

Riemannian analysis predicts

Presidential candidate LaRouche's economics advisors have prepared an analysis of the impact of the Federal Reserve's credit austerity policy on the United States economy, using a computer-based economic model. The accompanying graphs, generated by the computer, project a major economic depression, in the range of a 15 percent shortfall in output of tangible product from the American economy by the end of 1981.

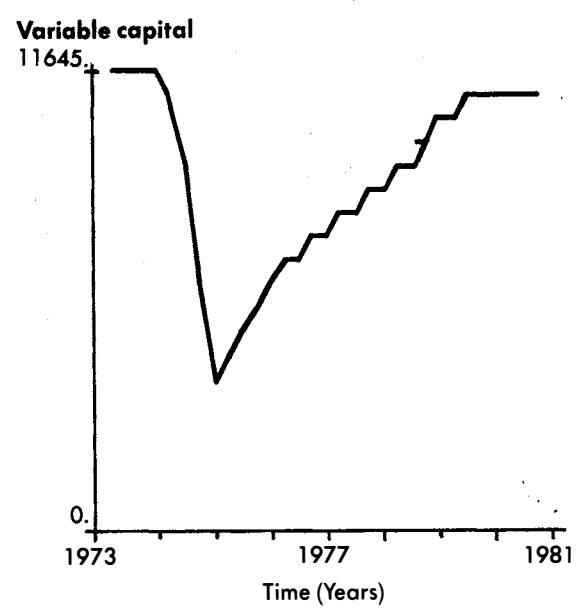
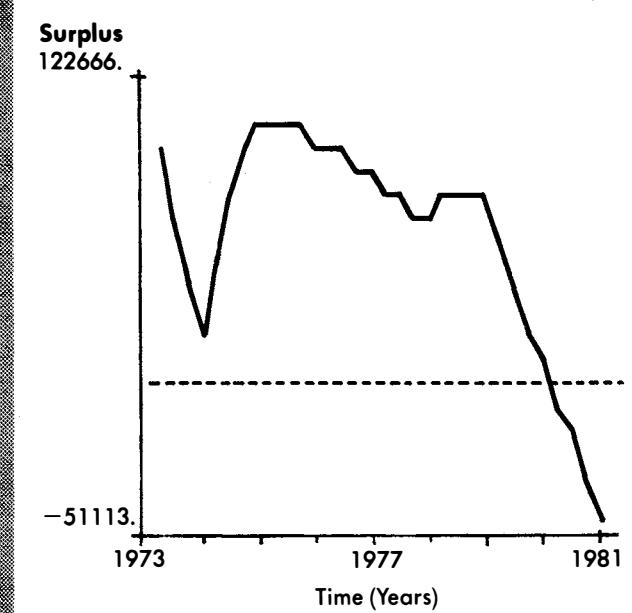
The Riemannian economic model employed is a highly innovative advance over conventional, and largely discredited, methods of computer-based economic forecasting of the type of the model employed by the Wharton School and various private consulting firms. Rather than seeking to correlate various, usually arbitrarily related elements of the Gross National Product, the Riemannian model measures the tangible, goods-producing side of the economy. The model has been featured in *The Executive Intelligence Review*, a leading

business information service, and other publications.

The accompanying computer-generated graphs show the consequences of two economic scenarios. The first four graphs analyze the impact of the credit squeeze on basic measures of the economy's productive capacity; the second four graphs measure the effect of a credit squeeze in addition to a rise in the price of oil to \$30 per barrel (for imported oil) by Jan., 1980.

Because the assumptions employed in these projections are related to political decisions forthcoming from the Federal Reserve or other branches of government, the quantitative results are less important than the qualitative results. Whether or not the rate of attrition of productive activity in the U.S. economy is the 5 percent forecast for 1981 under the credit austerity scenario—Federal Reserve decisions could make it more or less than that—the basic conclusions of the computer analysis remain valid.

U.S. economy: Effects of credit policy only



industrial shutdown

1) The trough of the forecast depression is much lower than that of the 1973-1974 recession, a conclusion clear from the computer graphs showing rate of surplus production between 1973 and 1981.

2) The rate of decline of productive activity will be considerably faster than the 1973-1974 recession—which represents the second-fastest decline on record, second only to the 1921 recession.

3) At least through the end of 1981, there is no reason to expect that the economy will enter into a recovery, according to the computer analysis. The economy is much weaker than it was in 1974, the last time the Federal Reserve put the brakes on credit creation.

The graphs for each scenario measure the following:

1) *Surplus*, or the total volume of tangible goods production (measured in current-dollar industrial sales plus or minus inventory changes) available for investment the following year.

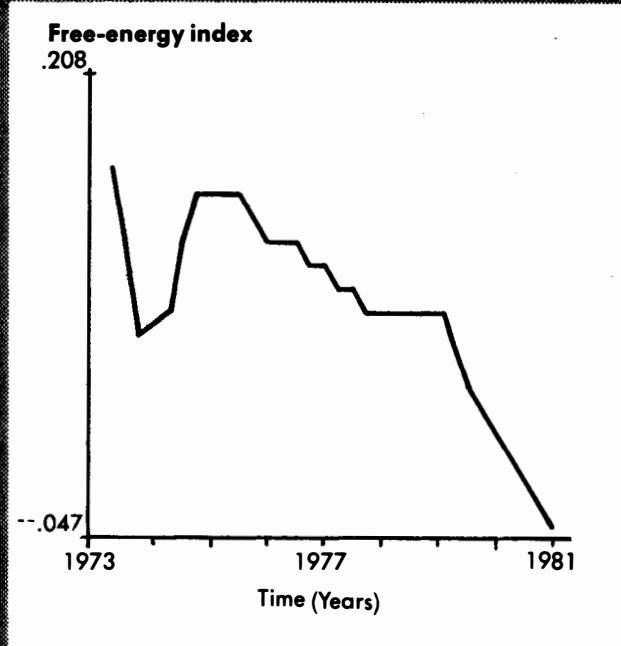
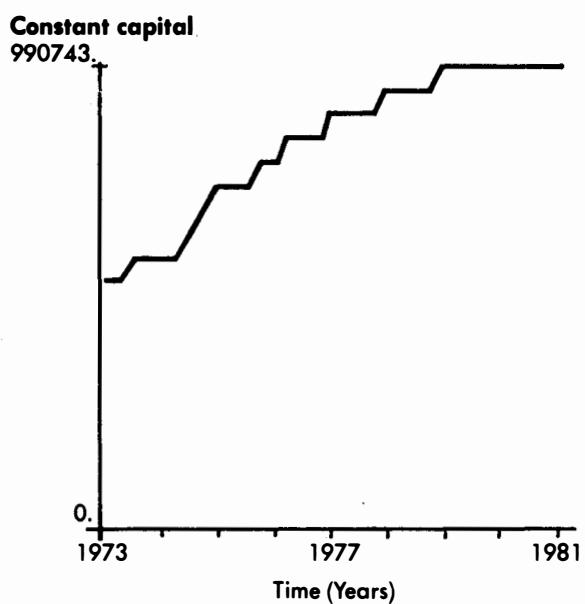
2) *Variable capital* (factor cost), or the total volume of tangible production required to employ goods-producing workforce;

3) *Constant capital* (user cost), or the total cost of maintaining productive facilities plus the cost of raw materials (unadjusted for depreciation, which would considerably lower these estimates).

4) A "free energy" index, also a measure of the economy's capacity to grow in the future. This index is the division of (1) by (2)+(3), or surplus/(variable plus constant capital).

Productivity drops

In both four-graph series, the last graph in the series, the free-energy index, shows a steady decline from the 1975 "recovery." In economic terms, this means a shift



in employment away from goods-producing to non-goods-producing activity, or an addition to the overhead cost of running the economy at the expense of its base of tangible-goods production. The employment shift over recent decades, from productive to "service" operatives, will accelerate but include "unemployed."

It also reflects a stagnating and falling rate of productivity. The Riemannian model measures productivity in global rather than local terms, i.e., instead of using the output per manhour measure, the model calculates the amount of new production of consumer goods required to generate an additional amount of surplus. In these terms, productivity has actually fallen since 1976, due to the relative increase in overhead costs.

Analytically, the sharp falloff in the free-energy index even prior to the most recent credit austerity measures shows why the economy is so much more susceptible to breakdown than in 1974-1975. The variable capital and constant capital graphs stabilize; however, since the data are current-dollar, not constant-

dollar figures, the indication is that the falloff in real terms will be roughly equivalent to the rate of inflation.

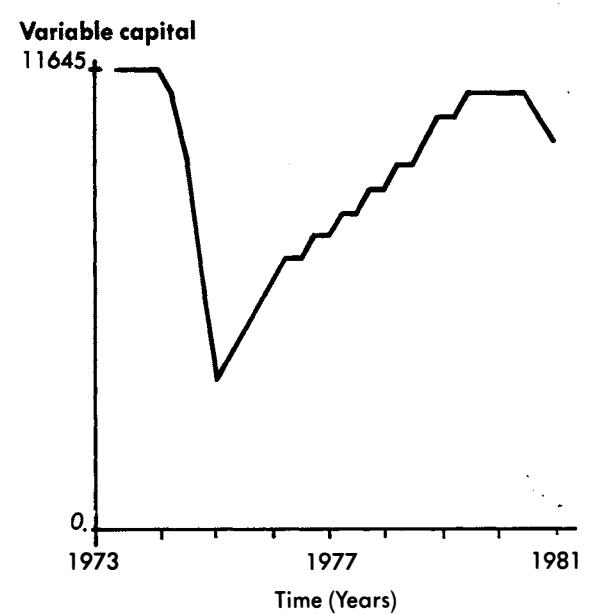
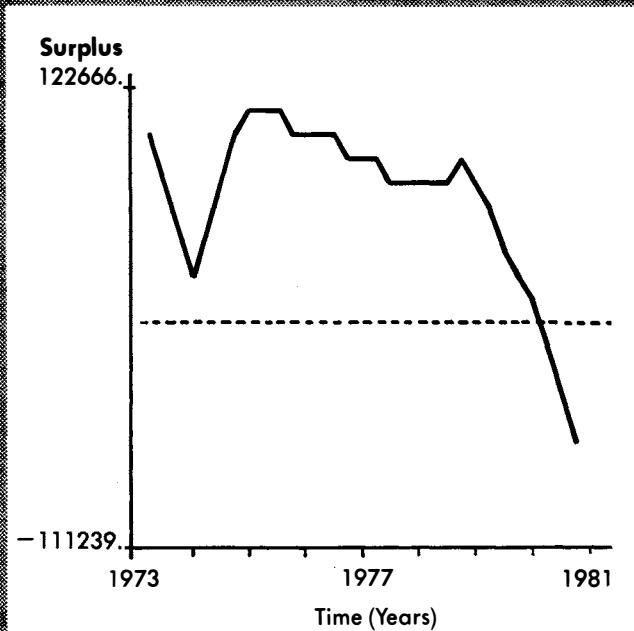
Assumptions

The assumptions used to program the model are as follows.

It is assumed that a reduction in the supply of credit (or a rise in interest rates) will directly impinge on the reinvestment of surplus into new production of tangible goods. The reasoning is based on an analysis of production and credit trends. The growth of short-term credit historically corresponds directly to the growth rate of nominal Gross National Product, i.e., the rate of growth of Gross National Product before adjustment for inflation. This statistical relationship follows common sense.

However, during the last two quarters of 1979, the rate of growth of short-term credit was approximately 20 percent. This extremely high rate of growth was far in excess of the rate of growth of nominal Gross

U.S. economy: Effects of credit policy plus \$30 per barrel oil price



National Product—a sharp divergence from the historical trend. The precise numbers for the second and third quarter GNP are not yet published, but they may be calculated from the rate of growth of real output (zero) plus the rate of inflation (12 percent). In other words, short-term credit had a rate of growth about 8 percent higher than the rate of growth of nominal GNP.

For purposes of programming the model, it was assumed that this divergence reflected an operating deficit for corporations and households taken as a whole, and represented borrowings to cover that deficit. An analysis of the major categories of borrowing justifies this assumption. The largest single sector of short-term credit growth was commercial and industrial loans from banks to private sector, which rose at a 37 percent annual rate.

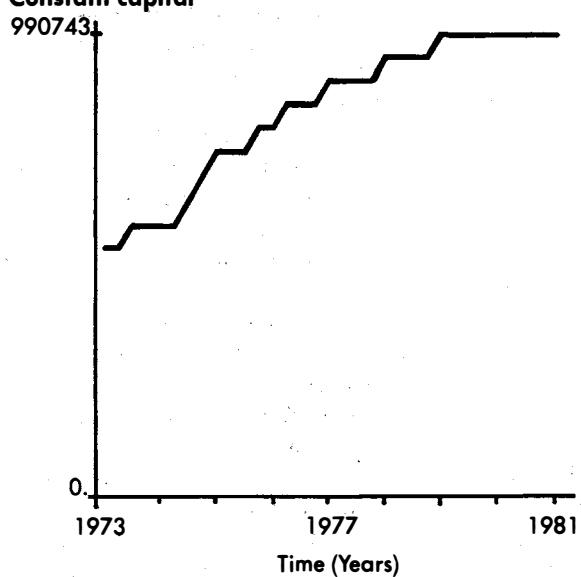
The major categories of loans were for no stated purpose, or mere assumption of credit lines while they were available; for purposes of financing tender offers; and for inventory financing. A great many smaller corporations are now surviving on trade credits provid-

ed by larger corporations, funded by fixed-term bank loans assumed earlier this year by larger corporations.

It is therefore assumed that a reduction of the growth in credit below present levels will occasion an immediate reduction in output—something that is already occurring in the case of the housing sector.

At this writing it is not known whether Federal Reserve Chairman Volcker will carry through on his intention of bringing the monetary aggregates down to the Federal Reserve's earlier targets, which would involve negative real growth in short-term credit for the rest of this year. Very few analysts believe that Volcker will go this far. If he does, there will be, in all likelihood, a prolonged crisis on the credit markets, and "a total shutoff of the flow of funds to the private sector," in the prediction of Data Resources, Inc., an economic consulting firm. Therefore it is assumed that Volcker will reduce the rate of credit growth by the 8 percent margin of excess above the rate of growth of nominal Gross National Product, and that this will impact reinvestment of surplus on a one-to-one basis.

Constant capital



Free-energy index

