

**BANKING AND A FRAGILE FINANCIAL ENVIRONMENT**

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In a serious science no theory can have credence if it asserts that that which happens cannot happen. Financial crises have plagued our history, and in the past decade there have been three crisis situations. Standard economic theory - the neoclassical synthesis - not only offers no explanation of these events but inferentially denies that they occur. The existence of financial instability is the big fact that mandates a fundamental change in economic theory.

The explanations of financial crises by standard economists are essentially frivolous: They run in terms of villians or of non-essential institutional flaws. The proposals for 100% money by Chicago economists in the 1930s took financial instability seriously, but, because the school was pre-Keynesian, their prescriptions lacked a consistent theoretical underpinning. Even though they prescribed for an economy with financial instability their economic theory did not allow for financial instability.<sup>1</sup>

Financial instability has occurred with a wide range of institutional arrangements. This lends preemptory credence to the hypothesis that financial instability is a ddeep seated characteristic of a capitalist economy. Only a theory which explains financial instability can be valid for our economy and a guide to policy.

Standard economic theory leads to the proposition that markets are equilibrating. It is evident that disequilibrating forces exist in the essential financial practices of a capitalist economy. These disequilibrating forces center in the financing of positions in capital-assets and investment in progress. In time, financial practices lead to an environment in which financial crises can occur.

The risk characteristics of banking and the tasks of bank regulators are different in a world in which instability is a present danger than in a world in which markets are stable. If bank regulation is to do better than in the past, it needs to be based upon an understanding of how our financial structure becomes susceptible to financial crises.

### I. The Institutional Specification

Our economy is capitalist. It is characterized by private ownership, buying and selling of means of production, and sophisticated finance. Capital-assets, individually and as collected into plants and firms, have prices. Capitalism has two sets of prices, one of current output and the second of capital-assets.

These two sets of prices are formed in different markets and on the basis of different "parameters". The supply prices of current output are mainly functions of money wages. The prices of capital-assets are mainly determined by the quasi-rents they are expected to earn and capitalization rates. Capitalization rates depend upon the material covered under the rubric of liquidity preference in Keynes' General Theory.<sup>2</sup>

As the two sets of prices are determined in different ways their ratios will vary. The cyclical behavior of the economy is largely determined by the alignment of the two sets of prices. Whenever the prices of capital-assets rise relative to the prices of current output investment increases. A fall in this price ratio leads to a decrease in investment. Through the multiplier changes in investment become changes in income.

Borrowing and lending based upon margins of safety is the essential financial usage of our economy. At any moment a maze of payment commitments exists due to outstanding financial contracts. These contracts are traded and new contracts are created. The demand for money depends upon the fact that it is convenient to hold "assets in the same standard as that in which future liabilities fall due."<sup>3</sup> An

increased value placed upon this convenience leads to a fall in the prices of income earning financial and capital-assets, whereas a decrease leads to a rise in prices.<sup>4</sup>

The essential private financial contract arises when debt is used to finance a position in capital-assets, either a current or a long lived capital-asset. These debts set up payment commitments. The behavior of the economy is affected by the relation between cash payment commitments on existing debts and anticipated cash receipts. The ability to meet commitments on financial contracts ultimately rests upon the profitability of enterprise: Prices must be such that almost always almost all financial contracts are validated.

Layered finance also characterizes our economy. Organizations which expect to make on the carry borrow to hold financial instruments. To do this their liabilities must be safer or more convenient than their assets. This usually translates into their assets being of longer term than their liabilities. The margins of safety of such financial firms include cash buffers and stocks of financial assets which can be sold in "money markets". Financial crises usually occur when instruments which were expected to yield cash by being sold cannot do so.

## II. The Profit Equation of Banks

Banks are profit maximizing organizations. Their return on owners equity equals the return per dollar of assets times their assets per dollar of equity. Given this profit equation, bank management endeavors to increase profits per dollar of assets and assets per dollar of equity.

Our banks are corporations. The price of their publically traded shares is positively related to the expected rate of growth of earnings. To raise and sustain growth in share prices a high rate of growth of earnings per share is needed. Because of stock ownership and options, bank management has a private

interest in ever higher share prices. Earnings minus dividends per dollar of equity is the rate of growth of equity through retained earnings. If assets grow as fast as equity and if the profit rate on assets remains unchanged, then earnings, dividends, and the book value of equity grow at the same rate. For example, a bank that makes 1% on assets and has a 12 to 1 asset/equity ratio earns 12% on equity. If dividends are one-third of earnings, equity will grow at 8%. If the same leverage is retained bank liabilities and assets will have to grow at 8%.

Management's growth targets are likely to be greater than the deposit growth rate that the Federal Reserve desires. A conflict between the profit and share price objectives of bankers and the economic policy objectives of the Federal Reserve exists. Bank management has been ingenious in developing reserve economizing liabilities so that the growth of bank assets has exceeded the growth objectives of the Federal Reserve and the growth of bank equity.

Banks have also been ingenious in developing techniques for financing business and financial institutions. These techniques include the development of covert bank liabilities, such as lines of credit and bank guarantees of financing. The development of extra-bank financial institutions, such as the REITs, depends upon the prior availability of bank guarantees.

During periods of financial innovation the supply schedule of credit is virtually infinitely elastic.<sup>5</sup> The availability of financing leads to a rise in capital-asset prices relative to income, in the demand for investment goods, and in investment activity that is financed. However the period of virtually infinitely elastic supply of credit is transitory, especially as feed backs from inflation strip firms and financial institutions of liquidity. Profit maximizing banking is an active force in creating conditions conducive to a financial crisis.

### III. Hedge, Speculative and Ponzi Finance

The liabilities of a unit lead to a time series of cash payments, on account of both principal and interest, that have to be made. The cash to make such payments can be on hand or obtained from (1) the operations of the unit, (2) the fulfillment of owned contracts, (3) the sale of assets, or (4) the issuance of debt.

A unit is hedge financing if over each significant period cash receipts from operations or contract fulfillment are expected to exceed cash payments. A firm which has virtually no short term debt and mainly equity liabilities is hedge financing.

A unit is speculative financing if cash payments exceed the expected receipts over some typically near term period at the same time as the present value of the expected cash flows from assets exceeds the present value of cash payments on outstanding contracts. This situation exists because short term financing has been used and the principal of some debt is due. A speculative financing unit has a positive and increasing net worth. Both the borrower and the lender expect, and they expected it when financing was arranged, that the debtor will borrow to pay maturing debt: debt will be refinanced.

A "Ponzi" financing unit is a speculative financing unit for which the interest portion of its near term payment commitments exceeds its net income receipts. A "Ponzi" unit may have to increase its outstanding debt in order to meet commitments. "Ponzi" financing units may be "fraudulent" and have a "negative net worth"; however, "legitimate" units engage in "Ponzi" finance if "accruals" account for a large part of income.

Hedge financing units are only vulnerable to what happens to their operating revenues and costs (or whether terms on contracts are fulfilled), speculative or

"Ponzi" financing units are also vulnerable to what happens in financial markets.

Commercial banks and other financial institutions engage in speculative finance: The term to maturity of their debts are shorter than that of their assets. They need to continually attract deposits and sell liabilities in order to be able to meet withdrawals. The short term of debts means that they are vulnerable to financial market developments.

The relative importance of hedge, speculative, and Ponzi finance determines where an economy is on a financial robustness-fragility scale. The greater the proportion of speculative and Ponzi finance in the economy, the more fragile the financial structure. The greater the weight of bank financing of business and of business open market paper in the economy the more fragile the financial structure.

#### IV. Financing Investment

An investment program is like a financial contract. Cash payments have to be made as the work on the program progresses and cash from operations will not be received until after the investment is completed. Investment is a money out today-money in tomorrow deal. The payments for investment in progress have to be financed. Investment can be financed internally, from the cash flows of investing units, or externally, by various types of borrowing. For much of investment short term borrowing takes place when investment is being produced and long-term financing of the finished capital-assets yields the cash to repay short term debts.

Funds can be frozen for a number of years in investment projects like power plants and condominium complexes. The cost of such investment projects will vary as interest rates change.

If investment is financed by internal corporate funds the financing partakes of the characteristics of hedge financing. However there are "speculative" elements even in hedge equivalent financing, for the amount of financing required, whether

internal funds will be sufficient for the project, and what interest rates will be charged on funds if needed are all conjectural elements.

If investment is being financed in whole or part by external funds (as is usually true of construction) then a variety of speculative financing is taking place. This is particularly so because the cash required at specified dates or stages of an investment program constitutes a particularly inelastic demand for funds. Thus if the supply of finance is constrained when a great deal of investment in progress requires external funds, interest rates, particularly short term interest rates, can rise very high, very quickly.

A large amount of external financing of investment tends to increase the speculative nature of the financial structure. The viability of any investment project will be adversely affected by a lengthening of its gestation period, an increase in its production cost, an increase in the ratio of external to internal funds, and an increase in interest rates. If speculative finance in general makes a financial structure fragile, the external financing of investment makes a financial structure especially fragile. When investment greatly exceeds the internal cash flows of investing corporations an incipient financial crisis can be triggered by normal market processes.

#### V. Margins of Safety

Our economy is characterized by "borrowing and lending based upon margins of safety". The margins of safety borrowers and lenders require are largely based upon custom, and thus history. The accepted margins reflect interpretations of flimsy evidence about various contingencies that confront borrowers and lenders.<sup>6</sup> Both the evidence and the interpretations are subject to change.

We can identify three "margins" of safety: "cash" in portfolios, excess of cash receipts over cash payment commitments, and an excess of the present value of receipts over that of payments. A hedge financing unit has a positive cash



flow over every period. The present value will be positive for every interest rate configuration. A speculative finance unit has deficit cash flows in near periods and surplus cash flows in later periods. A positive present value depends upon interest rates falling within some bounds. There exists interest rate configurations which will transform a speculative unit into a negative present value unit.

In the 1970s, inflation and high interest rates stripped cash and present value margins of safety from units. As the carrying costs of investment as well as labor and material costs increased in these years the cash margins were used. The rise in interest rates meant that speculative finance units became "covert" Ponzi units.

During good times, and as an essential part of the process by which good times are financed, margins of safety are eroded. An inflationary burst such as characterizes an investment boom will see margins of safety disappear. The panics and crises of history, took place as units attempted to fulfill commitments even as margins of safety shrank. During the great depressions of history margins of safety were rebuilt. In our era massive government deficits during "recessions" rebuild margins of safety.

#### VI. Present Values

The present value of a hedge financing operation is always positive, regardless of interest rates, whereas the present value of a speculative financing unit is positive or negative depending upon the ruling pattern of interest rates. A rise in interest rates can transform a speculative unit into a "Ponzi" unit, as the cost of carrying position rises above the income from assets in position.

The fragility of a financial system depends upon the number of things that can cause and amplify initial disturbances. Hedge, speculative, and "Ponzi" units 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 adversely affect a hedge unit as well as speculative and "Ponzi" units.

Speculative and "Ponzi" units are vulnerable to changes that normally occur in financial markets. 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.

Investment is a peculiar money today-money tomorrow contract. The money today is spent as the investment good is produced and the gross profits that will be received when the completed capital-asset used in production is the money tomorrow.

Interest costs on sunk costs is part of the cost of investment. Rising interest rates raises the cost of an investment good and lowers the capitalized value of the returns that an investment good will earn as a capital-asset. A present value reversal, which makes the value of the capital-asset less than the cost of the investment good, can occur as interest rates rise. Investment financing provides the internal mechanism which can trigger a financial crisis. The mechanism is essential to capitalism; there is no need to blame any particular devil for episodes of financial instability.

An economy heavily "into" speculative finance and investment in excess of corporate internal funds is set up for a financial crisis. The trend increase since 1946, and the rapid rise since 1964, in short term financing and in the ratio of investment to corporate internal funds are the endogenous developments that have made our economy crisis prone.

## VII. Conclusion

Banking was not an innocent bystander in the generation of our fragile financial structure. Banking is an active disrupting force which helps create conditions conducive to financial instability as bankers actively pursued profits through increased leverage.

If the thrust towards instability is to be constrained, economic policy must deal with reality and not the abstractions of neoclassical theory. Federal Reserve policy must be based upon an awareness of the possibility of financial instability. It cannot pursue stability of an ill designed construct like the money supply and cavalierly neglect how the viability of financial relations is affected by changing usages, interest rate changes, and its policy. The Federal Reserve must shift to a money market perspective from its myopic concern with the money supply.

In the recent failures of four billion dollar plus banks, FDIC validated all the non-equity liabilities: Depositor's risk was effectively socialized and as a result the need for depositor and collegiate surveillance vanished. The procedures used to abort the financial crisis of 1974/75 assure that market constraints of upon bank behavior will be weak once the fears induced by 1974/75 are attenuated.

An insurer has a right to require reasonable precautions and co-insurance by the insured. The authorities have a right to require a reasonable margin of safety from insured banks. The margin of safety that banks provide their insurer is their equity/asset ratio. The attenuation of bank equity ratios over the past decade was an essential ingredient in the financing of inflation and the generation of instability. The use of covert bank financing by lines of credit allowed the "bubbles" such as the REITs to develop.

Bank regulation and control has to establish reasonable constraints on the asset/equity ratio of banks and on line of credit banking. Wherever examiners have power - which is over the smaller banks - asset/equity ratios are constrained to 12 or 14 to 1 range. This is less than half the asset/equity ratios of many giant banks. The establishment and maintenance of a reasonable and common asset/equity ratio for all banks will attenuate the thrust towards instability. It will also remove an unfair competitive advantage that giant banks and thus giant business have over smaller banks and business.

Bank regulation should not only include ceilings on the asset/equity ratio but also should include ceilings on the rate of growth of bank capital due to retained funds.

Simultaneously with the imposition of such controls upon banks, the type of financing that corporations can engage in should be constrained. Speculative finance has to be constrained from both ends: the borrowers and the lenders. The broadened policy aim should be to decrease the dependence of the economy upon private investment demand.

In dealing with banking the remark of the great Chicago economist, Henry C. Simons, that "Banking is a pervasive phenomenon, not something to be dealt with merely by legislation directed at what we call banks." should be kept in mind.<sup>7</sup> Any reform on regulatory scheme is like the Maginot line - it prepares to fight the last war. A fundamental flaw exists in an economy with capitalist financial institutions. No matter how ingenious and perceptive Central Bankers may be, the speculative elements in capitalism lead to financial usages that are conducive to instability. If policy is based upon an economic theory that asks the right questions then policy can be effective. Current theory does not ask the right questions and policy as a result wears blinders.

## REFERENCES AND FOOTNOTES

<sup>1</sup>H.C. Simons, Economic Policy for a Free Society, Chicago, 1948.

<sup>2</sup>J.M. Keynes, The General Theory of Employment, Interest and Money, New York, 1936.

<sup>3</sup>Ibid., p. 237.

<sup>4</sup>Ibid., Chapter 17. See H.P. Minsky, John Maynard Keynes, Columbia Essays on the Great Economists Series, New York, 1975.

<sup>5</sup>H.P. Minsky, "Central Banking and Money Market Changes," Quart. J. Econ. (71) May 1957, 171-187.

<sup>6</sup>J.M. Keynes, "The General Theory of Employment," Quart. J. Econ. (51) February 1937, 209-223. J. Viner, "Mr. Keynes on the Causes of Employment," Quart. J. Econ. (51) November 1936, 147-167.

<sup>7</sup>H.C. Simons, op. cit., p. 172.