National Association of Bond Lawyers

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Sent Via Electronic Mail

Grant Driessen
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101 Independence Avenue SE.
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Steven Maguire
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Re: Comments to the CRS Report entitled Private Activity Bonds: An Introduction

Messrs. Driessen and Maguire:

The National Association of Bond Lawyers (NABL) is a non-profit corporation and specialty bar association of approximately 2,500 lawyers. NABL exists to promote the integrity of the municipal bond market by advancing the understanding of and compliance with the law affecting public finance. NABL members and their firms are involved every year in a significant portion of the municipal financings by U.S. state and local governments.

In September 2018, NABL met with staff at the Congressional Research Service (CRS) regarding the CRS report entitled "Private Activity Bonds: An Introduction," dated July 13, 2018 (the "Report"). We thank you for the opportunity to meet and to continue our dialogue about the role of tax-exempt private activity bonds. As a follow up to that discussion, we are providing comments with more detailed thoughts on the Report.

This letter was prepared by an ad hoc task force comprising of the individuals listed in Appendix A and was approved by the NABL Board of Directors. NABL will be happy to make itself available for future discussions on this or other topics related to the municipal bond market. We will follow up to schedule a meeting.

If NABL can provide further assistance, please do not hesitate to contact Jessica Giroux, Director of Governmental Affairs in our Washington DC office, at (518) 469-1565 or at jgiroux@nabl.org.

Sincerely,

Teri M. Guarnaccia
President, National Association of Bond Lawyers

Comments to the Congressional Research Service's Report entitled *Private Activity Bonds: An Introduction,* Dated July 13, 2018

This paper comments on the report of the Congressional Research Service entitled "Private Activity Bonds: An Introduction," dated July 13, 2018 (the "Report").

We thank you for the opportunity to continue our dialogue about the role of tax-exempt private activity bonds by providing you with our more detailed thoughts on the Report as a follow-up to our previous discussions. Our thoughts can be put into two categories. In the first category, we have some general thoughts about the approach that the Report takes when it discusses potential concerns regarding tax-exempt private activity bonds. We want to emphasize in particular in this regard our comments on statements made in the Report regarding the economic inefficiency of tax-exempt private activity bonds and the "lack of Congressional control" over tax-exempt private activity bonds. In the second category, we have provided a number of suggestions that are more technical in nature for how we think the Report could be expanded and clarified.

1. Comments on Statements in the Report Regarding the Economics of Tax-Exempt Private Activity Bonds.

The Report states that its intent is not to "justify or criticize the existence of or use of tax-exempt private activity bonds," but rather to provide "a brief review of bond fundamentals and a more detailed examination of the rules and definitions surrounding private activity bonds to help to clarify the impact of modifications." We agree that a publication providing such a summary of the many technical provisions applicable to tax-exempt private activity bonds is helpful, in particular as a means to educate members of Congress who may not have significant experience with this complicated body of law.

The Report, however, also contains many statements regarding the economic inefficiency of tax-exempt private activity bonds that go beyond such a technical summary and that do seem to "criticize the existence or use of tax-exempt private activity bonds." In particular, the "Summary" of the Report states that the "economic rationale for the federal limitation on tax-exempt bonds for private activities stems from the inefficiency of the mechanism to subsidize private activity and the lack of congressional control of the subsidy absent a limitation." There are factors that should be taken into account in assessing the economic efficiency of private activity bonds that may not have been taken into account in the Report.

It is of course clear that tax-exempt bond programs have a revenue cost to the federal government and that such cost is properly considered by Congress. As with any program involving a tax expenditure, Congress has periodically considered how the tax expenditures inherent in tax-exempt bonds should be limited. We do not agree, however, that the legislative history clearly indicates that a main concern of Congress regarding tax-exempt private activity bonds has been economic inefficiency, for the reasons we discuss below.

a. Tax-exempt private activity bonds typically do not "replace" or "crowd out" governmental bonds.

The Report, in the section captioned "Issues for Congress," explains the rationale for the asserted economic inefficiency of tax-exempt private activity bonds as follows:

> The inefficient allocation of capital arises from the economic fact that additional investment in tax-favored private activities will necessarily come from investment in other public projects. For example, if bonds issued for mass commuting facilities did not receive special tax treatment, some portion of

bond funds could be used for other government projects such as schools or other public infrastructure.

The Report asserts, in other words, that tax-exempt private activity bonds are economically inefficient because they "crowd out" governmental bonds that could have been issued for public projects.

This description of an "economic fact" does not appear to be based on any economic study or legislative history. More importantly, it does not appear to take into account how tax-exempt private activity bonds are typically structured and secured. Tax-exempt private activity bonds are structured in many different ways, but are typically payable from revenues generated by the bond-financed project or by special sources of governmental revenue dedicated to a particular purpose. Very few, if any, tax-exempt private activity bonds are repaid from general fund revenues of the state or local governmental issuer that are permitted to be used for general governmental purposes. In other words, contrary to the quotation from the Report above, the source of repayment of the tax-exempt private activity bonds could **not** "be used for other governmental projects such as schools or other public infrastructure."

Most tax-exempt private activity bonds are issued as "conduit bonds," where a state or local government lends the bond proceeds to a nongovernmental borrower that repays the debt. For example, tax-exempt private activity bonds for residential rental housing typically are payable from revenues of the housing project, which typically is owned by a for-profit developer who is the ultimate borrower of the bond proceeds.

In the case of certain other types of tax-exempt private activity bonds, such as exempt facility bonds for airports and for docks and wharves, the sources of funds to repay the bonds are revenues of a state or local government, but are almost always revenues dedicated to a particular purpose. For example, airport bonds are typically payable solely from airport revenues that are dedicated to airport purposes. General tax revenues, or other general fund revenues, are typically not used to repay or secure such tax-exempt private activity bonds. In that light, the discussion of "economic inefficiency" set forth in the Report is fundamentally mistaken. In other words, to take the example from the Report, it is **not likely** to be true that tax-exempt private activity bonds issued for mass commuting facilities (or any other type of facility for which tax-exempt private activity bonds can be issued, for that matter) "replace" governmental bonds that could be issued for other governmental projects.

b. Although Congress was concerned in the early 1980s that the proliferation of tax-exempt private activity bonds might make tax-exempt governmental bonds more expensive for issuers, the tax-exempt bond market has changed considerably in the intervening 30 years.

The Report further states that tax-exempt private activity bonds are economically inefficient because the volume of tax-exempt private activity bonds leads to a "higher cost of financing traditional activities." We agree that this consideration is present in some of the legislative history, unlike the "crowding out" consideration that we described above. We note, however, that the legislative history describing this possible concern is decades old and that the tax-exempt bond market has changed considerably since then. The Report relies on the Joint Committee on Taxation's General Explanation of the Revenue Provisions of the Deficit Reduction Act of 1984 of the Joint Committee on Taxation (the "Blue Book"), which essentially just repeats the legislative history of the Mortgage Subsidy Bond Tax Act of 1980, as authority for the statement that tax-exempt private activity bonds cause interest rates on tax-exempt governmental bonds to be higher than they otherwise would be. The Report cites no recent studies indicating that the volume of tax-exempt private activity bonds has any appreciable effect of increasing interest rates for traditional tax-exempt governmental bonds. If the Report is going to reach that conclusion, then the conclusion should be based on a study of the current tax-exempt bond market, which should take into account the following factors, among others:

i. Currently, what is the volume of tax-exempt private activity bonds relative to all tax-exempt bonds? Per the IRS website, the percentage ranged from 19.0% to 21.5% from 2012 to 2016. In 2017 (the most recent year for which such data is available on the website), the percentage increased to 25.4% but that is thought to have been caused by the threatened repeal of private activity bonds in the version of the Tax Cuts and Jobs Act initially passed by the House of Representatives.

ii. Even if it was the sense of Congress in the early 1980s that tax-exempt private activity bonds increased the cost of tax-exempt governmental bonds, is the market for tax-exempt bonds broader now than it was in the 1980s? If it is, then the broader array of potential buyers could dilute the impact that tax-exempt private activity bonds have on the interest rate on governmental tax-exempt bonds. Specifically, a study of this question should consider whether the proliferation of mutual funds and tender option bond trusts have enabled a broader class of investors to invest in tax-exempt bonds. For example, we have attached as Exhibit 1 charts from the Bond Buyer archives and the Federal Reserve showing the representative share of bonds held by various classes of bondholders over time, which supports the claim that the market for tax-exempt bonds is broader now than in the past.

2. Congress has already acted to address its concerns about the proliferation of tax-exempt private activity bonds from the early 1980s by enacting more stringent rules that apply to tax-exempt private activity bonds. These rules have been effective in addressing the prior concerns so that there is no lingering concern that current law does not provide Congress with adequate control over tax-exempt private activity bonds.

As set forth above, the Summary in the Report states that the "economic rationale for the federal limitation on tax-exempt bonds for private activities stems from the inefficiency of the mechanism to subsidize private activity and the lack of congressional control of the subsidy absent a limitation." The statement regarding lack of congressional control is not accurate. Congress has acted many times to control private activity bonds, and those controls provide Congress with firm control over the volume of tax-exempt private activity bonds.

As the Report describes, Congress has already acted to address its prior concerns about tax-exempt private activity bonds by enacting more stringent rules that apply solely to tax-exempt private activity bonds. Even where these concerns about the proliferation of tax-exempt private activity bonds were at their peak, Congress still recognized that tax-exempt private activity bonds have an important role to play.

The limitations on private activity bonds began, as the Report notes, with the Revenue and Expenditure Control Act of 1968. The 1968 Act was the beginning of a trend of increasing Congressional control over the issuance of tax-exempt private activity bonds, which culminated with the Tax Reform Act of 1986. Throughout this period, even as Congress enacted stronger limits on tax-exempt private activity bonds, it recognized at every turn that tax-exempt private activity bonds have an important role to play in municipal finance and that certain types of tax-exempt private activity bonds (such as those for projects that are owned by a municipality or those that benefit 501(c)(3) organizations) are less likely to raise concerns than others. A few examples follow.

The 1968 Act made no distinction between governmental bonds and bonds issued to benefit 501(c)(3) organizations. Instead, it created a distinction between state and local bonds issued for a predominantly public purpose, which would remain tax exempt and those issued for a private purpose (referred to under the 1968 Act as "industrial development bonds"), which would be taxable unless subject to an exception. Bonds issued to benefit 501(c)(3) organizations were treated as issued for a public purpose.

Similarly, Congress recognized early on that, within the category of projects that should continue to be eligible for tax-exempt financing despite private involvement, projects that are still owned by a municipality should receive more favorable treatment than those for which the benefits and burdens of ownership are fully transferred to a private party. For example, the Joint Committee on Taxation Blue Book for the Revenue Act of 1978 explained a provision in that Act that prohibited advance refundings for certain types of industrial development bonds, but not for those that financed publicly-owned projects: "The general purpose of this provision is to distinguish between advance refunding of obligations issued to provide public facilities and private facilities. The Congress believes that State and local governments should be allowed to advance refund industrial development bonds used to provide certain types of public facilities." Congress recognized from the beginning that there were types of bonds that should still receive the benefit of tax-exempt financing, even though the benefit of the financing flowed in some part to a private party.

Congress followed a similar theme in the Deficit Reduction Act of 1984. The 1984 Act placed an overall limit on the volume of all private activity bonds, accomplished by providing an annual state volume cap that covered most industrial development bonds and student loan bonds. The Blue Book for the 1984 Act also noted that while Congressional intent was to limit the growth of private activity bonds, certain facilities that traditionally had been considered public facilities and that perform essentially public functions, such as convention centers, trade show facilities and certain transportation facilities, would be exempt from the volume cap. Similarly, Congress in the 1984 Act recognized the importance of bonds for 501(c)(3) organizations and bonds issued for low- and moderate-income residential rental projects and exempted these bonds from the annual volume cap. This illustrates the balance between limiting private activity bonds while softening those limits for certain types of projects that address public concerns, an approach that has continued in subsequent tax acts. The 1986 Act continued the special treatment for governmentally owned airports, docks, solid waste disposal projects and high-speed rail projects, which continue to be exempt from volume cap.

The trend of restricting tax-exempt private activity bonds reached its peak with the Tax Reform Act of 1986, showing how Congress already exercises control over the proliferation of tax-exempt private activity bonds. The 1986 Act changed the law such that, for the first time, qualified 501(c)(3) bonds were categorized as private activity bonds. But the 1986 Act also provided that qualified 501(c)(3) bonds are treated differently from other private activity bonds, and in fact are treated more similarly to governmental bonds; for example, they are not subject to the traditional volume cap (although nonhospital bonds were originally subject to a $150,000,000 limit on outstanding bonds per organization) and are permitted a de minimis use of proceeds for truly private or unrelated private business use.

Since the enactment of the 1986 Act, Congress has recognized in some instances that the limits on tax-exempt private activity bonds enacted by the 1986 Act were unnecessarily strict. For example, in the years after the 1986 Act, Congress found that the $150,000,000 limit on 501(c)(3) nonhospital bonds resulted in severe constraints on certain 501(c)(3) private colleges and universities and facilities for the care of the elderly, and in 1997 the $150,000,000 limit on nonhospital bonds was repealed for most future bond issues. The legislative history states that Congress found the restriction inappropriate because it put 501(c)(3) organizations at a financial disadvantage relative to substantially identical governmental institutions. This subsequent legislation is just one instance where Congress found that the controls over tax-exempt private activity bonds from the 1986 Act were stricter than necessary, so it relaxed them.

Similarly, in the years that have passed since the 1986 Act, Congress has increasingly turned to expanding the availability of tax-exempt private activity bonds as a tool to provide relief from disasters (such as Gulf Opportunity Zone Bonds)[1] and to stimulate the economy in times of economic hardship (such as Recovery Zone Facility Bonds). These programs typically provide broad authorization for tax-exempt private activity bond financing without the restrictions based on the type of project that are found in the permanent tax-exempt private activity bond provisions. Instead, Congress typically will limit the amount of bonds issued by imposing a separate volume cap. These newer categories of private activity bonds illustrate that the new volume cap models developed since the enactment in 1986 of the permanent volume cap regime have provided Congress with the ability to target the intended incentive to private businesses in an appropriate way. The methods of volume allocations have included empowerment zones, where jurisdictions were given a specific amount based on population within the zone, and Gulf Opportunity Bonds and Midwestern Disaster Area Bonds, where the cap was based on the proportion of residents in FEMA-designated disaster areas. Moreover, these expansions in the availability of tax-exempt private activity bonds after the 1986 Act reflect the fact that Congress already has the perfect tool for controlling the volume of tax-exempt private activity bonds, the concern that was expressed in the legislative history on which the Report relies – a literal control on the volume of bonds through various volume cap provisions.

3. Technical Comments to the Report.

Below, we have restated the headings from various sections of the Report and have provided some specific comments that are more technical in nature on the contents of those sections.

a. Comments under the Heading "Tax-Exempt Bonds and the Alternative Minimum Tax"

The Tax Cuts and Jobs Act of 2017 repealed the corporate AMT and increased the income threshold for the individual AMT. We would encourage studies and analysis of whether the elimination of corporate AMT results in a lower interest rate on private activity bonds. We note that, in the case of conduit tax-exempt private activity bonds, the comparably lower interest rate typically redounds to the benefit of the conduit borrower, as the issuer typically passes this rate on directly to the conduit borrower, which is the actual party repaying the bonds.

b. Comments under the Heading "What Are the Qualified Private Activities?"

i. We suggest a minor revision to the sentence referencing "issuance costs such as brokerage and accounting fees." Brokerage and accounting fees are costs more often associated with the costs of a holder purchasing bonds and are not among the costs included in the 2% limit on costs of issuance or in the list found in IRS Publication 4078. The sentence would be more accurate if it referenced the definition of "issuance costs" in the Treasury Regulations under Code Section 150, which would include costs such as underwriter's discount and various counsel fees incurred in connection with bond issuance.

ii. 501(c)(3) bonds were not treated as private activity bonds until the 1986 Act. Even with the separation from governmental bonds, they are in many ways

[1] See National Association of Bond Lawyers, *Disaster Bond Recovery Financing – Considerations for Congress* (September 5, 2018) (available at https://tinyurl.com/y6jgjlco).

treated more like governmental bonds than like other types of private activity bonds. The Joint Committee on Taxation Blue Book for the 1986 Act notes that "Congress recognized that section 501(c)(3) organizations in many cases perform functions which governments otherwise would have to undertake. The use of the term private activity bond to classify obligations for 501(c)(3) organizations in the Internal Revenue Code of 1986 in no way connotes any absence of public purpose associated with their issuance. Accordingly, the Act requires that any future change in legislation applicable to private activity bonds generally shall apply to qualified 501(c)(3) bonds only if expressly provided in such legislation."

c. Comments under the Heading "What Is the Private Activity Bond Volume Cap?"

i. We would recommend here a brief mention of the Omnibus Reconciliation Act of 1980 (in particular, the portion thereof subtitled the Mortgage Subsidy Bond Tax Act of 1980), because it is the first to introduce a volume cap on private activity bonds. The annual cap for each state enacted by that legislation applied solely to qualified mortgage subsidy bonds (single family mortgages) and was equal to the greater of (i) 9% of the average annual aggregate principal amount of mortgages executed during the three preceding years for single-family, owner-occupied residences located within the state or (ii) $200,000,000. Thus, the initial volume cap calculation was targeted to the type of private activity to be financed, but included a minimum volume cap amount. This notion of a minimum amount has been a feature of subsequent volume cap provisions.

ii. Notes on Table 2: We suggest changing the column heading to "Subject to Unified State Volume Cap" and adding new column "Subject to Separate Volume Cap" to give a more accurate and complete picture of limits to issuance as determined by Congress.

iii. The discussion above on various methods of allocating volume cap provides a sense of the ways in which Congress has targeted specific categories of bonds to the perceived need for such financing. The unified private activity bond volume cap under Code Section 146, which gives states the flexibility to allocate volume cap among categories, is not the exclusive allocation method Congress can or has used. The volume caps for the various programs enacted by the American Recovery and Reinvestment Act of 2009 provide perhaps the best illustration of how volume cap can be used to target the benefits of tax-exempt financing for private business activities.

iv. Notes on Figure 1: The rationale for the table comparing volume cap to average personal income is not discussed and is not obvious. As noted above, the debt service on private activity bonds typically does not come from local governments or their residents, so the measure of how much debt the residents could support would not be relevant. The state volume cap has always been based on the population with a minimum amount per state. There is no legislative history on point, but given the variety of categories included in the list subject to volume cap and the nature of those outside of the cap, it may be that the cost or need for such facilities may not be dependent on the economic status of people in the state as measured by personal income. A state with a small population could have especially unique needs or deferred capital expenditures due to regional economic factors.

d. **Comments under the Heading "PAB Use by Type of Activity"**

i. The Report notes that half of the volume cap is carried forward and at some point, if not used, is abandoned. It would seem helpful to Congress, particularly in estimating the dollar impact of any proposed changes, to more accurately determine or estimate how much volume cap is indeed abandoned and whether those states receiving the minimum allocation have a different pattern with respect to the abandonment of volume cap. The Report should also be corrected to clarify that volume cap for qualified small issue bonds cannot be carried forward.

ii. Notes on Table 3: This table should also reflect those categories of bonds that can no longer be issued because they are past the statutory deadline for issuance. That would include Gulf Opportunity Zone, New York Liberty Zone, Midwestern Disaster Area, Recovery Zone Facility and Green Building bonds.

4. Further Reading.

We have attached at Exhibit 2 a list of articles that you may find helpful in considering the comments in this paper.

EXHIBIT 1

Holders of Municipal Debt

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015*
Total Debt Outstanding	2,821.2	3,019.3	3,189.3	3,424.8	3,517.2	3,672.5	3,772.1	3,719.4	3,714.4	3,671.2	3,652.4	3,719.0
Held By:												
Households	1,522.9	1,600.7	1,635.6	1,673.6	1,720.9	1,827.9	1,871.7	1,805.8	1,661.0	1,605.2	1,540.0	1,596.5
Mutual funds	293.8	311.2	343.9	371.6	389.4	478.8	525.5	541.2	627.4	613.9	657.7	603.7
Money market funds	322.3	349.1	392.0	496.6	509.5	440.1	386.7	357.3	336.7	308.3	281.7	268.4
Closed-end funds	89.1	89.3	89.3	91.2	77.9	81.2	81.6	82.5	86.0	84.4	84.8	84.0
Exchange-traded funds	0.0	0.0	0.0	0.6	2.3	5.9	7.6	8.6	12.3	11.4	14.6	18.5
Nonfinancial corporate businesses	31.8	32.1	28.1	29.2	26.2	27.1	23.9	22.3	22.9	21.8	13.1	21.6
Nonfarm noncorporate businesses	4.3	4.4	5.8	5.3	4.9	5.1	5.6	5.9	6.1	6.3	4.6	4.9
Government-sponsored enterprises	44.6	39.7	36.1	33.3	31.3	29.1	24.9	21.0	17.0	13.4	10.8	8.2
State & local government general funds	5.7	6.9	8.3	10.0	10.4	11.5	12.9	13.2	13.5	13.6	13.6	14.9
Rest of the world	26.0	29.0	34.4	45.1	51.0	58.7	71.7	72.4	71.8	76.1	80.4	87.2
U.S.-chartered depository institutions	147.8	166.1	190.1	202.0	221.9	224.3	254.6	297.3	365.0	418.9	451.5	498.9
Foreign banking offices in U.S.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Banks in U.S.-affiliated areas	0.3	0.5	1.3	2.0	2.5	3.5	2.5	3.4	2.6	3.6	2.7	2.1
Credit unions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	4.2	4.6	3.8	4.3
Property & casualty insurance companies	267.8	313.2	335.2	371.3	381.9	369.4	348.4	331.0	328.1	326.4	321.7	330.4
Private pension funds	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.5	0.6	0.0
Life insurance companies	30.1	32.5	36.6	41.4	47.1	73.1	112.3	121.8	131.5	141.6	147.8	158.5
State & local government retirement funds	2.5	1.7	1.7	1.5	1.4	1.4	2.2	1.7	1.8	3.1	4.2	2.9
Brokers & dealers	32.0	42.9	50.9	50.1	38.7	35.4	40.0	30.9	26.6	18.6	18.9	14.0
Issued By:												
State & local governments	2,438.2	2,579.2	2,679.6	2,825.6	2,842.7	2,954.9	3,023.6	2,970.0	2,964.3	2,924.9	2,910.9	2,966.6
Short-term	44.2	42.5	34.3	51.2	55.8	63.6	63.0	52.3	56.1	45.3	38.6	32.8
Long-term	2,393.9	2,536.7	2,645.2	2,774.4	2,786.9	2,891.3	2,960.6	2,917.6	2,908.2	2,879.6	2,872.3	2,933.8
Nonprofit organizations	197.6	212.7	229.1	250.2	259.5	265.4	263.2	255.5	241.0	227.8	223.1	218.0
Nonfinancial corporate businesses	185.4	227.3	280.6	349.0	415.0	452.2	485.4	493.9	509.1	518.5	518.4	534.4

*Figures for 2015 are as of December 31, preliminary and seasonally unadjusted. Dollar amounts are in billions of dollars. Components may not add to totals because of rounding. Source: Federal Reserve Board, Flow of Funds Accounts, Flows and Outstandings, Fourth Quarter 2015.

Holders of Municipal Debt: 1998-2007

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
TOTAL DEBT OUTSTANDING	$1,402.7	$1,457.1	$1,480.7	$1,603.5	$1,762.9	$1,900.5	$2,031.0	$2,225.9	$2,403.2	$2,617.8
HELD BY:										
Households	498.7	528.1	531.2	581.1	678.7	704.1	742.7	821.4	866.0	916.0
Mutual funds	242.6	239.4	230.4	253.0	277.3	290.2	294.3	311.7	344.4	371.8
Money market funds	192.8	210.4	242.5	276.7	278.5	292.1	313.8	336.8	370.3	473.5
Closed-end funds	60.7	69.7	67.7	74.7	86.0	89.3	89.1	89.4	89.4	91.6
Nonfinancial corporate businesses	25.7	25.0	31.9	29.3	32.1	35.4	31.8	32.1	40.4	40.1
Nonfarm noncorporate businesses	2.8	2.7	2.4	3.5	3.4	2.7	4.3	4.4	5.0	5.7
Government-sponsored enterprises	19.2	22.7	29.2	35.4	39.4	44.4	44.6	39.7	36.1	33.3
State & local government general funds	3.2	3.5	3.7	4.0	4.1	4.4	4.7	4.9	5.3	5.6
Rest of the world	6.8	7.8	8.0	8.0	11.5	19.5	26.0	29.0	31.0	33.0
Commercial banks	104.8	110.8	114.1	120.2	121.7	132.7	140.8	157.7	180.2	192.3
Savings institutions	2.5	3.0	3.2	4.5	5.5	6.3	7.1	8.6	10.7	10.6
Property & casualty insurance companies	208.1	199.0	184.1	173.8	183.0	224.2	267.8	313.2	335.2	351.6
Life insurance companies	18.4	20.1	19.1	18.7	19.9	26.1	30.1	32.5	36.6	38.2
State & local government retirement funds	3.3	3.0	1.7	1.7	0.9	4.4	1.8	1.7	1.7	0.8
Brokers & dealers	13.1	11.9	11.3	19.0	21.0	24.9	32.0	42.9	50.9	53.8
ISSUED BY:										
State & local governments	1,133.6	1,172.5	1,189.0	1,294.5	1,437.9	1,557.9	1,673.0	1,844.1	1,994.6	2,178.1
Short-term	42.7	45.3	46.6	70.5	95.7	106.1	100.2	105.9	102.8	120.1
Long-term	1,090.9	1,127.2	1,142.4	1,224.0	1,342.2	1,451.8	1,572.8	1,738.2	1,891.8	2,058.0
Nonprofit organizations	121.3	131.7	137.5	151.3	164.2	178.3	188.6	205.1	226.9	250.2
Nonfinancial corporate businesses	147.8	152.8	154.2	157.7	160.8	164.2	169.4	176.7	181.7	189.4

Figures for 2007 are preliminary and seasonally unadjusted. Dollar amounts are in billions of dollars. Components may not add to totals because of rounding. Source: Federal Reserve Board, Flow of Funds Accounts, Flows and Outstandings, Fourth Quarter 2007.

Holders of Municipal Debt: 1983-98

Totals in billions of dollars

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
TOTAL DEBT OUTSTANDING	$575.1	$650.6	$859.5	$920.4	$1,010.4	$1,082.3	$1,135.2	$1,184.4	$1,272.2	$1,302.8	$1,377.5	$1,341.7	$1,293.5	$1,296.0	$1,367.5	$1,464.3
Held by:																
Households	211.2	250.7	348.2	355.3	454.7	524.4	546.0	574.5	614.1	585.6	552.6	502.2	459.0	434.8	421.3	447.1
Bank personal trusts	35.7	39.9	48.2	56.9	63.1	65.9	73.0	80.8	89.9	96.0	108.9	114.2	108.3	104.0	104.8	105.8
Mutual funds	13.4	19.1	34.9	67.0	74.8	82.9	98.6	112.6	139.7	168.4	211.3	207.0	210.2	213.3	219.8	243.4
Money market funds	16.9	24.0	36.4	64.1	61.8	66.1	70.1	84.0	90.6	96.0	105.6	113.4	127.7	144.5	167.0	193.0
Closed-end funds	0.0	0.0	1.0	2.0	3.3	7.5	12.1	14.1	25.4	39.7	51.8	53.4	59.6	61.7	61.7	62.9
Nonfinancial corporate businesses	18.3	22.5	25.6	25.1	19.4	16.8	32.4	24.7	44.8	45.8	54.7	56.7	36.8	31.7	40.0	48.2
Government-sponsored enterprises	0.7	1.2	1.6	2.3	2.4	2.9	2.9	3.7	3.0	3.2	2.6	3.4	4.4	4.1	3.3	2.2
State and local government general funds	8.0	9.0	7.8	7.7	8.1	9.6	11.9	11.6	11.6	10.5	9.5	8.6	5.1	4.6	4.8	4.4
Commercial banks	162.1	174.6	231.7	203.4	174.3	151.6	133.8	117.4	103.2	97.5	99.2	97.6	93.4	94.2	96.7	104.8
Savings institutions	3.1	2.8	3.4	3.1	3.1	2.8	2.6	3.0	2.4	2.1	2.1	2.0	2.0	2.1	2.1	2.5
Life insurance companies	10.0	8.7	9.7	11.7	10.7	9.1	9.0	12.3	10.2	11.4	14.7	12.8	11.9	13.4	36.5	38.8
Property and casualty insurance companies	86.7	84.7	88.2	101.9	124.8	134.1	134.8	136.9	126.8	134.3	146.1	153.8	161.0	175.4	194.1	195.8
State and local government retirement funds	2.0	1.5	1.1	0.7	0.8	0.5	0.3	0.5	0.4	0.5	0.7	0.4	0.5	0.6	1.3	1.0
Private pension funds	0.5	0.9	1.6	2.8	1.0	0.6	0.6	0.5	0.5	0.5	0.6	0.7	0.9	0.9	1.1	1.2
Brokers and dealers	6.5	11.0	19.9	16.6	8.3	7.5	7.1	7.9	9.4	11.3	17.1	15.5	12.7	10.8	13.2	13.2
Issued by:																
State and local governments	450.2	495.0	651.1	724.1	816.0	886.5	937.8	983.5	1,067.6	1,091.9	1,158.7	1,112.4	1,060.4	1,053.3	1,110.6	1,189.7
Short-term notes	21.3	17.6	20.5	20.4	18.0	20.0	23.3	26.2	33.1	32.0	33.8	31.7	32.9	39.1	47.5	41.2
Long-term bonds	429.0	477.4	630.6	703.7	798.0	866.5	914.5	957.3	1,034.5	1,059.8	1,124.9	1,080.7	1,027.5	1,014.1	1,063.1	1,148.5
Households and nonprofit organizations	41.0	51.2	81.3	79.1	78.2	79.5	81.9	85.8	90.6	92.6	94.0	97.6	98.3	104.9	114.9	126.9
Nonfinancial corporate businesses	83.9	104.4	127.0	117.1	116.2	116.4	115.5	115.2	114.0	118.3	124.9	131.7	134.8	137.9	142.0	147.8

Figures for 1998 are preliminary and unadjusted. Totals may not add due to rounding. Source: Federal Reserve Board, *Flow of Funds Accounts, Flows and Outstandings, Fourth Quarter 1998.*

F.212 Municipal Securities

Billions of dollars; quarterly figures are seasonally adjusted annual rates

			2016	2017	2018	2017 Q3	2017 Q4	2018 Q1	2018 Q2	2018 Q3	2018 Q4	
1	**FA383162005**	**Net issues**	**44.7**	**13.0**	**-58.2**	**-50.3**	**166.8**	**-95.3**	**-15.1**	**-64.8**	**-57.5**	**1**
2	FA213162005	State and local governments	31.5	-2.9	-54.0	-20.4	107.8	-91.4	-12.6	-42.1	-69.9	2
3	FA213162400	Short-term (1)	-2.7	4.8	2.4	12.9	4.1	8.0	-0.1	4.7	-3.2	3
4	FA213162200	Long-term	34.2	-7.7	-56.3	-33.2	103.7	-99.4	-12.5	-46.8	-66.7	4
5	FA163162003	Nonprofit organizations (2)	-3.1	2.4	-0.3	-13.1	8.8	7.2	-1.4	-4.9	-1.9	5
6	FA103162000	Nonfinancial corporate business (industrial revenue bonds)	16.3	13.5	-3.9	-16.8	50.1	-11.1	-1.1	-17.8	14.3	6
7	**FA383162005**	**Net purchases**	**44.7**	**13.0**	**-58.2**	**-50.3**	**166.8**	**-95.3**	**-15.1**	**-64.8**	**-57.5**	**7**
8	FA153062005	Household sector	10.2	-50.9	-72.5	-73.1	45.6	-107.9	-72.8	-50.2	-59.0	8
9	FA103062003	Nonfinancial corporate business	-2.6	9.2	-4.6	9.6	-2.0	-10.5	5.1	-20.5	7.7	9
10	FA113062003	Nonfinancial noncorporate business	0.4	0.4	0.5	0.3	0.6	0.4	0.5	0.3	0.8	10
11	FA213062003	State and local governments	0.1	-0.3	-0.1	-0.4	0.5	-1.7	0.7	1.1	-0.7	11
12	FA763062000	U.S.-chartered depository institutions	46.8	21.1	-40.7	11.7	26.7	-41.4	-35.8	-56.9	-28.5	12
13	FA753062003	Foreign banking offices in U.S.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13
14	FA743062003	Banks in U.S.-affiliated areas	-0.4	-0.5	-0.1	-1.5	-0.0	0.1	-0.0	-0.3	-0.1	14
15	FA473062005	Credit unions	0.9	-0.2	-0.0	-1.4	0.3	-0.6	0.3	-1.8	2.0	15
16	FA513062005	Property-casualty insurance companies	1.8	-9.9	19.1	-12.5	-2.2	14.1	16.7	30.0	15.4	16
17	FA543062005	Life insurance companies	8.8	6.1	5.3	7.7	5.3	7.7	3.3	6.6	3.7	17
18	FA343062033	Federal government retirement funds	0.0	-0.0	-0.0	-0.0	0.0	0.0	-0.0	0.0	-0.0	18
19	FA223062043	State and local govt. retirement funds	0.2	1.1	-1.0	-1.5	5.7	-3.4	-0.9	0.1	0.4	19
20	FA633062000	Money market funds	-81.8	-19.9	8.4	-23.8	7.6	-15.7	38.1	-11.8	23.1	20
21	FA653062003	Mutual funds	41.4	40.0	26.0	40.7	29.5	64.9	28.3	40.9	-29.9	21
22	FA553062003	Closed-end funds	0.6	0.1	1.4	-0.2	0.1	-0.0	5.3	-1.6	1.9	22
23	FA563062003	Exchange-traded funds	6.2	5.2	6.4	4.8	7.6	2.8	7.9	2.0	13.1	23
24	FA403062005	Government-sponsored enterprises	-2.4	-1.2	-0.6	-1.7	-0.6	-0.7	-0.1	-1.3	-0.3	24
25	FA663062003	Brokers and dealers	7.1	5.6	-5.9	-15.6	37.5	-3.7	-10.4	-4.1	-5.6	25
26	FA263062003	Rest of the world	7.2	7.1	0.1	6.3	4.7	0.4	-1.3	2.8	-1.6	26

(1) Debt with original maturity of 13 months or less.
(2) Liability of the households and nonprofit organizations sector (table F.101).

EXHIBIT 2

Additional Articles Related to the Cost and Impact of Tax-Exempt Bonds:

Bernardi Securities Inc. "**Tax Exempt Municipal Bonds: The Case for an Efficient, Low-Cost, Job-Creating Tax Expenditure**." December 2011

Galper, Harvey et al. "**Municipal Debt: What does it Buy and Who Benefits?**" (December 2014)

- Concludes that benefit of tax exemption is not just with higher income individuals – there are significant net benefits to those to consume a relatively large share of state and local public services as well.

Garret, Ordin, Roberts and Serrato. "**Tax Advantages and Imperfect Competition in Auctions for Municipal Bonds**." (Duke and NBER), May 2018.

- Certain conclusions of this article include: (a) reductions in tax advantage for municipal bonds translate to substantial increases in both borrowing costs and markups; (b) states with lower state income tax rates, with fewer bidders and with larger reliance on competitive sales are disproportionately affected by this policy; (c) "Compared to the reduction in the federal tax expenditure, the increase in borrowing costs is 2.8-times as large, suggesting that the tax advantage for muni bonds is an efficient mechanism for subsidizing public good provision at the local level."

Poterba, James M. and Verdugo, Arturo Ramirez. "**Portfolio Substitution and the Revenue Cost of Exempting State and Local Government Interest Payments from Federal Income Tax**." National Bureau of Economic Research, October 2008.

- Discusses the taxable vs. tax-exempt yield spread, who holds tax-exempt bonds and the reasons it is incorrect to assume that if tax-exempt bonds were not available they would be replaced entirely 1-for-1 with taxable bonds. Thus, revenue impact is overstated.

Saito, Blaine G. "**Building a Better America: Tax Expenditure Reform and the Case of State and Local Government Bonds and Build America Bonds**." 11 Geo. J.L. & Pub. Pol'y 577 (2013).

Municipal Finance Journal:

Gamkhar, Shama and Beibei Zou, "**To Tax or Not to Tax: Lessons from the Build America Bond Program about Optimal Federal Tax Policy for Municipal Bonds**." Volume 35, Number 03, Fall 2014, pp. 1-25.

Bergstresser, Daniel and W. Bartley Hildreth. "**Complete Issue**" Volume 35, Number 02, Summer 2014, pp. 1-82.

- Galper, Harvey, et al. "**Who Benefits from Tax-Exempt Bonds? An Application of Theory of Tax Incidence**" pp. 53-80.

- Fischer, Phillip J. "**Comment on Who Benefits from Tax-Exempt Bonds**?" pp. 81-82

APPENDIX A

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