are predicated on its ability to refinance or issue debt in the capital markets), which could be the next big shock to the municipal bond market. Puerto Rican bonds are widely held by U.S. mutual funds due to their triple-tax free status in all 50 U.S. states; approximately 57% of municipal bond mutual funds held Puerto Rican securities as of September 2014, down from 77% percent in October 2013, according to Morningstar Inc. Puerto Rico had a population of 3.5 million in 2014, which is down by 6.8% since 2000. Puerto Rico is an overseas American territory that uses the U.S. dollar and U.S. minimum wages, making labor costs high and exports uncompetitive. Puerto Rico’s large debt load was built from its reliance on debt issuance to cover increasing operating deficits. However, the continued economic weakness—it has been in recession every year since 2006—and reduced tax revenue are making this model less sustainable even though the new governor has made many positive changes. Six months after taking office in January 2013, Governor



Garcia Padilla made tough fiscal changes, such as freezing the island's largest public pension funds, raising utility rates sharply, imposing new taxes and stepping up enforcement of existing taxes.

Puerto Rican GO municipal bonds were downgraded to non-investment grade status in February 2014 by S&P, Moody's and Fitch due to years of deficits, economic recessions, high pension liabilities and constrained access to the capital markets because of its high debt levels. In July 2014, S&P further downgraded Puerto Rico's GO bonds to BB from BB+; Puerto Rico Sales Tax Financing Corporation (COFINA) first lien sales tax revenue bonds were downgraded to BBB from AA-; and COFINA second lien sales tax revenue bonds were downgraded to BBB- from A+. Passage of the Puerto Rico Public Corporation Debt Enforcement Act (Recovery Act) was cited as the primary reason for the downgrades, as it allowed certain Puerto Rican public corporations and other instrumentalities of the commonwealth to seek protection from creditors through a bankruptcy-like debt restructuring process in local courts. According to S&P, the Recovery Act "signals a potential shift in the commonwealth's historically strong willingness to continue to meet its obligations to bondholders, particularly in the event of constrained market access," although Puerto Rico's Government Development Bank (GDB) and Treasury Secretary disagreed with S&P's assessment and said "the Recovery Act specifically excludes the Commonwealth, all of its municipalities, the GDB and COFINA and in no way alters our commitments to honor our GO, COFINA and other related credits." Judge Francisco A. Besosa of the United States District Court in Puerto Rico ruled Feb. 6, 2015, that the Recovery Act was unconstitutional, as U.S. laws prohibit state governments and territories from modifying municipal debt; governments or municipalities not under state control (such as Puerto Rico and District of Columbia) cannot file for Chapter 9. Puerto Rico is appealing this decision, and its resident commissioner to the U. S. Congress, Pedro Pierluisi, reintroduced a 2014 bill to include Puerto Rico in the U.S. Chapter 9 Bankruptcy Code.

In February 2015, S&P further downgraded Puerto Rico's GO, COFINA, and other municipal bond ratings to B with a negative outlook, and with no distinction in risk between GO and revenue bonds. The downgrade reflects significant near-term liquidity risk for Puerto Rico, despite the GDB's completion of a \$1.2 billion bank borrowing to alleviate short-term financial pressures until fiscal year-end June 30, 2015.

According to S&P, Puerto Rico "could potentially find itself without market access at affordable cost" if liquidity does not improve and access to the capital markets fades.

S&P concluded that Puerto Rico needs its economy to grow in order to pay growing debt service, pension and health care costs, but this prospect has declined in recent months. The 16% value-added-tax (VAT) that will replace the current 7% sales tax, if implemented, could negatively affect the economy as the new tax rate is higher and was designed to reduce pervasive tax evasion on the island.

As of year-end 2013, U.S. insurers held \$1.68 billion in Puerto Rican municipal bonds, a reduction from the \$2.5 billion held as of year-end 2012. As of year-end 2013, U.S. insurers also held \$444 million in Puerto Rican corporate bonds, which could be negatively affected by the weakening economy. Furthermore, the Bond Buyer, a municipal bond news publisher, estimates monoline insurers have total net par (net of reinsurance) outstanding exposure to Puerto Rican municipal bonds of \$15.7 billion as of June 30, 2013 — Assured Guaranty \$5.7 billion, National Public Finance Guarantee (MBIA) \$5.2 billion, Ambac \$2.5 billion, and Syncora and FGIC together with \$2.3 billion.

Table 8 lists U.S. insurers' exposures to Detroit and Puerto Rican municipal bonds as of year-end 2013, which in total were less than 1% of total U.S. insurers' municipal bond holdings.

**Table 8: U.S. Insurers' Holdings of Municipal Bonds as of 2013**

In BACV \$ millions	Detroit		Puerto Rico		Total		Total U.S. Insurers' Muni Bond Holdings	Detroit & Puerto Rico % of Total Muni Holdings
		%		%		%		
P/C	\$833.2	72.9%	\$1,076.6	63.9%	\$ 1,909.8	67.5%	\$ 345,555.2	0.55%
Life	272.8	23.9%	522.2	31.0%	795.0	28.1%	162,086.4	0.49%
Health	36.5	3.2%	75.5	4.5%	112.0	4.0%	21,330.5	0.53%
Title	-	0.0%	9.3	0.5%	9.3	0.3%	1,559.5	0.59%
Fraternal	1.0	0.1%	0.1	0.0%	1.2	0.0%	6,399.3	0.02%
<b>Total</b>	<b>\$1,143.6</b>	<b>100%</b>	<b>\$1,683.8</b>	<b>100%</b>	<b>\$ 2,827.4</b>	<b>100%</b>	<b>\$ 536,930.8</b>	<b>0.53%</b>

### **Bank Liquidity Rules**

To ensure large banks can survive a crisis, the Federal Reserve recently approved new liquidity rules, such as the liquidity-coverage ratio (LCR), whereby large banks must have enough safe liquid assets to fund bank operations for 30 days. High quality liquid assets (HQLA) cannot be "unique, bespoke, or complex structures which are difficult to value on a routine basis" and must be "liquid and readily marketable." As currently contemplated, municipal bonds would not count toward the requirement, as they are not considered highly liquid. But regulators are working on a proposal to include the most liquid municipal bonds in banks' liquidity coverage ratio calculation. Excluding municipal bonds could lead banks (as investors) to pull out of the \$3.7 trillion municipal bond market.

"Over time, there would be less demand for municipal securities," said Michael Decker, a SIFMA managing director who tracks municipal securities rules, which could lead to higher borrowing costs for state and local governments.

Banks owned \$422 billion, which is 11.4% of the total municipal bonds outstanding as per year-end 2013 (Federal Reserve System data). Without participation from banks, the market would lose a reliable source of funding that might be difficult for it to absorb, raising yields and thus borrowing costs for municipal bond issuers.

### **Oil Prices**

The downward trend of crude oil prices in 2014 and into 2015 could affect oil-and-gas producing U.S. states. According to the U.S. Census Bureau, the following states derived a high percentage of their tax revenue from the oil-and-gas sector: Alaska (78%), North Dakota (46%), Wyoming (40%), New Mexico (14%), Montana (11%) and Texas (9%). On the positive side, many of these states have set aside sizable reserves to help deal with a potential downturn in the energy sector. The U.S. insurance industry's municipal bond exposure to these six states totaled \$56.7 billion as of year-end 2013. For more details, please see the Capital Markets special report titled, "The Current Oil Shock: Modest Impact on Insurance Industry Investment Portfolios," published Feb. 27, 2015.

### **Conclusion**

Despite recent turmoil in the municipal bond market due to the Detroit Chapter 9 bankruptcy filing in 2013 and financial troubles in Puerto Rico, bankruptcies remain a rare event, and credit ratings in general have remained stable over the last several years. According to Moody's data, municipal bond rating transitions data has shown stability over the long run, and they are generally more stable than corporate bond ratings. Market concerns over Detroit have been mitigated for the time being, as the city formally emerged from bankruptcy Dec. 10, 2014. However, Puerto Rico's financial difficulties remain and could lead to volatility in the rest of the municipal bond market; U.S. insurers' \$536.9 billion of municipal bond holdings as of year-end 2013 could be negatively affected even though they only owned \$1.68 billion of Puerto Rican municipal bonds.



The Capital Markets Bureau will continue monitoring the U.S. insurance industry's municipal bond exposure and report on these investments as deemed appropriate.

Questions and comments are always welcome. Please contact the Capital Markets Bureau at [CapitalMarkets@naic.org](mailto:CapitalMarkets@naic.org).

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