

*At Peter Bernstein's
Part 1.10 Minsky's journal*

BANKING AND A FRAGILE FINANCIAL ENVIRONMENT

Hyman P. Minsky

Washington University, St. Louis, Missouri

In a serious discipline no theory can have credence if it asserts that that which happens cannot happen. Financial crises have plagued our history: the great crash of 1929-1933 was not an isolated, unique event. In the decade 1966-1975 three situations that can be characterized as nascent financial crises occurred: the credit crunch of 1966, the Penn Central/Chrysler/commercial paper run of 1970, and the billion dollar bank/REIT debacles of 1974/75. In the 1960's, after a hiatus of more than thirty years, financial instability, and with financial instability the possibility of a deep depression, became a clear and present danger. The evident fragility of the financial structure in the past decade is a clear indication that economic theory and economic policy need to be modified to allow for the new evidence. In particular the structure of the banking system and the system of regulation and control of banking that centers around the Federal Reserve System need to be adjusted in the light of the malfunctioning of the financial system and the economy in the past decade.

Today's standard economic theory - what its major architect Paul Samuelson has labeled "The neo-classical synthesis" and what its leading

critic Joan Robinson has aptly characterized as "Bastard Keynesianism" - not only offers no explanation of these events but inferentially denies that they occur. The existence of financial instability is the dominant fact that mandates a fundamental change in economic theory. The new economic theory that is needed will have to focus on the endogenous destabilizing forces that are at work in an economy with the specific institutional attributes of our economy. Economic theory is important only if it serves as a guide to effective policy. The failures of economic policy and the resultant poor performance of the economy in the past decade, which are so evident that detailed documentation is not needed, lend additional weight to the need for a fundamental recasting of economic theory.

The explanations of financial crises and system malfunctioning by standard economists are essentially frivolous: they run in terms of villains or of non-essential institutional flaws. Thus common explanations put forth by standard brand economists of the chronic inflation, persistent unemployment, and recurrent near financial crises of the past decade run in terms of the Federal Reserve not getting things right, ("If only Arthur Burns had not gone "all out" to re-elect Nixon in 1972!), the cover-up of the costs of the Viet Nam adventure in the budgets of the mid 1960's, the perverse wage increasing behavior of trade unions, Nixon's opportunism and economic ignorance when controls

were instituted, the destabilizing effects of flexible exchange rates, and the emergence of the oil cartel. Nowhere in the standard economic theory or in the views of the community of economists who shuffle in and out of policy advising roles, is the question raised as to whether what has happened in the past decade is the result of processes that are inherent in our type of economy, i.e., that the evident malfunctioning is a normal phenomena for our type of economy.

Economists concerned with economic policy were not always as superficial as the current crop of policy advisors. The proposals for 100% money by Chicago economists in the 1930s took financial instability seriously, but, because the school was pre-Keynesian, their prescriptions for change lacked a consistent theoretical underpinning. Even though they prescribed thoroughgoing financial reform as the medicine for an economy with financial instability their economic theory did not allow for financial instability.¹ Nevertheless the intuition of the Chicago School of the 1930's - that capitalism is flawed because of its financial system - is basically valid. What Keynes provided in The General Theory was a stab at an explanation of how instability is generated in our type of economy. Keynes' explanation of how capitalism breeds instability was ignored as some of his ideas and constructs were

assimilated into the "neo-classical" synthesis; because the current standard economic theory is based on only part of the structure of theory that Keynes developed it is correctly labeled as an illegitimate offspring.

Financial instability has occurred with a wide range of institutional arrangements. For example, crashes occurred in 1857, 1907 and 1929/33. In 1857 there was no national banking system, in 1907 there was no central bank, and in 1929/33 there was a central bank. By today's standard the government hardly existed as an economic force in 1857, 1907 and 1929/33. Trade unions did not have any effective power in the earlier epochs and the corporate form did not emerge as a leading form until the late 19th century. The wide variety of circumstances under which financial instability has occurred lends preemptory power to the hypothesis that financial instability is a deep seated characteristic of a capitalist economy. It follows that only a theory which explains financial instability can be valid for our economy and be an effective 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 way positions in capital-assets and

investment in progress are financed. The cumulative effect of financial practices during a period of financial tranquility leads to an economic and financial environment in which financial crises can occur.

Banks and banking are not passive bystanders as the economy evolves towards a financial structure in which financial crises can occur. Private profit maximizing banking is both an active agent in the evolution of the economy to a situation in which instability is a clear and present danger and an institution which is essential to capitalism.

The risks of banking and the tasks of bank regulators are different once instability is a present danger than when financial markets are stable. If bank regulation and our design of financial institutions are to enable us to do better than in the past, they need to be based upon an understanding of how our financial structure becomes susceptible to financial crises. A theory which makes the emergence of situations conducive to financial instability a normal attribute of our type of economy is needed, for only such a theory can enable us to identify the ways in which we can hope to control instability.

I. Institutional Specification

Our economy is capitalist. This means that it is characterized by private ownership of the means of production, sophisticated finance, and the buying and selling of capital assets and financial instruments. Thus

capital-assets both individually and as collected into plants and firms have prices. In contrast to a socialist economy, in which only current output is priced, a capitalist economy has two sets of prices; one of current output and the second of capital-assets and the associated financial instruments.

These two sets of prices are formed in different markets and on the basis of different "parameters". The supply prices for current output mainly depend upon money wages and profit margins as determined by demand. The prices of capital-assets are determined by the quasi-rents they are expected to earn, risk premiums, and capitalization rates. Capitalization rates depend upon the relative supply of those assets that protect the holders against uncertainty (i.e. money), the subjective value placed upon the insurance that such assets yield, and the extent of financial commitments that lead to a demand for the monetary assets in which financial commitments are denominated. The above specification of what enters into the determination of capitalization rates is an interpretation of the material Keynes covered under the rubric of liquidity preference in his General Theory.² In this interpretation liquidity preference determines the relative prices of the different capital and financial assets in our economy, given that the price of a unit of the

country's money is 1, be it 1 dollar, 1 pound, or 1 franc. Liquidity preference cannot be encompassed by a demand for money equation.

As the two sets of prices are determined in different markets and depend upon different variables their ratios are free to 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 these price ratios leads to a decrease in investment. Through the multiplier changes in investment become changes in aggregate demand.

The borrowing and lending of money based upon margins of safety is the essential financial usage of our economy. At any moment a maze of payment commitments denominated in money 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."³ 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 these prices.⁴

The essential or primary private financial contracts arise when debts are used by businesses to finance positions in capital-assets, either current or a long lived capital-assets. These debts set up payment commitments. The behavior of the economy is affected by the

relation between the cash payment commitments of these primary borrowers on existing debts and their anticipated cash receipts from the production of output. The ability of borrowers to meet commitments on financial contracts ultimately rests upon the profitability of enterprise: prices and costs must be such that almost always the profits of enterprise are sufficient to validate almost all financial contracts.

Layered finance also characterizes our economy. Financial organizations, which expect to make on the carry, borrow to hold financial instruments. To do this their liabilities must be deemed safer or more convenient by ultimate wealth owners than their assets. This usually translates into their assets being of longer term than their liabilities and the provision of various margins of safety by the financial organization. One margin of safety that such financial firms maintain consists of cash buffers and stocks of financial assets which can be sold in "money markets". Financial crises usually occur when some financial transactions, such as the sale of assets or new borrowing, which were expected to yield cash cannot be executed.

II. The Profit Equation of Banks

Banks are profit maximizing organizations. Their return on the book value of owners equity equals the return per dollar of assets times their assets per dollar of book value; i.e., $\frac{P}{B} = \left(\frac{P}{A}\right) \left(\frac{A}{B}\right)$ where P is profits, B is the book value of owners equity, and A is assets. Given this profit identity, bank management endeavors to increase profits per dollar of assets ^{and assets} per dollar of equity.

Profits per dollar of assets depends upon the bank's efficiency in operations, the return after losses on assets, and the price paid for the various types of deposits. Bank management is efficient to the extent that it minimizes the cost of operations and the prices it pays for deposits and maximizes the returns on assets net of losses. Because the terms on deposits and the interest rate on assets are largely determined by market forces, the success of bank management in the mixed game of skill and chance in which it is engaged depends upon its ability to have a mix of deposits which minimizes the cost of money even as it selects assets which minimize its losses due to default and the restructuring of debts.

A banker handles other peoples' money along with his own. The inverse of the assets/book values ratio, the book value/assets ratio tells how much of the banker's money is being invested along with other peoples' money as the banker goes about his business. The book value/assets ratio is analogous to the margin requirement imposed upon stock market purchases. If bank deposits were not insured by a government agency, the book value/assets ratio would indicate the maximum loss that a bank could take on its assets and still be able to fulfill its commitments to its depositors. In a world in which the socialization of risk through government underwritten deposit insurance did not exist,

the book value/asset ratio would be one of the margins of safety that make depositors and other banks willing to hold liabilities of a particular bank. In these circumstances depositors and collegiate surveillance would act to constrain the attenuation of the book value/asset ratio. In a world in which socialized deposit insurance exists such market and collegiate surveillance withers away. In such a world the book value/asset ratio is equivalent to the coinsurance that an insurer may require in situations where there is a good measure of moral hazard involved in insurance, i.e., when the insurer can arrange for the situation that activates the insurance to occur. If the insuring authorities are not vigilant in enforcing an asset/equity ratio, the profits of those banks that can raise their asset/book value ratio will increase even as the margin of safety they provide the insuring agency decreases.⁵

Our banks are corporations. The market price of their publically traded shares, like the shares of other companies, is positively related to the expected rate of growth of earnings. If the level, rate of growth, and assuredness of bank earnings are high enough, then the market valuation of the bank's shares will exceed the book value of owners equity. To first raise the ratio of market price to book and then sustain a favorable growth in the market price of shares

requires a high rate of growth in expected earnings per share. Because of stock ownership and stock options, management of a bank that is organized as a corporation has a private interest in ever higher share prices - in having the market value of the owner's interest rise relative to the book value of owner's interest. This emphasis upon accelerating growth in order to affect the market valuation of shares is not present for banks that are organized as partnerships: a partner's interest, as the partnership is periodically reconstituted, is a proportionate share of the book value. As will become evident in what follows, banking as a generic phenomena is destabilizing but corporate banking, especially corporate banking in which management is largely divorced from ownership, is particularly destabilizing.

Earnings minus dividends divided by book value is the rate of growth of book value through retained earnings. If assets grow as fast as book value and if the profit rate on assets remains unchanged, then earnings, dividends, and the book value of equity can grow at the same rate. For example, a bank that makes 1% on assets and has a 12 to 1 asset/book value ratio earns 12% on book value. If dividends are one-third of earnings, book value will grow at 8%. For the same asset/book value to be retained bank liabilities other than book value and assets will have to grow at 8%.

If the normal return on assets with no growth in earnings prospects and with the safety and assurance features of bank stocks is 15% then the market value of the above bank's shares would be a 12/15 or 80% of its book value. However given that the bank in this example has an assured growth rate of 8% per annum, the market valuation of the bank's shares will be 12/15-8 or approximately 170% of book value.⁶ If management can sustain earnings per dollar of assets even as the assets per dollar of book value increases they can raise the price of their shares. Thus if management can shift to a 15 to 1 asset/book value ratio, the market price of the shares on a no growth basis will rise to 100% of book value and on a growth basis (assuming 1/3 dividend payout) to 15/15-10 or 300% of book.⁷ Note that in the growth context the price per share will well nigh double with the higher asset/book value ratio. The incentive for bank management to raise the asset/book value ratio, if it can be transformed into an increase in the rate of growth of assets and earnings, is strong. In fact it will pay for a bank to increase the asset/book value ratio even if it results in some attenuation of the earnings/assets ratio.

Management's growth targets are likely to be greater than the deposit growth rate that the Federal Reserve desires. A conflict is

likely to arise between the profit and share price objectives of bankers and the economic policy objectives of the Federal Reserve. As is well known Milton Friedman and other monetarists have argued that there is a desired rate of growth of the money supply. Even though they have set this magic number at different rates at different times their views may be fairly represented by assuming a 4% target for monetary growth. In our example a banking system which consists of banks that earn 12% on book value and pay dividends of 4% on book would try to grow at 8%, whereas the Federal Reserve might very well set a 4% monetarist type target for monetary growth. In this situation bank management would endeavor to develop a liability mix which would enable assets to grow at 8% or more even as the Federal Reserve allows the reserve base to grow at 4%.

Over the post-war era bank management has been ingenious in developing reserve economizing liabilities, so that the growth of bank assets has exceeded not only the growth objectives of the Federal Reserve but also the growth of bank equity. This power of banks to evade monetary constraint imposed by the Federal Reserve authorities is one reason for chronic inflationary pressures. In a world with corporate, growth oriented banking and a fragile financial structure the Federal Reserve is forced into accomodating the banking systems demand for reserves. The banking process determines the volume of bank liabilities outstanding and the Federal Reserve is forced to supply sufficient reserves to sustain these liabilities.

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, depended upon the prior availability of bank guarantees.

During periods of banking and financial innovation the supply schedule of credit to business is virtually infinitely elastic.⁸ The availability of financing leads to increases in 1) capital-asset prices relative to income, 2) the demand for investment goods, and 3) investment activity that is financed. However the period in which a virtually infinitely elastic supply of credit exists is transitory, for the ever increasing amount of investment that is financed will lead to first an inflation in prices relative to wages and then to a wage inflation. The feed backs from inflation to balance sheets strips firms and financial institutions of liquidity, which triggers an explosion of money market interest rates. Such an explosion of money market interest rates can make the interest costs of inherited debt positions greater than the cash flows from operations. Profit maximizing banking in general and

corporate banking in particular is an active force creating conditions conducive to a financial crisis.

III. Hedge, Speculative, and Ponzi Finance

In order to understand how banking and financial considerations lead ^{to} situations that are conducive to instability it is necessary to investigate the cash flow implications of financing relations.

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 debts. This situation exists because short term debt is outstanding and the principal of some of this debt is

due. Speculative financing unit can have a positive and increasing net worth due to retained earnings. 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 refinancing is a way of life.

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 will have to increase its outstanding debt or reduce its cash holdings 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 and dividends are paid.

Hedge financing units are only vulnerable to what happens to their operating revenues and costs (or whether terms on contracts are fulfilled), speculative and "Ponzi" financing units are also vulnerable to what happens in financial markets. Ponzi finance units have to sustain a belief by creditors that the current cash flow deficit is a transitory phenomena.

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 their debts means that they are vulnerable to financial market developments. Furthermore, even though the assets of banks are of longer term than their liabilities, their assets are of shorter term than the mass of capital and financial assets owned by units that are bank financing. Thus the greater the weights of banking and other financial intermediaries in the economy, the greater the weight of speculative financial relations in the financing of business and households. Not only do banks engage in speculative finance but they induce speculative financing by others.

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 short term debt, such as 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 like a money loan in that it 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, and in particular for construction, 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: the funds to pay debt are obtained by new debt.

Funds can be frozen for a number of years in investment projects like power plants and condominium complexes as they are being put together. The cost of such investment projects will vary as interest rates change, for the interest charges on early on costs are part of the completed price.

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 in large 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. An explosion of short term interest rates is a normal functioning result of an investment boom.

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 financing, 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 fixed investment greatly exceeds the internal cash flows of investing corporations an incipient financial crisis can be triggered by normal market processes. The flow of funds data show that fixed investment exceeded the internal funds of non-financial corporations throughout the late 1960's and the early 1970's - the era of the post-world war II financial crunches, squeezes, and debacles.

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.⁹ 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 an excess of cash receipts over cash payment commitments due to debts over every period. The present value of these positive cash flows 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 1970's, 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 to meet commitments. Furthermore, the rise in interest rates, by increasing the carrying costs of outstanding debt, meant that some 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 the margins of safety in portfolios, although the experience in the past decade indicates that the rebuilding of these margins is incomplete.

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 such units 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 is 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. When this occurs the short term debt that is used to finance the investment in process cannot be turned over and additional debt required to complete the project cannot be raised. Investment financing provides the internal mechanism that can trigger both a financial crisis and a down turn in income. The mechanism is part of an essential attribute of capitalism: the use of short term debt to finance work in progress. There is no need to blame any particular devil for episodes of financial instability. Financial instability is inherent in an economy with the financial practices characteristic of capitalism.

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. Bank management's shift from asset management to liability management and on to line of credit banking is part of the mechanism by which profit maximizing banking facilitated the development of a fragile financial structure which led to the near crises of the past decade.

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 and capital gains through increased leverage.

If the thrust towards instability is to be constrained, economic policy must deal with reality and not be blinded by the abstractions of neoclassical theory. Federal Reserve policy must be based upon an awareness of the banking and financial mechanisms that make financial instability possible. It cannot pursue the 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 own policy. As a first step in making the system less susceptible to financial instability, the Federal Reserve must adopt a money market perspective and abandon its myopic concern with the money supply.

In the recent failures and near-failures of four banks that were in the billion dollar and larger class the Federal Reserve and the Federal Deposit Insurance Company validated all of the non-equity liabilities at

both the domestic and foreign branches of these banks. Depositor's risk was effectively socialized and as a result the need for depositor and collegiate surveillance of bank practices virtually vanished. The procedures used by the Federal Reserve and the F.D.I.C. to abort the financial crisis of 1974/75 virtually assure that market constraints upon bank behavior will be weak once the fears induced by the near misses of 1974/75 are attenuated. The way in which Franklin National and the REIT "failures" were handled virtually assure that similar crisis situations will occur again soon.

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 can be measured by their book value/asset ratio. The attenuation of book value/asset 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 means of lines of credit meant that the measured asset/book value ratios understated bank exposure. Furthermore "bubbles" such as the REITs are able to develop because of the explosion of covert bank liabilities in

the early 1970's.

Bank regulation and control has to establish reasonable constraints on the asset/book value ratio of banks and on line of credit banking. Wherever examiners have power - which is over the smaller banks - asset/book value ratios are constrained to a 12 or 14 to 1 range. This is less than half the asset/book value ratios of many giant banks. The establishment and maintenance of a reasonable and common asset/book value 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/book value 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 need be constrained. 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 University of 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.¹⁰ Any reform of the regulatory system is like the Maginot line that was built after World War I -- 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 will eventually dominate and 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 in moderating the thrust towards instability. Current theory does not ask the right questions and as a result policy wears blinders. As long as neo-classical theory dominates both economic policy and the interventions designed to determine institutional details policy makers will periodically be surprized by threats of financial instability and will have to improvise their reactions. Because their reactions are not based upon any deep understanding of why financial crises occur, their intervention will tend to set the stage for a rather quick resumption of the very financial adventurism and inflationary pressures that lead to financial instability.

It is doubtful that we can ever completely eliminate the possibility of financial crises and thus of deep depressions within a capitalist framework. However, by constraining the ability of bankers to finance speculative investment booms, we can achieve an economy that is significantly less susceptible to crises and thus to the threat of a deep depression than is true at present. Even though a finely tuned state of permanent prosperity is not attainable, it is possible to realize a significantly better performance than we achieved in the past decade.

REFERENCES AND FOOTNOTES

¹H. C. Simons, Economic Policy for a Free Society, Chicago, 1948.

²J. M. Keynes, The General Theory of Employment, Interest and Money, New York, 1936. Liquidity preference cannot be interpreted as a demand for money equation, liquidity preference is the label for the market processes which determine the relative prices of capital and financial assets.

³Ibid., p. 237.

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

⁵The very high asset/book value ratios that the giant banks are able to sustain after the Franklin National debacle is mainly due to the way the Federal Reserve validated all deposit liabilities - including bought money in the overseas branch - as Franklin National failed. See H. P. Minsky. Society March/April 1976

⁶As is well known the present value of \$1 in perpetuity is $\frac{1}{r}$, where "r" is the normal return on assets in the assigned risk class. If the expected return is expected to grow at g% per year and g is less than r then the present value of such an income stream is $\frac{1}{r-g}$.

⁷Bank stocks do not sell at 300% of book because 1) investors really do not believe that these growth rates will be sustained in perpetuity and 2) the ability of new funds to enter into banking and near-banking means that the rate of growth of existing banks will eventually return to more moderate levels.

⁸H. P. Minsky, "Central Banking and Money Market Changes", Quart. J. Econ. (71) May 1957, 171-187.

⁹J. 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.

¹⁰H. C. Simons, op. cit., p. 172.