

LaRouche-Riemann model: no recovery

by David Goldman, Economics Editor

That the U.S. economy will undergo a 10 percent reduction in industrial and other tangible-goods output between mid-year 1981 and mid-year 1982 is not, at this point, a forecast that surprises most observers. But the "consensus" forecast points to an early "recovery" from a "cyclical" downturn. Some commentators, e.g. the economists of Salomon Brothers, Goldman Sachs, and Tucker Anthony Day, have ventured to suggest that the obvious illiquidity of the corporate sector will draw out the "cyclical" downturn past the "normal" recovery phase, an approach that is less blinkered, but no less incompetent.

The physical economy

The extraordinary success of the LaRouche-Riemann econometric model in judging the likely behavior of the U.S. economy since November 1979 derives from our insistence that short-term, or "business-cycle," fluctuations are irrelevant to the process involved. The LaRouche-Riemann model is unique in computing a competent array of measures of economic activity, which together answer the question: how is the econo-

my's current activity affecting its future capacity to produce? The model computes the productive versus overhead, or non-productive expenditures of the economy, and measures the physical requirements of future production so as to determine how present decisions change the future profile of the economy.

Although the measures presented here reflect the relatively short-term behavior of economic output, the criteria whence they were derived are computer-based measures of the economy's capacity to withstand such disturbances as the Federal Reserve has introduced into the credit system. Such analysis of the fundamental productive base of the economy is precisely what "conventional" econometrics of the Wharton School variety edits out of analysis.

The conclusion that the economy will fall—in the present leg of depression—by a solid 10 percent in terms of productive output, and essentially remain at that trough level or slightly above through 1983, is based on a measurement of the weakened American economy's capacity to withstand a shock, that in turn can, at least in rough terms, be measured quantitatively, through the liquidity analysis presented in this report.

Since 1974, the United States has undergone a fundamental deterioration in productive capability, characterized by:

- 1) A collapse in relative productivity that has made unfavorable trade balances a structural condition;
- 2) A diversion of 40 to 50 percent of investment resources into investment in expensive energy-producing or energy-saving areas, with consequences much greater than the initial cost of higher energy prices;
- 3) Virtually no growth in productivity during the past three years (while Japan, for example, has averaged

Figure 1

Total U.S. instantaneous growth rate (in percent)

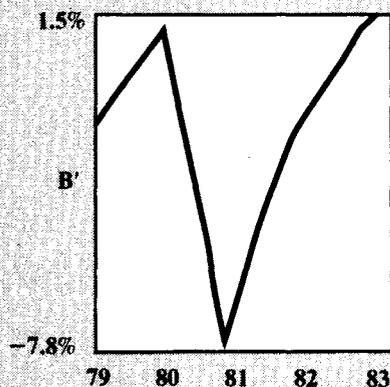


Figure 2

Net investable surplus (in billions of 1972 dollars)

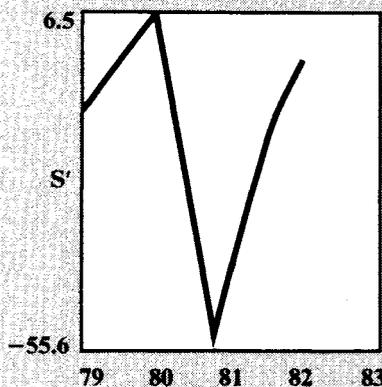


Figure 3

Net surplus (in billions of 1972 dollars)

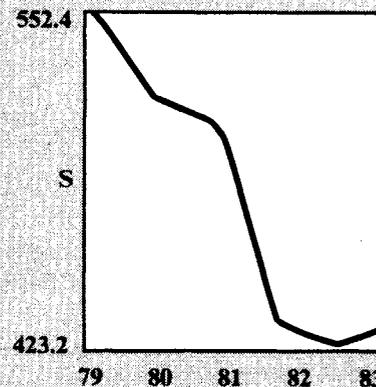


Figure 4

Net surplus annual change (in percent)

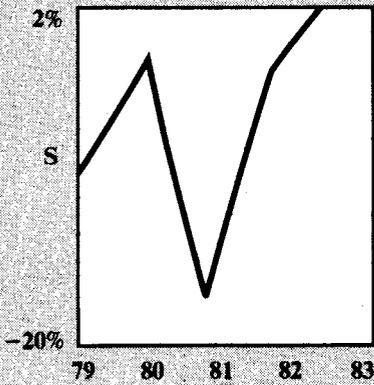


Figure 5

Circulating capital (raw materials) consumption (in billions of 1972 dollars)

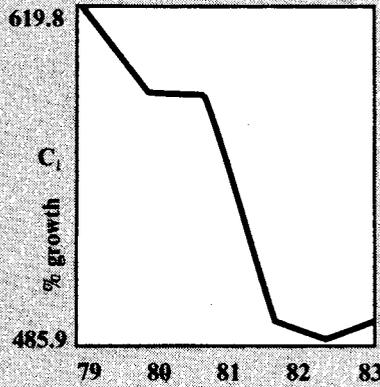
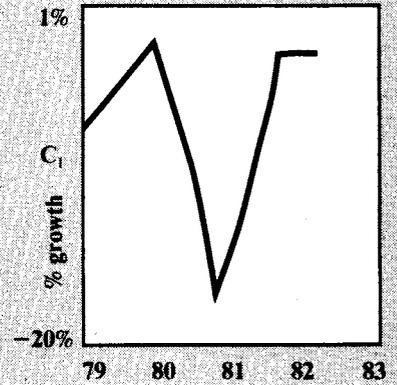


Figure 6

Circulating capital percentage annual change (in percent)



more than 8 percent productivity growth per annum); and

4) Adverse shifts in employment favoring white-collar and service employment over goods-producing employment in manufacturing, construction, agriculture, transportation, and mining.

The assumptions of this forecast are:

1) That the Federal Reserve will not accommodate the budget deficit through easing monetary policy, but will insist, as Paul Volcker has warned repeatedly in congressional testimony, that more borrowing by the

federal government must be paid for through less credit to the private sector;

2) That the tax and budget policies already voted by Congress will not be altered substantially from their present direction;

3) That there will be little or no productivity growth over the next year.

The total economy

Figure 1 shows the economy's growth rate, or net investible surplus per unit of labor and capital input, in

Figure 7

Depreciation of plant and equipment (in billions of 1972 dollars)

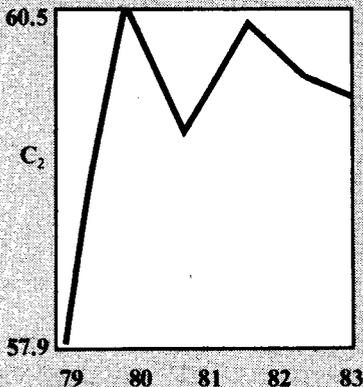


Figure 8

Depreciation cost annual change (in percent)

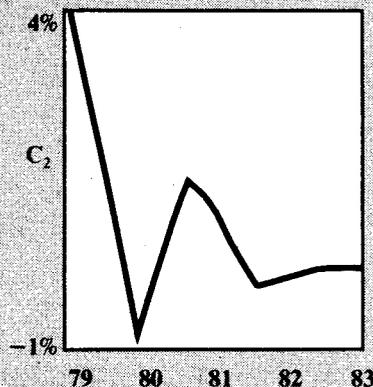


Figure 9

Net capital investment (in billions of 1972 dollars)

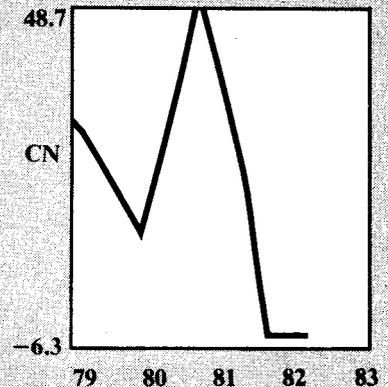


Figure 10

Non-productive expenditures
(in billions of 1972 dollars)

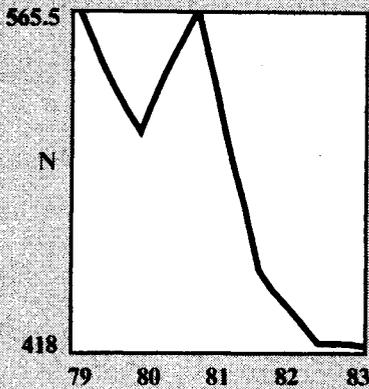


Figure 11

Non-productive expenditures
annual change
(in percent)

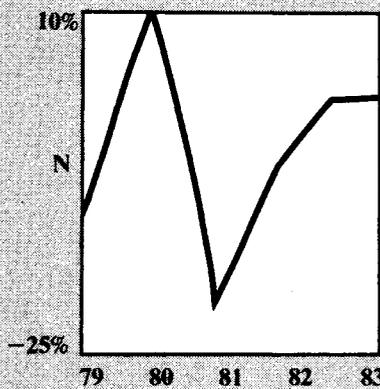
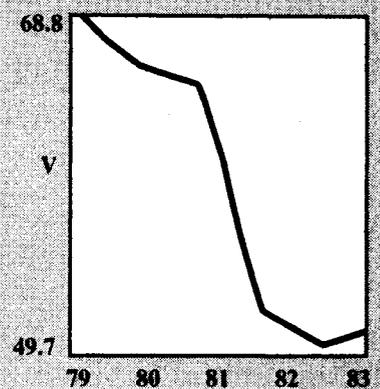


Figure 12

Productive employment
(in billions of 1972 dollars)



average annual values. The rate of growth peaks in the beginning of 1980, at a positive growth rate of about 1 percent, and falls to a negative growth rate (rate of decline) at the end of 1980 of almost 8 percent per annum.

This is followed by essentially no growth during 1982, and negligible growth during 1983.

Figure 2 shows the economy's net investible surplus, or goods available for investment in expanded plant and equipment or expanded labor, falling into the negative during 1980 and through 1981. Under this simulation, the economy was losing employment and investment at an annual rate of \$56 billion constant

1972 dollars before an upward tick toward the previous low level.

In viewing the sharp up-and-down movement of the graph, it must be remembered that investible surplus is a rate, and that the return of the measure to the zero line during 1983 means only that the economy has ceased to lose output—not that a recovery has taken place.

Figure 3 shows the economy's net surplus over the relevant period. Following the 1979 recession, surplus production stabilized, falling during 1981 and 1982 to a level approximately 20 percent lower, prior to stabilization during 1982 and very slight growth (of about 2

Figure 13

Total factor productivity
(dollars/dollars)

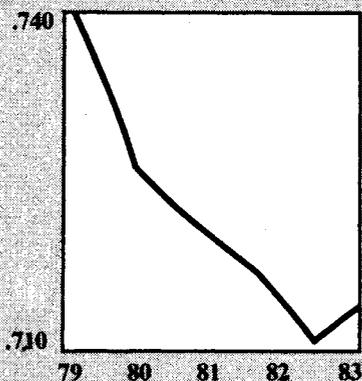


Figure 14

Total factor productivity:
percentage annual change

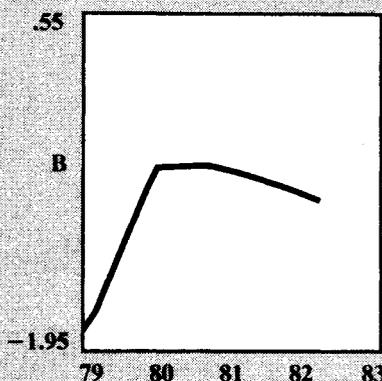
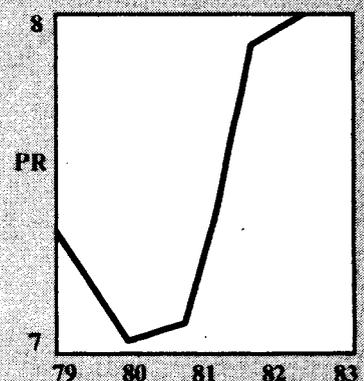


Figure 15

Labor productivity
(surplus per unit
of labor input)
(dollars/dollars)



percent) during 1983.

Figure 4 shows the same data in percentage terms; during 1980, the reduction of surplus bottoms at negative 17 percent per annum.

Figure 5 shows the expected volume of raw materials utilization in goods-producing industries. Because raw materials usage is dependent on overall activity, the shape of the curve is almost identical to that of overall surplus output.

Figure 6 shows the same data in percentage-change terms, with raw-materials consumption falling to a negative 17 percent rate of change during 1982.

Figure 7 shows the depreciation cost of U.S. plant and equipment. Because of the fall in capital investment past 1979, the cost of replacing old or worn-out plant and equipment does not change substantially from the 1980 level.

Figure 8 shows that depreciation cost varies within a small spectrum of percentage changes, i.e., between positive 4 percent (reflecting the last year of significantly increased capital investment, 1979) to negative one percent.

Figure 9 shows net capital investment falling sharply during 1981. Considering that machine-tool orders are now 30 percent less than a year ago, and that capital-goods categories earlier exempt from the worst effects of the economic downturn are showing reduced orders, this conclusion is not surprising. Despite much talk of retooling in auto to produce more fuel-efficient cars, and retooling in aerospace to meet the demands of the military budget, and despite substantial continuing capital investment in the energy field, the currently available data show a definite downward trend, and square with the computer forecast shown in this graph.

In fact, these data vastly understate the actual deterioration of American plant and equipment, which is measured implicitly in the productivity analysis otherwise generated by the model. For purposes of short-term analysis the Commerce Department's measure of depreciation is used, which reflects only a small portion of the actual deterioration of plant and equipment. Competent depreciation is measured not by historical accounting but by current replacement cost, as a first approximation. The depleted American industrial base could not produce the same plant and equipment at the same *relative* cost of twenty years ago; in fact, the present level of capital investment, adjusted for true depreciation costs, has been negative since 1971, as *EIR* demonstrated in a March 1980 analysis. However, this underlying deterioration is reflected in the model's result that the economy has virtually no capacity to recover.

Figure 10 shows the behavior of non-productive expenditures, including the results of the President's budget-reduction programs. The shape of the curve is close to, but steeper than, the shape of the curve for

overall surplus (surplus is equal to non-productive expenditures plus re-investible surplus).

Figure 11, which shows the same data in percentage-change terms, indicates that the rate of decline of non-productive consumption was even steeper than the rate of fall of overall surplus. This result is striking, since the entire growth in employment since the Carter administration came in five years ago has been in this sector. The bloating of white-collar employment rolls represents a form of overhead which the depressed economy can no longer afford; and the implication is that substantial layoffs will occur not merely in basic industry but in white-collar sectors such as finance, banking, insurance, and service sectors such as retail and wholesale trade, restaurants, and entertainment.

Figure 12 shows a steep fall in productive employment, representing a combination of higher unemployment and lower wages. Implied is a pattern of layoffs continuing through 1982, bringing the unemployment rate up to depression levels. Already, the rate of unemployment (counting workers forced from full-time into part-time work) is almost 14 percent; the official employment rate, a poor but widely-cited guide to actual unemployment, may well exceed 12 percent.

Figure 13, or total factor productivity, shows a modest decline from .74 (that is, surplus divided by total capital and labor inputs equals .74) to .71. This small decline is due to the fact that labor may be pared down along with production, but capital costs are relatively fixed, so that the denominator of the equation falls more slowly than the numerator.

Figure 14 shows the same data in percentage terms, i.e. that total factor productivity falls during 1981-1982 at an annual rate of about 1 percent.

Figure 15 shows a paradoxical rise in labor productivity (measured according to the LaRouche-Riemann model's *surplus per unit of labor input* rather than the Commerce Department's output per manhour). Although the average productivity of each sector was programmed to remain constant as a basic assumption of the forecast, nonetheless the total economy's productivity rises due to the change in mix of the economy. As noted, although all economic sectors are doing relatively poorly, some are doing considerably worse than others, and the faster rate of economic decline accentuates the distinction between so-called "sunrise" and "sunset" sectors.

The higher-productivity sectors of the economy, e.g. aerospace and electronics, still show relative stability compared with industries such as auto and housing, which are functioning at half their peak levels or less. Therefore the productivity of the "sunrise" industries weighs in more heavily in the overall calculation of productivity.

This does not reflect improvement but rather deterioration of the industrial economy of a fundamental kind.