



Grant Anticipation Revenue Vehicles: An Option to Finance Transportation Projects

Grant Anticipation Revenue Vehicles (GARVEE bonds) are a financing instrument that enables states to fund transportation projects based on anticipated receipt of future federal funds. Specifically, states (or local agencies) can issue GARVEE bonds for transportation projects using future federal highway funds to repay the principal, interest, and any other costs associated with the issuance of the bonds.

The use of GARVEE bonds was authorized by the National Highway System Designation Act of 1995. The act expanded the types of bond-related costs that could be financed by federal highway funds. While the total amount of federal funds states receive remains unchanged, they can now use a portion of those funds for debt-financing. Prior to 1995, states could only use federal highway funds to repay the principal on bonds—a restriction which substantially limited a state's ability to leverage future federal highway funds.

Pros and Cons of GARVEE Bonds

The criteria for determining when GARVEE bonds would be an appropriate funding mechanism are largely the same as those that would apply in considering any type of bond financing. Since enacting the gas tax in 1923, California has relied primarily on pay-as-you-go financing for transportation projects. When existing revenues are sufficient to meet transportation needs, pay-as-you-go financing is generally preferable to bond financing since it avoids the additional debt service cost. However, pay-as-you-go financing of certain costly, high-priority projects (including projects which need to be accomplished within a short period of time, such as the seismic retrofit of the state's roads and bridges) could leave few additional revenues for other purposes. In such instances, pay-as-you-go financing may not be desirable and bond financing may be a better approach. Additionally, to the extent that bond financing allows a project to be built sooner, it could be more cost-effective by avoiding cost increases resulting from inflation. Furthermore, by delivering a project earlier than

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would otherwise be possible, bond financing may also provide greater benefit to the public.

GARVEE bonds also contain several unique characteristics that ought to be considered when choosing between various financing options. First, indirect GARVEE bonds (discussed below) allow projects to be funded with federal transportation funds without being subject to the various federal requirements attached to the use of such funds. Second, use of GARVEE bonds, unlike use of general obligation (GO) bonds, is not subject to voter approval.

GARVEE bonds, however, are more costly than GO bonds as they are deemed somewhat more risky. As a consequence, they are likely to have higher interest rates. This is because the bonds are backed by anticipated future federal funds without any guarantee that the funds will in fact materialize.

How Do GARVEE Bonds Work?

Direct GARVEEs. Federal law authorizes two types of GARVEE bonds: direct and indirect. *Direct* GARVEE bonds are financed by future federal reimbursements for a specific project (or groups of projects). Any project that is eligible for federal highway funds would be eligible for direct GARVEE bond financing.

In order to qualify for direct GARVEE bond financing, a project must be approved by the Federal Highway Administration (FHWA) as an “advance construction” (AC) project. This designation requires that the project be contained in the State Transportation Improvement Program (STIP) and ensures the project’s future eligibility for federal assistance. The amount of the AC designation would be equal to the federal share of the project—usually about 80 percent of the project’s costs,

Indirect GARVEEs. These bonds are more flexible than direct GARVEEs. They are repaid by federal funds that the state anticipates receiving as reimbursement for *other* transportation projects. Once the state receives the reimbursement, the federal funds are considered “state funds.” As such, these funds are free from federal requirements regarding the types of projects that the money can be used to finance or any other federal requirements.

Here is how indirect GARVEEs work: Assume, for example, that California issues a GARVEE bond for Project A, a project which is eligible for *state* highway funds, but has not been approved (or may not even be eligible) for *federal* highway funding. When the state receives federal reimbursement for Project B, which *was* approved as a federally eligible project, the state could choose instead to use those funds for bond payments on Project A. Project B, in turn, would be funded with state funds.

In the case of both direct and indirect GARVEE bonds, the state must demonstrate prior to bond repayment its ability to pay its share (typically 20 percent) of the anticipated debt service cost. The state may pay its share in a variety of ways, including: (1) pay its share of contributions on an ongoing basis as costs for the project are incurred; (2) pay its full share up front based on the net present value of the anticipated cost of the project; or (3) issue bonds to separately finance the state share of project costs.

Impact of TEA-21 on GARVEEs

How a bond is received in the financial market depends largely on the predictability of future revenue streams. The federal Transportation Equity Act for the 21st Century (TEA-21), enacted in 1998, substantially reduced the short-term risk of

GARVEE bonds by providing states with a minimum guarantee of federal funding. This virtually eliminates the risk of anticipated federal funds not materializing *within* the six-year (1998 through 2003) authorization period of the act. Although it is considered very unlikely that federal transportation allocations will substantially diminish beyond 2003, there is no guarantee that subsequent federal transportation acts will provide a level of funding equivalent to TEA-21. Therefore, given that the terms of a GARVEE bond will usually extend beyond the duration of the existing federal transportation act, they are subject to some inherent risk.

Market Response to GARVEE Bonds

To date, three states—Massachusetts, New Mexico, and Ohio—have issued GARVEE bonds. Ohio and New Mexico employed a direct GARVEE whereas Massachusetts utilized the indirect GARVEE. The projects vary in complexity and cost ranging from a \$116 million interchange in Ohio to the \$10.8 billion Central Artery Tunnel in Boston. In addition to these states, Mississippi, Arkansas, and Colorado have passed enabling legislation, and Arizona and California have pending legislation to authorize the use of GARVEE bonds.

Based on the three experiences to date, it appears that the bond market views GARVEE bonds favorably. Although riskier than GO bonds (which are secured by the “full faith and credit” of the state), GARVEE bonds still received strong, investment grade ratings from rating agencies. New Mexico, Massachusetts, and Ohio’s GARVEE bonds, for example, received ratings of AAA, AA3, AA3 respectively from Moody’s rating service. In each state, the interest rate on the GARVEE bond was relatively close to the state’s GO bond and state revenue bond interest rates.

To help bolster their bond ratings, all three states provided bondholders with some type of funding backstop in the event that federal funds are insufficient to meet bond payments. Massachusetts and Ohio structured their debt so that other state transportation funds may be sought in the event of unexpected federal fund shortfalls. Specifically, Massachusetts pledged to direct 10 cents of its 21-cent state fuel tax towards GARVEE bond repayment in the event of a federal funding shortfall. New Mexico chose instead to purchase municipal bond insurance which increased the rating on the bond from an underlying A3 (still considered “investment grade,” but significantly lower than the state’s Aa1 GO bond rating), to AAA (the highest possible rating), resulting in at least \$500,000 savings over the life of the bond. To date, no GARVEE bonds have been issued without some type of additional funding backstop.

Use of GARVEEs in California

Current state law does not yet authorize the issuance of GARVEE bonds. However, SB 928 (Burton)—currently in the Assembly Appropriations Committee—would authorize the state to issue such bonds. In order to protect other state funds in the event of federal funding shortfalls, SB 928 specifies that the bonds would not constitute a liability of the state. In short, bond repayment would only be made from federal transportation funds.

To date, states have issued GARVEE bonds which have total debt service equal to almost 12 percent of their annual federal transportation apportionments. At this level of debt service payments, each state received investment grade ratings. In Massachusetts, for example, average annual debt payments on the GARVEE bond are expected to be approximately \$60 million, about 11.5 percent of the state’s average annual federal

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highway apportionments of approximately \$524 million. Based on this experience and with annual transportation apportionments totaling approximately \$2.2 billion, it appears likely that California could authorize annual debt service payments in the range of \$200 million to \$250 million.

Should California Issue GARVEEs?

Short-Term Considerations. GARVEE bonds provide the state with a new option for financing its myriad of transportation needs. In the short run, however, there appear to be limited advantages to financing projects with GARVEE bonds. This is primarily because of two factors. First, as a result of TEA-21, which provided the state with an increase of approximately 40 percent in federal funds, the state does not currently face any immediate cash-flow problems with respect to financing transportation projects. Indeed, the state has received such an infusion of funds that a major concern at present is ensuring that the state does not lose any of its federal funding due to an inability to expend the funds in a timely manner.

Second, to the extent that GARVEE bonds are issued for projects on the state highway system, the state may face administrative barriers to successful use of GARVEE bonds. In order to benefit from the increased level of funding that would be

made available by GARVEE bonds, the Department of Transportation (Caltrans) has to be capable of hiring and managing sufficient staff to design additional projects financed by bond proceeds. This could present a serious challenge given that Caltrans encountered some difficulty in recruiting, hiring, and retaining qualified staff to fill 2,500 new positions in 1998-99, and is planning to further expand project delivery staff by over 1,000 for 1999-00.

Long-Term Considerations. Any consideration of GARVEE bond financing should take into account the cost-effectiveness of using this financing mechanism—including the extent to which state funds can be freed up (by earlier use of future federal funds) to fund other projects, as well as the logistical question of whether Caltrans has (or can easily obtain) the resources to perform the additional design work.

While California may not need to take advantage of GARVEEs in the immediate future, there is no doubt that the state's unfunded transportation needs—most recently estimated to be over \$100 billion—far exceed available funding. As the Legislature considers how to finance these needs, GARVEE bonds would provide the state with an additional financing tool.

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