

cluding the finding of Tanzer of an appreciable and negative relationship between "surplus" liquid assets and borrowing as well as the minor weight given to liquidity by Moody's analyses of individual bond issues which the writer has read, it is highly probable that much more weight is given to liquidity by borrowers than by lenders. On the assumption that between 2.5 and 5 times as much weight was placed by borrowers, B_m is between 2.5 and 5 times greater than A_m . Calculations based on this assumption and values found for delta-prime in the regression runs found that β_m and A_m would diverge from delta-prime in equation (3) by about the same number of basis points. Since we might expect lenders to have significantly faster reaction reflexes than State and local borrowers, for reasons discussed earlier, this implies that the general finding of delta-prime coefficients between 0.5 and 0.8, with the most plausible finding that at or slightly below 0.8, means that lenders make nearly all adjustments to their portfolios based on current conditions within the current semiannual period, while borrowers carry over a considerable but not suspiciously large proportion of the ultimate adjustment to following periods. While speculative, these calculations suggest that the combined reaction speed (delta prime) coefficients found in the regression runs are, at the least, not implausible in magnitude.

Going to these runs, equation (3) was tested in its statistical form with the modification that all stock and flow variables, including specifically the lagged stock of State-local debt, were transformed to percentages of lagged permanent income (with Friedman weights). Several reasons for this suggested themselves besides the statistical convenience of removing collinearity among the independent variables because of growth and postwar trends in credit and monetary conditions. Permanent income is defensible both as an index of the combined total of human and nonhuman wealth (presumably applicable to aggregate investor portfolio decisions) and as an index of the tax base for financing interest and amortization on State and local debt (and hence of the burden of that debt on voters). Time and savings deposits at commercial banks, Federal grants-in-aid, and other "institutional" variables are likewise expressed as percentages of permanent income because they are related to desired debt and asset levels of borrowers and lenders respectively. A word might be said about the variable, the Standard & Poor's stock price index as a percent of permanent income. Because of the scarcity of stock issues relative to retirements and value of stock outstanding, stock prices are an approximation to an index of the value of all shares outstanding, for the period since 1951 at least. Thus, the writer interprets increases or decreases in the percentage of stock prices to permanent income as measuring the extent to which the wealth of high-tax-bracket individuals is rising or declining relative to the wealth of the rest of us. If this is correct, this variable should catch changes in the demand of wealthy individuals for State and local bonds which are not reflected in aggregate economic growth and gross saving.

Only one variable was used in either level or interest rate spread form to measure the influence of yield changes in investments competing with municipals on the supply of loanable funds. That was the long-term yield of U.S. Government securities. This limitation was suggested by the very high collinearity of most long-term interest rates and the need to experiment with alternative measures of State and local needs for borrowed funds and of the expectations of borrowers as to future interest rates.

An accounting defect in the analysis is that the lagged debt stock variable includes short as well as long-term State and local contractual debt while the debt flow variable (bond sales) is limited to long-term debt. While the influence of this difference is judged to be very minor, because of the very small proportion of new short-term borrowing relative to bond sales in nearly all post-war periods, it should be kept in mind by the reader.