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Foreign Influences on U.S. Interest Rates

Foreign events have had a significant effect on U.S. interest rates since 1975, according to **The International Financial Market and U.S. Interest Rates**, *Working Paper No. 598*, by NBER Research Associate **David G. Hartman**, Executive Director of the Bureau. Past research on the sensitivity of international capital flows to U.S. interest rates typically assumed that short-term interest rates in the United States were not, in turn, affected by those capital flows. Even in studies of the relationship between the Eurodollar market and the domestic U.S. financial market, causality was assumed to run in only one direction, with interest rates in the United States taken as given—unaffected by events in the rest of the world. That assumption becomes more questionable with the lifting of U.S. restrictions on capital outflows after 1974, and the sizable increase in international financial transactions in recent years.

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Hartman compares the movements in three-month Eurodollar interest rates with rates on comparable domestic commercial paper. The two markets move in close harmony on a monthly basis, suggesting powerful arbitrage in one market or both. Unanticipated changes in Eurodollar and domestic rates are only moderately correlated from week to week, however, permitting investigation of the dynamic interaction of both markets in order to detect patterns of causality. For example, Hartman finds that an unanticipated increase in the Eurodollar rate is largely arbitrated within a few weeks by a rise in domestic interest rates and a decline in the Eurodollar rate.

Moreover, the author concludes not only that about one-third of the variation in Eurodollar rates can be traced to U.S. sources but, more strikingly, that a sig-

nificant fraction of the variation in U.S. rates from 1975 to 1978 is attributable to foreign sources. Although a precise estimate of the extent to which foreign influences account for U.S. rates is unavailable, Hartman's analysis indicates that between 18 and 64 percent of the variation in U.S. commercial paper rates is due to foreign sources. This impact of external events on the U.S. market is a new development; it does not show up in the early 1970s.

Both foreign and domestic markets for dollar-denominated assets thus appear to be closely linked, adjusting rapidly to events affecting either market. “The U.S. financial market,” Hartman concludes, “is not as insulated as is ordinarily assumed.” AR

Money, Credit, and Economic Activity

Economists traditionally have viewed the money supply as being considerably more important than the quantity of outstanding credit in the determination of economic activity. NBER Research Associate **Benjamin M. Friedman** has called that conventional emphasis into question in a new study that focuses on the relationship between GNP and the total credit liabilities of all nonfinancial borrowers. In **The Relative Stability of Money and Credit “Velocities” in the United States: Evidence and Some Speculations**, *Working Paper No. 645*, Friedman finds that the total indebtedness of nonfinancial borrowers bears at least as close a relationship to economic activity as the more familiar monetary aggregates.

The principal credit aggregate that has remained stable relative to GNP includes the debts of households, nonfinancial businesses, state and local governments, and the federal government. To avoid double-counting, it excludes debt issued by financial

institutions, such as finance subsidiaries of nonfinancial corporations and federally sponsored credit agencies and mortgage pools. Looking at nonfinancial credit for the years from 1953 through 1978, Friedman finds that it changed very little when measured relative to economic activity. It was 135 percent of GNP at the end of 1953 and 143 percent at the end of 1978; the high for the period was 146 percent at the end of 1964 and the low 133 percent at the end of 1956.

Such stability in the economy's overall debt ratio is not necessarily surprising by itself. What makes it remarkable is that the total has been so stable despite considerable variation in its components. In general, a rise in household and corporate debt has offset a long-term decline (relative to GNP) in government debt. At the same time, cyclical bulges in government debt have largely offset cyclical declines in private debt. Friedman also looks at the debt ratio over a much longer period and still finds essentially no change. The ratio of debt to GNP at the end of 1978 was virtually unchanged from the ratio at the end of 1921.

To test the relative stability of the nonfinancial debt ratio, Friedman first compares it with nine other financial aggregates over the 1953–78 period. They include such things as the monetary base, M1, M2, M3, total credit (including the liabilities of financial institutions), and bank credit. Based on the raw data, and with the exception of net nonfinancial assets, nonfinancial debt showed the least variation. Nonfinancial debt was also fairly stable when the data used in its computation were adjusted for the long-term increase in the velocity of money. In that case, net financial assets and total debt were most stable, nonfinancial debt placed third, and all the monetary aggregates followed.

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Next, Friedman performs a series of tests to examine the source of the stability of nonfinancial credit and to compare it further with the other aggregates. The first tests show that increases or decreases in federal borrowing relative to GNP tend to be offset in a systematic way by opposite changes in the borrowing of households, corporations, and state and local governments.

Using a second type of test, Friedman finds that total nonfinancial credit is the only credit aggregate that exhibits true underlying stability. According to those tests, the stability of the debt ratio increases when federal debt is added to nonfederal, nonfinancial debt, and then decreases when the debt of financial institutions is added to the total.

Friedman performs an assortment of other tests as well, including a series of simulations using a four-variable system of money (M1), nonfinancial credit, real income, and the price level. In some simulations, credit was more stable relative to economic activity than M1; in others, the stability of credit and money were comparable. Friedman interprets the tests as showing that the relationship between nonfinancial credit and economic activity is at least as strong and stable as the more familiar relationships involving monetary aggregates and the monetary base.

Friedman offers three hypotheses that might explain why credit has remained so steady relative to GNP. The first is the “ultrarationality” hypothesis. In essence, it assumes that individuals as a group “see through the shell” of both corporations and the government and regard corporate and government debt as ultimately their own. If that is true, households would see the decline in government debt from 73 percent of GNP in 1953 to 41 percent in 1978 as a decline in their own indebtedness and would offset it by increasing their direct borrowing and the corporate component of their indirect borrowing.

The second hypothesis, which Friedman calls “capital leveraging,” assumes that individuals do not see through the shell, and that their borrowing is limited by credit market constraints. Under that hypothesis, the decline in federal borrowing has necessarily entailed a reduction in the holdings of government securities by individuals. That drop in financial asset holdings has been matched by an increase in tangible assets and, in turn, individual borrowing power. Thus, the stability of the debt ratio may reflect an increase in tangible assets, and borrowing against those assets, as government securities have declined relative to GNP.

The third hypothesis, called “asset demand,” combines elements of ultrarationality and capital leveraging. According to ultrarationality, the private sector acts to maintain constant ratios of both assets and liabilities to income. The asset demand hypothesis further assumes that people want to hold constant proportions of tangible and financial assets. If that is true, a drop in the supply of government securities would give rise to greater demand for privately issued debt instruments. Alternatively, the asset demand hypothesis can combine an assumption of constant demand for financial assets (relative to income) with the capital leveraging hypothesis. If net worth is stable and government-issued financial assets falling, privately issued financial assets (that is, private debt) must rise.

Friedman's study stops short of rigorously testing any of the three hypotheses. The results documenting the stability of the debt-to-income relationship, however, together with the existence of at least three explanations bearing very different implications for monetary and fiscal policies, warrant a redirection of monetary research toward the nonbank public's credit liabilities as well as its monetary assets.

Unemployment Insurance and Consumption

Social insurance programs, such as unemployment insurance (UI), are designed to help people maintain their spending on goods and services (consumption) during difficult times and thereby to stabilize aggregate demand (and employment). However, most research to date on UI has focused on its distortionary effect on the labor market. In *Working Paper No. 600, Social Insurance and Consumption: An Empirical Inquiry*, NBER Research Associate **Daniel S. Hamermesh** takes an innovative look at the effect of UI on consumption.

UI benefits are designed to enable individuals who have not saved sufficiently for "hard times," or who are unable to borrow during such periods, to maintain their level and pattern of consumption. Hamermesh's data for the U.S. economy from 1954-78 and on over 14,000 individuals surveyed in 1972-73 reveal that at most half of the UI benefits paid are spent as designed—that is, as if spending on goods and services would otherwise be constrained by lack of current income. The other half of UI benefits merely add to the individuals' stream of lifetime income and spending. In other words, about half of UI recipients need the benefits, which for them may even be inadequate, while the other half have enough savings and ability to borrow so that UI benefits are more than adequate for maintaining consumption. Thus, UI payments "are only partly used to tide over individuals suffering transitory loss of income."

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However, individuals receiving UI spend a larger share of their total income on necessities than nonrecipients. Further, although a disproportionate share of UI benefits is spent on luxuries, UI recipients spend less in total on luxuries than nonrecipients with the same total incomes. The 50 percent or so of UI recipients with inadequate savings, or with an inability to borrow, buy and spend differently than they otherwise would; for them, additional benefits would "loosen the constraint on the composition of spending as well as that on total spending."

Finally, Hamermesh considers the stabilization rationale for UI. He finds, though, that a major portion of UI does not stabilize employment because people spend the benefits as if they are fully expected. "The main point," Hamermesh concludes, "is that much of the potential...stabilizing effect of UI...is dissipated because many recipients respond to the existence of UI payments by changing saving rather than consumption spending."

The Past and Future of S and Ls

To some observers, many of the nation's savings and loan associations (S and Ls) have been practicing something close to levitation: they have been floating financially despite the lack of almost any visible support. They have been losing deposits to money market funds and other high-interest-rate investments, and they have seen the value of their long-term, low-interest assets, namely mortgages, decline precipitously over the past fifteen years with accelerating inflation and rising interest rates. Yet not many have gone bankrupt so far. Why is that? In *Working Paper No. 640, Reregulation, Savings and Loan Diversification, and the Flow of Housing Finance*, NBER Research Associate **Edward J. Kane** reveals some of the "tricks" behind this "magic."

Before getting into his explanation, however, Kane indicates a certain bemusement with the title of the important legislation dealing with banks and thrift institutions passed by Congress last year—The Depository Institutions Deregulation and Monetary Control Act of 1980 (DIDMCA). Some observers maintain that DIDMCA aggravates S and Ls' financial problems. Kane calls the legislation "reregulation" rather than "deregulation"; it does relax protective restraints on deposit institution behavior, but it does so only partially, gradually, and in a discretionary manner. Moreover, it applies Federal Reserve System reserve requirements for the first time to roughly 9000 nonmember commercial banks, 5000 S and Ls, 500 mutual savings banks, and 22,000 credit unions.

Kane's paper clearly spells out the deterioration in the financial position of savings and loan associations. Because of the many antiquated mortgages with low interest rates held by S and Ls, the S and Ls' return on mortgages was only 9.18 percent per annum in the first half of 1980, while the effective mortgage interest rate on new homes was 12.63 percent. The proportionate shortfall in mortgage income yield (what Kane calls the pseudo-default rate on S and L mortgage loans) was an estimated 27.32 percent.

There are some mitigating factors for the S and Ls, though. First, only a small fraction of mortgage loans remain outstanding until maturity in perhaps 20 to 30 years; many are prepaid at par. Second, S and Ls have unrealized capital gains in their branch office real estate. Also, today's high nominal interest rates mean that the book value of S and Ls' certificate and nondeposit liabilities is overstated (the reverse of the mortgage situation). Third, Kane notes that S and Ls are *already* paying more for their deposits than the "explicit" interest rates on them. They have had to close the interest rate gap with financial competitors by giving "implicit" interest payments, such as merchandise premiums and subsidized account services. "To keep from losing deposits to traditional and nontraditional competitors, S and Ls were induced to expand both

their branch office systems and their service operations and to run them at a loss," Kane states. This means, he adds, that the average S and L will not be greatly threatened by the phaseout of interest ceilings on *explicit* deposit interest rates called for in DIDMCA.

Indeed, Kane maintains that the biggest buttress that has kept the savings and loan industry from disintegrating has been Federal Savings and Loan Insurance Corporation (FSLIC) insurance, not the extra 0.25 percent interest that the savings and loan associations can pay on savings deposits as compared to what commercial banks can offer on similar deposits. Kane's economic argument is that the insurance makes it possible for S and Ls to operate with little capital of their own because of the removal of much risk. Moreover, the out-of-pocket cost of that insurance is the same whether an S and L has a poor capital structure or a more adequate capital structure. This, he states, "generates excess demand for FSLIC insurance services, in the form of expanded risk taking by client S and Ls . . . the benefits of deposit insurance increase with leverage." So the FSLIC must necessarily impose capital adequacy requirements on S and Ls.

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One little recognized cost of the insurance and its capital adequacy requirements is that S and Ls tend not to dump their low-interest mortgages and take the losses because this would make their capital too low to qualify for FSLIC insurance. Otherwise, such losses could be written off against income taxes. So S and Ls pay more taxes than they would need to if free to take losses. Kane terms this an "implicit fee" for federal insurance. Between 1965 and 1979, the S and Ls in effect transferred 2.54 percent of their assets to the U.S. Treasury, he calculates. "Had they retained these

funds and invested them advantageously, their current condition would be less strained."

Taking these two factors together (the capital adequacy and tax questions), Kane infers that "the value of FSLIC insurance has increased dramatically with accelerating inflation. As the pseudo-default rate rises on an S and L's past mortgage loans, FSLIC insurance becomes a better and better bargain."

Because of this bargain, Kane argues, the S and L industry has not been in as bad shape as the simple statistics on book values might indicate. The price of shares of stockholder-owned S and Ls has remained positive. Nor have executives in the industry been fleeing to other activities.

Another challenge Kane offers to popular belief is his assertion that federal ceilings on deposit rates (under Regulation Q) were only proximately responsible for customers switching from low-interest pass-book deposits to higher-yielding investments in the same institutions or elsewhere during post-1965 business cycle peaks when interest rates soared to new highs. "The true causes," he states, "were state and federal government restrictions on S and L loan opportunities and on mortgage lenders' ability to design and price mortgage instruments for an environment marked by increasing rates of anticipated inflation and of inflation risk."

DIDMCA, the 1980 bill, suspended state ceilings on mortgage interest rates. It also expanded the set of alternative investments that S and Ls can make. So, Kane says, it "opens valuable new opportunities for S and Ls to protect themselves from temporary political exploitation by mortgage borrowers."

Kane's paper also looks in some detail into the impact of the new law (DIDMCA) and on the profitability, housing finance activity, and structure of the S and L industry. He concludes that S and Ls could become more profitable, that the housing industry may become less cyclical, and that the S and L industry could face considerable consolidation under the new law. As more solid banks or S and Ls take over the weaker S and Ls, deposit runs would be less likely, the federal insurance system (FSLIC) would be less exposed, and investors in stockholder-owned S and Ls would benefit. DF

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