

An alternative hypothesis is that voters and public officials attempt to adjust actual to desired stocks of buildings and equipment, rather than actual to desired stocks of debt. Or, some weighted average of real stocks of capital, service flows from that capital, and debt would be relevant to decisionmaking. However, the difficulty of measuring stocks of buildings and equipment statistically is compounded by problems of relating that stock to flows of present and future services. The alternative service-flow approach, while perhaps more relevant to voter and official thinking, is troubled by just about the same problems of measurement. On the other hand, stocks of debt are measurable and known to most public officials. An increase in debt levels raises amortization and interest payments and therefore tax burdens in an immediate and measurable way. In addition, increases in debt relative to the tax base may have an unfavorable impact on bond ratings and hence the future cost of borrowed funds.

On the supply-of-funds side of the municipal bond market, the review of the literature in part I and the immediately preceding discussion suggest the following variables as influential: Municipal bond yields; yields on competing, taxable securities; time deposits at commercial banks; some measure of the wealth of individuals in high tax brackets; some measure of the difference between expected and actual municipal bond yields; the stock of liquid assets of State and local governments (positively related to supplies of loanable funds, since such assets help to insure that debt amortization payments are met); and the stock of State and local bonds in individual and institutional portfolios (exercising a negative influence on lending, as long as the relevant elasticities of substitution are less than infinite). This list of variables, and the supposition that lender reactions may require more time than the semiannual periods of our data, suggest the following stock adjustment model like for borrowers in its form:

$$(2) \quad B_t = \delta_2(A'Y'_t - S_{t-1})$$

when δ_2 is the lenders' reaction-speed coefficient, the Y primes are a vector of variables positively and negatively affecting the desired stock of bonds in the collective portfolio of all lenders and bondholders, the A prime are the coefficients relating these variables to the desired stock of bonds, and B and S are defined in the same way as for borrowers.³

costs, and uncertainty induce bondholders to postpone a part of the net change in bondholdings to later periods, why should not the same factors operate with respect to checks received in repayment of debt? The bondholder always has the alternative of doing nothing, and doing nothing during a period means that the stock of debt at the beginning will be reduced at the end by the amount of debt amortization received. And reinvestment of the incoming flow of amortization payments demands the same attention and involves the same steps as the portion of bond purchases which result in a net change in holdings. Reinvestment and net investment, in short, are Siamese twins; and gross, not net, investment should be explained by the lagged stock adjustment model. Similar conclusions apply to State and local decisions on gross and net borrowing.

But whichever theory the reader prefers, the delta coefficients in equations 1 and 2 are not the delta coefficients in the classical stock adjustment model. However, differences between the writer's and the classical delta coefficients are very minor for values of either which are moderate to large in size, as long as we can make another assumption. This is that current period amortization is a constant fraction of the lagged stock of bondholdings (or debt, for State and local governments) over time. Given this assumption, which is very realistic for the period since 1951, the relationship between the classical reaction-speed coefficient and the writer's delta coefficients in equations 1 and 2 is as follows:

$$\delta = \delta'(1 - \alpha) + \alpha$$

When alpha is the constant proportion of current debt repayment to the lagged stock of debt, delta is the classical reaction-speed coefficient and delta prime is the writer's reaction-speed coefficient. Since amortization payments have always been less than a tenth of the lagged debt stock for State-local governments, simple calculations show that as long as delta is above 0.3 or so, delta and delta prime are very close to each other. And the same is necessarily true in both equations 1 and 2 of the text, since alpha is the same for both. As before, the lagged stock is defined as the sum of the actual lagged stock and current debt amortization. See footnote 2 for the general justification for this special definition of the lagged stock. The reasons given there, mostly with respect to bondholder behavior,