Serious Inflation and Recession ahead:

Scarcity and Strategy Simulation results suggest a troubled world.

The Scarcity and Strategy simulation at https://economicsimulation.com is designed to provide a normal business cycle result based upon the 20 years in the developed nations before the great recession of 2008. The statistical base after 2008 is so polluted with the results of massive fiscal and monetary policy stimulus and covid dislocations that interrelations among many economic variables are undependable.

This simulation is not designed to be a quarterly or even detailed current year forecast. It is constructed to identify major movements in economic variables – thus two- year estimates are included in this report.

Results for the next few years (after June 2022) suggest double digit inflation of at least 11% yearly and recession of minus 10% of GDP or greater for the two years in total. However, the economic situation could become much worse depending on the length of the Ukraine war, related energy issues and central bank tightening with associated impacts on stock and bond valuations and investment decisions.

Many variables are difficult to determine in both timing and magnitude e.g., gasoline prices and natural gas prices as the winter of 2022 approaches. The simulation results diverge into two scenarios: First, where all inflationary forces are active immediately and do not relent bringing about an inflation that could reach 20% and an associated double- digit recession. Second, the results above with inflation milder yet lasting longer along with two years of worsening recession. Each situation presents profound policy decision dilemmas for fiscal and monetary authorities. Elements of concern in these decisions are shown below:

Inflationary Forces

1.Federal government deficits (in 2022) at the level of 50% more expenditure than revenues collected. This action by itself would be sufficient to create significant inflationary pressures during normal time periods.

2.A full employment situation which results largely from a very slow growth of the labor force. Traditionally, full employment was always considered inflationary over time. Even a recession may include near full employment circumstances.

3.Energy prices for natural gas, coal and petroleum advancing at a rate measured by the Global price of Energy index at more than 100% over the last year (April 2021 to April 2022). Natural gas prices are particularly dangerous in Europe for the winter of 2022.

4. Food prices exacerbated by war as well as bird and pig diseases. Further, fertilizer and energy price problems will mean no quick solutions.

5. John Williams has computed a shadow price index which is based upon earlier US government methods of price change calculation. These measurements show prices advancing generally three to

four percentage yearly above the measured CPI. Currently (June 2022) hardly anyone believes that prices have advanced only 8% over the last year. Whatever the government claims, the real economy experiences a higher inflation impact although that exact number is most debatable.

Contractionary Forces

1.The 30 trillion -dollar deficit will generate interest on the debt payments likely to double from recent years. Higher interest rates over long periods will make this problem extremely difficult for government budgets. The population receives no goods or services for these bond payments.

2.Higher interest rates and central bank balance sheet reduction slow growth in most industries at the margin. Construction is especially affected. Moreover, stock and bond markets are sensitive to interest rate increases and losses are measured in trillions of dollars. The current stock market decline may continue for at least a year.

Ten-year bond yields far below the rate of inflation may slow the economy somewhat, but will do little to slow the rate of inflation caused by supply problems and tight labor markets. In the inflationary 1970's and early 80's ten-year bond yields were generally somewhat above the rate of inflation. Central banks are now trying to slow the economy with negative real interest rates which would cause buyers to lose money.

3. Investment incentives in real (not financial) plant and equipment are negatively affected by rising interest rates. Moreover, there is confusion generated in inflationary periods which becomes a disincentive for investment.

4. Growth in productivity is difficult when labor is changing jobs at a rapid rate and business cycles are hard to forecast. Productivity growth will be far to weak to quell any significant level of inflationary pressure.

5. Declining real wages will inhibit consumer spending.

Specific Simulation Results

In a variety of different circumstances using different inputs to better understand current uncertainties the following results emerge:

Over the next two years (beginning June 30 2022) expect 24 to 38 percentage points of inflation. There will be recession as well – with GDP falling 10 to 20 percentage points over the two years. Some scenarios are even worse.

Very high or double-digit inflation will usually set off a major recession within a few months or a year.

Real per capita wages will fall by at least 15% over two years.

These powerful movements of inflation and recession will be mostly done in the major nations of Europe and the United States in two years – providing the markets are allowed to adjust and policies such as price controls are not used. Obviously, the consequences will linger.

Overall Assessment

Supply shortages worsened by covid, port capacity, political disagreements (e.g., energy) and war cannot be effectively handled by government policies in the short run. A powerful foundation has already been laid for substantial inflation – the USA 2021 federal deficit was 70% above revenues. Federal reserve policies are so exaggerated to be stimulative that World War 2 expedients, such as the government buying its own bond debt, have been in place for many years.

If the large developed nations of the world experience a major crisis, the potential for a massive debt crisis among the poorer nations certainly exists. Japan, with massive debt and inflation, deserves our good wishes.

There are two policy actions which weigh heavily on the inflation situation and could be changed. First, the war in the Ukraine needs to be resolved immediately. Second, the federal government needs to reduce the massive deficit which feeds inflation. Both of these are difficult. Central bank policies in the US and the EU are so many years out of adjustment that current slow but steady policies may well be the best choice – disorientation of investors is undesirable.

Substantial inflationary forces are most troubling in a debt laden world. The great economist of the nineteenth and early twentieth century, Alfred Marshall, wrote over a century ago "reckless inflations of credit (are) the chief cause of all economic malaise…" [1].

Welcome to the new world of economics -disturbingly like the old world.

I hope this information may be useful to educators, policy makers and interested individuals.

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1.(Principles of Economics- Macmillan 8th ed. 1920, p.591)

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