6-21-1976

U.S. Financial Crises Due to the Very Nature of Economy

Hyman P. Minsky Ph.D.

U.S. Financial Crises Due to the Very Nature of Economy

By HYMAN P. MINSKY

The 3 near or incipient financial crises since 1966, were neither accidents nor the result of policy errors but were the result of the normal functioning of our particular economy. The cumulative changes which occurred in the financial structure over 1945-1965 resulted from profit seeking activity in our economy; an economy which uses decentralized markets not only to produce and distribute but also to deal in capital-assets and finance investment.

As a result of normal market behavior the extraordinarily robust financial structure inherited from World War II, in which a financial crisis was a virtual impossibility, was transformed into the fragile structure we now have, in which the periodic triggering of a financial crisis is well nigh certain.

The past decade has shown that in our economy, with a big government and passably effective "lender-of-last-resort" operations by the Federal Reserve, FDIC, and explicit or implicit consortia of giant banks, a cumulative debt-deflation need not follow upon an incipient financial crisis but can be aborted. However, in our economy success in aborting an embryonic financial crisis leaves a residue which virtually assures that a period of accelerating inflation will follow.

The resilience the economy showed last year was due to an accidental but crudely apt fiscal policy—money was literally thrown at the economy—combined with successful lender-of-

A speculative financing unit has cash flow payments over some periods—typically near-term—which

"barter" paradigm models decentralized markets lead, under quite restrictive assumptions, to a coherent result. "Barter" paradigm models focus on trade and simple production. They abstract from time, money, uncertainty, history, policy, capital-assets of the kind we know exist, and the financial institutions and usages which are associated with "Wall Street".

Economic theory has not shown and not attempted to show that an economy with the capital asset, monetary, and financial characteristics of our economy is coherent. As a result of the limitations of standard theory, it is not legitimate to add money onto a "barter" paradigm model of the economy, as is done by both the quality theorists and the standard Keynesians, and then draw inferences about the behavior of our economy.

Smith's 2nd problem, to explain the relative richness or poverty of different countries or of one country over time, has been answered in terms of differential endowments of capital-assets. These differential endowments are the result of past accumulation. Accumulation depends upon an ability to generate and effectively allocate a surplus. In our economy the surplus is extracted and allocated by the market processes which finance investment and the government processes which determine taxes and spending.

A financial contract is a money today-money tomorrow deal. Money today-money tomorrow deals are a pervasive reality in our economy.

"Wall Street" will serve as the label for the institutions and usages that generate and allocate the finance for investment and for positions in the inherited stock of capital-assets. In our economy the behavior of "Wall Street" is a determinant of the pace and direction of investment. A model of the economy from the perspective of "Wall Street" differs from the standard model of economic theory in that it first sees a network of financial interrelations and cash flows and then a production and distribution mechanism. A "Wall Street" paradigm is a better starting point for theorizing about our type of economy than the "barter" paradigm of conventional theory.

From the perspective of "Wall Street" economic theory has to explain the prices of capital-assets and equity shares, instruments which have value only because they are expected to be "profitable" or to pay dividends over some future period. A

Continued on next page

this period.

last-resort operations. The recovery over the 4 quarters (1975II-1976I) cannot be imputed to either an inherent resilience of our monetary and financial systems or to a self-equilibrating property of the income generating mechanism. In a trivial and uninteresting sense 1974-75 vindicates Keynes.

●

Some 200 years ago Adam Smith set 2 problems for economics. One is to explain why a decentralized market mechanism yields a coherent result. The 2d is to explain why one country is richer or poorer than another—or why a country grows richer or poorer over time.

The response to Smith's first problem is the substance of pure economic theory. Pure theory shows that within

---

Dr. Minsky is Professor of Economics at Washington University, St. Louis. These are excerpts from a paper he prepared for the Conference on Financial Crises at the Salomon Brothers Center for the Study of Financial Institutions at the N.Y. University Graduate School of Business Administration. In it, he contends that the 3 near or incipient financial crises since 1966 were not accidents but resulted from the transformation of a robust into a fragile financial structure. This, in turn, occurred because of the processes by which investment and positions in the stock of capital assets are financed in the U.S. economy.

Financial Crises

Continued from preceding page

further problem of economic theory is to determine the relations, if any, between the prices of existing capital-assets and the prices of current output and the effect, if any, that various alignments of these two sets of prices have upon the behavior of the economy.

The prices of capital-assets are determined by expected future profits and portfolio preferences. Portfolio preferences and relative supplies determine prices of various capital and financial assets, which differ in the incomes they are expected to yield, carrying costs, and liquidity. Money is an asset, with particular yield, carrying costs, and liquidity characteristics, whose price is always one. The money prices of other assets are determined by their special characteristics and their relative scarcity.

Money therefore directly affects the price level of various capital-assets and financial assets—it does not directly affect the price level of current output. The proximate determinant of the price level of current output is the money wage rate and, roughly speaking, the weight of disposable incomes derived from government activity and the production of investment goods in total disposable income. Thus the proximate determinants of the 2 price levels are quite different.

The money wage rate is a dominant of the supply price of investment output. The price of a capital-asset is a determinant of the demand price of a comparable investment good. Given that the price level of capital-assets and investment output are based upon quite different principles, it is not surprising that, at times, they can and do get out of "alignment."

This is especially so when, as is true for our economy, positions in capital-assets as well as the investment output in the process of being produced are debt financed, so that changes in financing terms will affect both the supply price of investment outputs with significant gestation periods as well as the market valuation of capital-assets.

•

To put meat upon a "Wall Street" paradigm approach to economic theory, a precise statement of the determinants of the robustness or fragility of a financial structure is necessary. One determinant of the robustness-fragility of a financial system is the mix of hedge, speculative and "Ponzi" finance in the economy. Another determinant of robustness-fragility is the weight of cash or near cash assets in portfolios: the liquidity narrowly defined, of various classes of units. A third determinant is the extent to which ongoing investment is debt financed.

A financial contract is a money today-money tomorrow deal. Money today-money tomorrow deals are a pervasive reality in our economy. Such deals—in the form of money loans, bonds, bank deposits, equity shares, insurance contracts, mortgages, etc. — are the essence of financial businesses. In addition, in our economy, capital-assets — plants, equipment, housing, commercial estates, and inventories—are particular and essential money today-money tomorrow contracts.

Capital-assets are best thought of as a special type of financial instrument. Whereas in the world of finance the money tomorrow part of the contract is a commitment of some household, business firm, or government unit, in the capital-asset "contract" the money tomorrow is the gross profit income of some business enterprise operating with its particular management in specific markets and in a particular economic context.

A "Ponzi" financing unit is a speculative financing unit for which the interest portion of its cash payment commitments exceeds its net income cash receipts.

Capital-assets therefore yield cash flows over time, the cash flows depend upon how demand for outputs that use the services of the particular capital-asset develop. Positions in such capital-asset are financed by combinations of debts and equities. The cash flow problem of a unit owning capital-assets can be characterized as a balancing of the cash receipts from operations and the cash payments... increase its debt in order to meet commitments on outstanding instruments. Units engaged in "Ponzi" finance may have a "negative net worth" on any honest computation of present values; however units may engage in "Ponzi" finance with substantial net worths if "accruals" account for a large part of income.

Whereas units which engage in hedge finance are vulnerable only to what happens in the market for their products (or whether the terms on owned contracts are fulfilled) units which engage in speculative or "Ponzi" finance are also vulnerable to changes in financial markets.

Commercial banks and depository institutions, such as savings banks of various kinds, typically engage in speculative finance: The term to maturity of their debts are shorter than that of their assets. They need to continually attract or purchase deposits in order to be able to meet withdrawals. "Liability management" banking is more speculative than "asset management" banking. The shorter term of debts than assets in banking means that banks are vulnerable to financial market developments: untoward developments can increase the carrying costs of assets in position without necessarily improving their cash flows.

•

One difference between units that hedge and speculative finance is that the present value of a hedge financing operation is always positive regardless of movement of interest rates whereas the present value of any speculative financing unit, for which the surplus cash flows come later than the deficit cash flows, will be positive or negative depending upon the ruling pattern of interest rates. For units that engage in speculative finance a rise in short- and long-term interest rates can transform a positive present value into a negative present value.

Furthermore a rise in interest rates can transform a speculative unit into a "Ponzi" financing unit, in that upon ments due to debts. In a "Wall Street" paradigm model, all units are like a banker who maximizes profits under liquidity and solvency constraints.

•

If unit's cash flow commitments on debts are such that over each significant period the cash receipts are expected to exceed the cash payments by a significant "margin" the unit will be said to be engaged in "hedge financing." A household whose monthly income far exceeds the monthly payments on a home mortgage and which has few other debt payments is a hedge financing unit. A profitable firm which has virtually no short-term debt and which has mainly equity liabilities is a hedge financing unit.

A speculative financing unit has cash flow payments over some periods —typically near-term—which exceed the cash flows that are expected over this period. This situation usually arises because the principal amount of some debt is due: contractual and demand cash flow commitments are on account of both principal and interest. On the other hand the present value of the cash flow that is expected to accrue to the firm from owned assets exceeds the present value of contractual cash payments.

A speculative financing unit has a positive net worth, even though in some near term periods cash payment commitments exceed the cash flow from operations. What both the borrower and the lender expect—and they expected it when the deal was set up—is that the debtor will be able to refinance his position. New debt will be "sold" or "issued" to raise funds that will be used to pay maturing debt.

A "Ponzi" financing unit is a speculative financing unit for which the interest portion of its cash payment commitments exceeds its net income cash receipts. A "Ponzi" unit has to refinancing the cost of carrying position can exceed the income from the assets in position.

The fragility of the financial system depends upon the number of things that can amplify initial disturbances.

In our economy success in aborting an embryonic financial crisis leaves a residue which virtually assures that a period of accelerating inflation will follow.

Hedge, speculative, and "Ponzi" financing units alike are vulnerable to events which reduce the cash flows from assets. A decrease in income from operations, or a "default" or "restructuring" of the debts owed to a unit, can transform a hedge financing unit into a speculative financing unit.

For things to go wrong with a hedge financing unit something first had to go wrong someplace else in the economy—unless the hedge characteristics of the initial financing was based upon unrealistic euphoric expectations with respect to markets and their growth.

On the other hand, speculative and "Ponzi" finance units are vulnerable to changes in interest rates. Increases in interest rates will increase cash flow commitments without increasing receipts. Furthermore as they must continuously refinance their positions, they are vulnerable to financial market disruptions. The greater the weight of speculative finance in the total financial structure the greater the fragility of the financial structure.