The Economic Cost of WIFIA's Current Loan Portfolio

Part 2: Federal Tax Revenue Impact

Version 1.0

May 5, 2021

Overview

The US EPA's Water Infrastructure Finance and Innovation Act (WIFIA) Loan Program has been operational since 2017. Although the Program was closely modelled on a US DOT project finance loan program, WIFIA has primarily lent to highly rated public water systems that are financing basic infrastructure projects. These systems can typically borrow in the tax-exempt municipal bond market at rates near or even below the US Treasury (UST) rate offered by WIFIA, but a WIFIA loan includes several non-market features that are valuable for financing long-term capital projects.

Due to highly rated borrowers' interest in these features, and the quality of their applications, WIFIA has been able to originate and execute a $9.03 billion portfolio of 44 loan commitments as of mid-March 2021. Unusually for a federal infrastructure loan program, this portfolio has extremely low credit and project risk characteristics.

However, the portfolio has two other significant economic implications for the WIFIA Program. The first is the scale of FCRA interest rate re-estimate cost in a rising rate environment, as outlined in Part 1. The second, outlined in this Part 2, is the portfolio's impact on federal tax revenue due to the displacement of tax-exempt debt by WIFIA loans. WIFIA loans themselves do not directly cause higher tax revenues. However, the loans displace tax-exempt debt that would have otherwise been issued, prompting debt investors to seek equivalent taxable alternatives.

This presentation outlines the nature and potential benefit of the current portfolio's displacement of tax-exempt debt:

1. How a WIFIA loan displaces tax-exempt bonds in a water infrastructure financing.

2. The Joint Committee on Taxation (JCT) methodology for estimating the federal revenue impact of tax-exempt debt displacement.

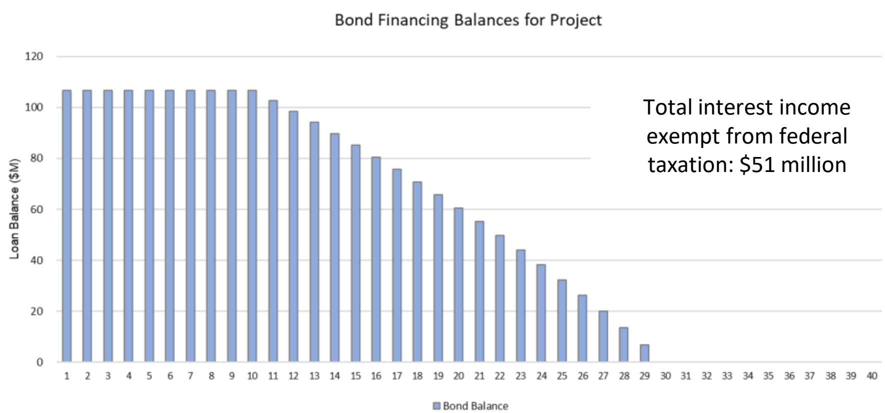
3. Estimated annual increase in federal tax revenue caused by current portfolio.

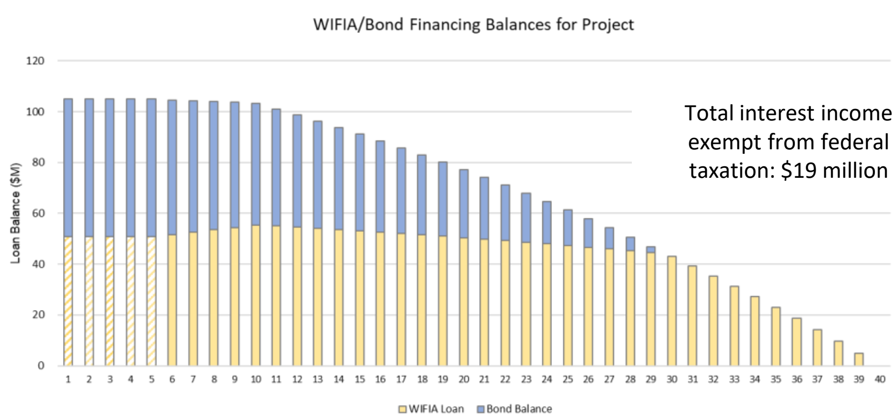
4. Comparison of the discounted present value (PV) of the portfolio's federal tax revenue increase to FCRA interest rate re-estimates.

5. Current JCT assumptions and necessity to review the WIFIA Program regarding OMB Circular 129.

Various conclusions are included on the final page. Note that this presentation and related analyses are based solely on public and widely available information, but all specific analyses, estimates and conclusions herein are exclusively those of InRecap LLC.

1. WIFIA Loan Displacement of Tax-Exempt Bonds in a Project's Financing





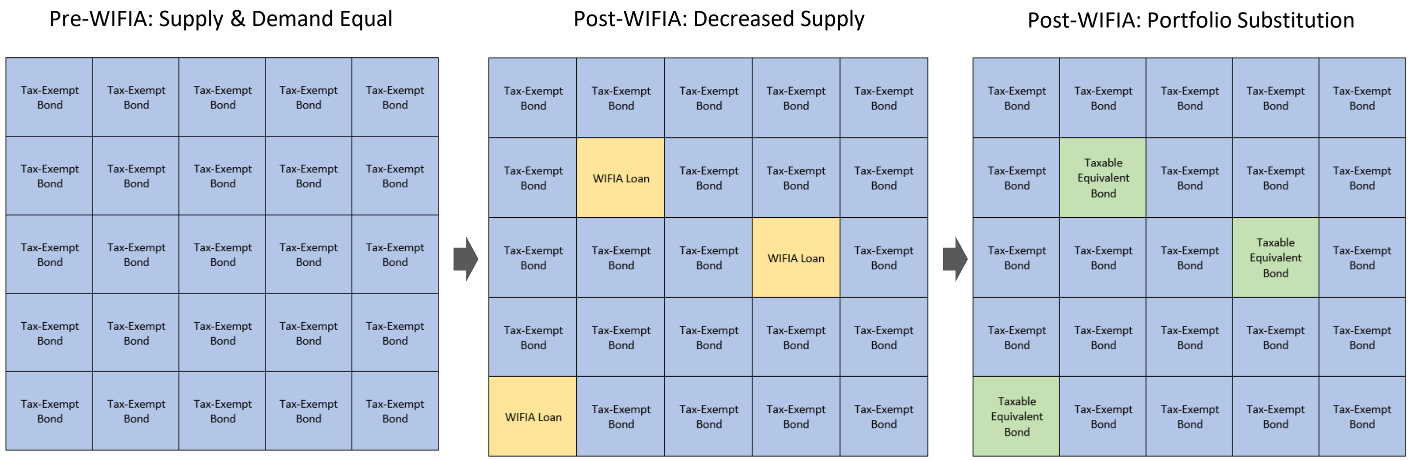
Without WIFIA Loan

- Highly rated public water systems will typically finance their essential large-scale, long-lived infrastructure projects with 30-year tax-exempt revenue bonds.
- All the bonds are issued at outset of construction to fix interest rates.
- The bond's interest income total approximately 50% of project cost and is exempt from federal taxation.

With WIFIA Loan

- A WIFIA loan will provide up to 49% of the project's initial financing. Loan terms are unlikely to cause any significant change in project design or schedule.
- A WIFIA loan must be on parity with other senior debt, effectively displacing the tax-exempt bonds that would have otherwise been issued.
- Tax-exempt debt will now finance only 51% of the project, with much lower total tax-exempt interest income due to lower size and shorter duration.

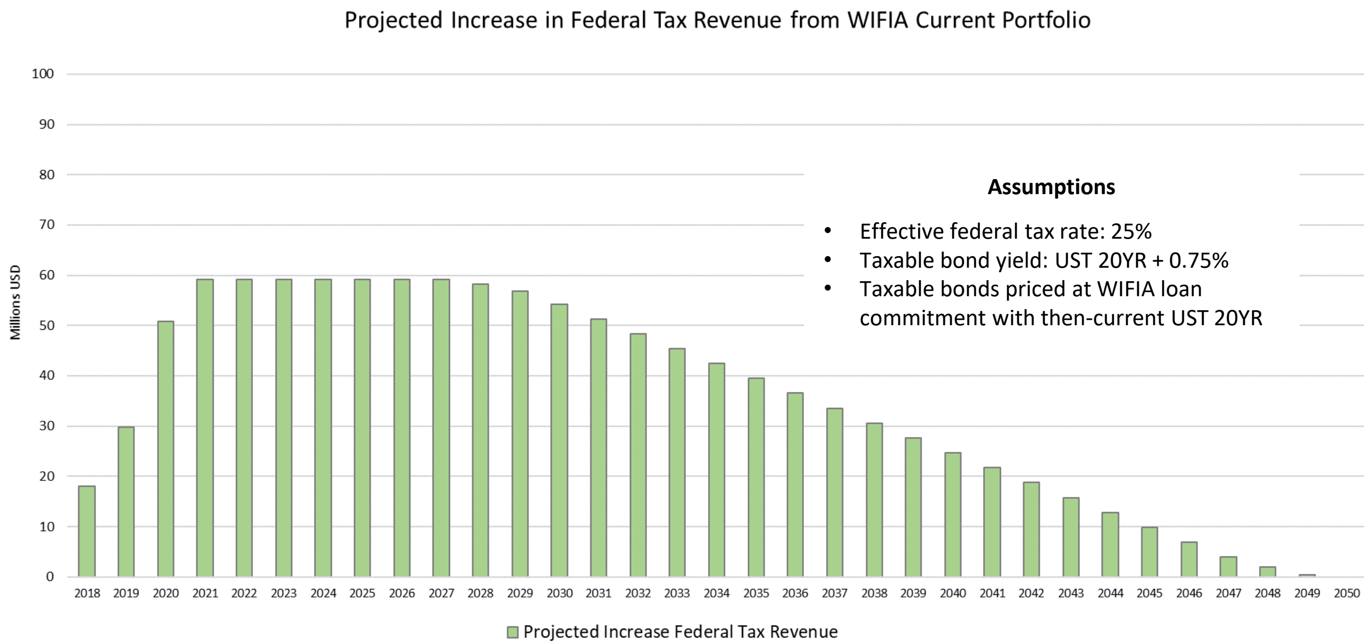
2. JCT Static Portfolio Taxable Bond Substitution Methodology



The displacement of tax-exempt debt by WIFIA loans will clearly impact federal tax revenues. It is not possible to precisely estimate the effect due to the size and complexity of debt capital markets. However, the CBO is obligated to estimate the revenue impact of a change in federal legislation, including changes that directly or indirectly affect tax-exempt debt. The JCT has developed a standard methodology to approximately determine the impact of changing tax-exempt debt issuance on a static basis, *The Federal Revenue Effects of Tax-Exempt and Direct-Pay Tax Credit Bond Provisions (JCX-60-12), July 16, 2012.* This methodology has been used by JCT to score WIFIA Program legislative authorizations, as discussed further in Section 5. There are three sequential concepts:

1. **Pre-WIFIA Program Conditions** : The market aggregate 'static' portfolio of tax-exempt supply and investor demand is precisely in balance at market clearing prices.
2. **Impact of WIFIA Program**: WIFIA loans will displace some tax-exempt bonds that would have otherwise been issued. In a static portfolio scenario, additional supply of tax-exempt debt will not be economic on the margin. Total tax-exempt debt is therefore decreased.
3. **Post-WIFIA Investor Reaction**: Debt investors will react to the reduced supply of tax-exempt bonds by buying equivalent taxable bonds with the same risk and return characteristics. This causes a chain of aggregate portfolio substitutions to accommodate the increased supply of US Treasuries issued to fund the WIFIA loans. Aggregate portfolio debt remains the same, but the taxable portion is higher.

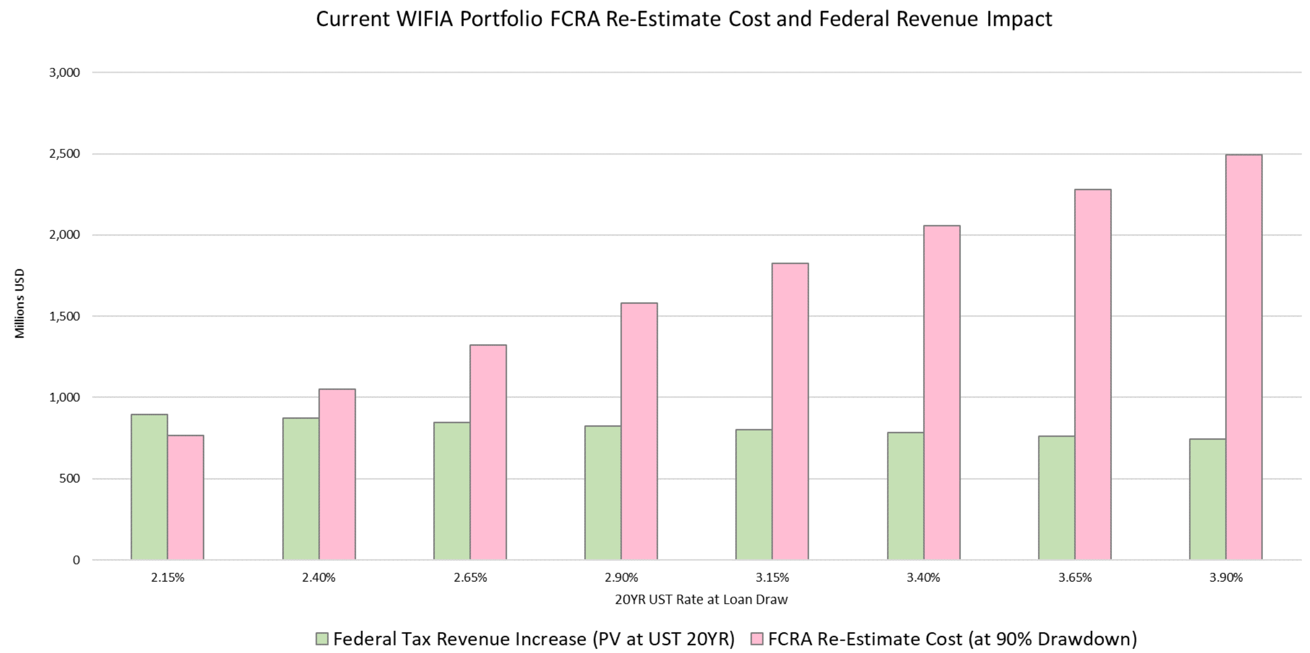
3. Estimated Federal Tax Increase from Current Portfolio



Using JCT methodology, the federal tax impact of WIFIA's loan commitment portfolio can be estimated by modeling the portfolio of taxable bonds that will be bought by investors as a substitute for displaced tax-exempt bonds . Assumptions include:

- Although a WIFIA loan is drawn over time, the loan commitment itself will displace tax-exempt bonds that would have been issued (with escrowed proceeds) to fix rates at the outset of the project's construction period.
- Federal tax rates on taxable bond interest will vary over time and for specific investors. JCT has used a rate of 25% as a general average for their estimates.
- Taxable interest is assumed to be (1) the UST 20YR at the time of WIFIA loan commitment when the taxable bonds are bought, corresponding to the weighted average life of a 35-year WIFIA loan, plus (2) a spread of 0.75%, corresponding to typical market spread for Aa3/AA- corporate bonds, reflecting average WIFIA loan credit quality.

4. Comparison of Federal Tax Impact and FCRA Re-Estimate Cost



The PV of annual federal tax increase due to WIFIA's current portfolio can be directly compared to the FCRA cost of re-estimates from the portfolio (also a PV metric) described in Part 1. Both amounts are sensitive to higher future interest rates, but in different and opposite ways: (1) higher rates increase the discount on future tax revenues, while (2) raising the re-estimate cost directly.

In general, at current levels of UST 20YR rates, the PV of increased tax revenues will substantially offset (or even exceed) the re-estimate cost of the portfolio. Although these are separate federal budgeting concepts, in economic terms the offset is a substantive, hedge-like mitigant to portfolio interest rate exposure.

At the higher UST 20YR rates projected over the next 5-7 years by CBO, this federal tax impact is an increasingly less effective 'hedge' as the metrics diverge, but it covers not less than about 30% of exposure.

5. Current JCT Assumptions and Consistency with OMB 129

JCT's most recent official estimate for WIFIA's impact on federal tax estimates is found in CBO's scoring of S.2800, the Water Resources Development Act of 2018. Their estimate explicitly assumes that WIFIA loans increase the amount of tax-exempt debt issued because the loans will enable investments in water infrastructure that otherwise would not have occurred. As a result, JCT methodology will show a displacement of taxable debt and lower federal revenues. Their model projects a $2.6 billion reduction over the scoring period:

> **Revenues**
>
> JCT expects that some of the funds authorized to be appropriated in S. 2800 for loans to State Revolving Funds and eligible entities under the WIFIA program would be used by state and local governments to leverage additional funds by issuing tax-exempt bonds. JCT estimates that the issuance of additional tax-exempt bonds would reduce federal revenues by about $2.6 billion over the 2019-2028 period.

In the absence of actual data (at the outset of the WIFIA Program, for example), JCT's assumption that WIFIA loans would enable water projects that would not have happened otherwise is reasonable in the context of typical policy objectives for infrastructure loan programs. However, it is apparent that essentially all WIFIA loans in the current portfolio are for basic or non-optional infrastructure projects that demonstrably would have proceeded without the Program, and that these projects would otherwise been financed with tax-exempt debt. JCT should update their assumptions using actual WIFIA data for future scoring.

This will likely necessitate a review of the WIFIA Program regarding OMB Circular 129 (November 2020), specifically paragraph II.A.5, which specifies that private lending is "displaced to the smallest possible degree" by federal loan programs:

> 5. The effects on private capital markets. The review should estimate the extent to which the program substitutes directly or indirectly for private lending, and analyze any elements of program design that encourage and supplement private lending activity, with the objective that private lending is displaced to the smallest degree possible by agency programs.

Conclusions

As described in Part 1, WIFIA's current $9 billion portfolio of loan commitments is highly exposed to rising interest rates. The federal tax impact described in this Part 2 is a separate but equally significant economic element of the portfolio.

- The displacement of tax-exempt debt by WIFIA loans was not an intentional policy outcome. Rather, although it was expected that WIFIA borrowers would likely be public water systems that ordinarily access the tax-exempt market for infrastructure financings, the broad policy objective was for WIFIA loans to enable projects that would not have proceeded otherwise. The newly-enabled projects would add to the national stock of water infrastructure, fulfilling the direct policy goal. In that scenario, WIFIA loans would increase, not displace, tax-exempt bond issuance for the 51% non-WIFIA share of the project's financing. This scenario is consistent with JCT's current assumptions and OMB Circular 129's objectives.

- However, since the Program's operational inception and during the period the current portfolio was executed, it appears that essentially all the projects utilizing WIFIA loans would have proceeded anyway. In retrospect, this is not a surprising outcome, due to the value of the interest rate option described in Part 1. The interest rate option effectively made a WIFIA loan a better alternative than an otherwise similar tax-exempt bond for many projects that were already in an advanced planning stage. This resulted in WIFIA loans' broad applicability as a cost-effective replacement for tax-exempt debt in basic infrastructure projects, an apparently successful outcome in terms of Program transaction volume, though questionable from a policy perspective.

- In effect, WIFIA current portfolio's exposure to interest rate re-estimates and its federal tax impact are both unintended consequences of WIFIA's statutory provisions for a fixed interest rate and flexibly drawable loan commitment that extends over lengthy construction periods.

Going forward, there are several implications to consider:

- The fact that the federal tax impact appears to offset the re-estimate cost of the portfolio at current rates is also an unintentional, though fortuitous, economic result for federal taxpayers. Nevertheless, it should be considered as a substantive mitigating factor to current portfolio risk.

- If WIFIA continues its present course with new loans (which looks likely, at least in the short term), the federal tax impact of each new loan commitment should be assessed, and the value applied in some way to hedge or reserve for the loan's re-estimate risk, if only for the purpose of high-level evaluation or oversight.

- Most generally, both Part 1 and Part 2 of this analysis of WIFIA's current portfolio strongly suggest that, despite apparent success to date, the Program's policy purpose, financial risk management and loan products should be re-evaluated and clarified.

Links to Related InRecap Material

The WIFIA Bank (*WFM March 2021*)
An Institutional Lender to the State & Local Public Sector (*InRecap post April 2021*)
Resetting the Mission at WIFIA (*WFM Oct 2020*)
An Update on the WIFIA Loan Program (*WFM Aug 2020*)
Is the WIFIA Program Successful? (*SSRN July 2020*)

Economic Cost of WIFIA Portfolio: Part 1 (*Non-public technical analysis April 2021*)
Innovative Infrastructure-Related Initiatives (*InRecap post Feb 2021*)
WIFIA: Examining Synergies with the Muni Bond Market (*WFM Sep 2020*)
Yes, Get WIFIA's Budget Scoring Right (*InRecap post Sept 2020*)
WIFIA Loans to SRFs Will Pay for Themselves (*InRecap post May 2021*)

Extended 55-Year Term for WIFIA Loans (*InRecap post Feb 2021*)
Contingent Loans for Climate Adaptation (*InRecap post Feb 2021*)
Federal Climate Contingent Loan Portfolio Sell-Down (*InRecap post Feb 2021*)
Data Visualization for WIFIA Loan Benefits (*Upcoming WFM April 2021*)
Can Innovative WIFIA Features Expand SRF Loan Capacity? (*Upcoming WFM April 2021*)
WIFIA Sinking Fund Option (*Non-public technical analysis Feb 2021*)