PRIVATE SECTOR ASSET
MANAGEMENT AND THE EFFECTIVENESS
OF MONETARY POLICY: THEORY AND PRACTICE

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1. Introduction

The controversy about how money affects the economy is deeper and more fundamental than is evident in the current literature. From the current literature it seems as if the dispute is over whether stable monetary growth is a) capable of being defined, b) obtainable, and c) superior, as a stabilization technique, to active discretionary monetary and fiscal policies. In truth the above are peripheral or secondary issues. The fundamental issue in monetary theory is whether a capitalist economy is inherently stable or whether, due to its very nature, it is unavoidably unstable; that is whether unsustainable booms and deep depressions are due to essential characteristics of capitalism.

1/ For an example of the current 'controversy' literature see Brunner. A fairly complete bibliography can be derived from Brunner's citations.

Financial crises, domestic and international, have been associated with capitalism throughout its history. This does not prove that they are inherent in capitalism—the crises of history may have been due to a combination of ignorance, human error and avoidable attributes of the financial system.

One polar view in the stability of capitalism is represented by the Chicago School. An article of faith, nowhere better stated than in Henry Simons' famous article "Rules Versus Authorities..." ([22]), is that serious depressions are due to man-made imperfections of the financial system. Friedman and Schwartz argue that "The monetary collapse was not the inescapable consequence of other forces, but rather a largely independent factor which exerted a powerful influence on the course of events. The failure of the Federal Reserve System to prevent the collapse reflected not the impotence of monetary policy but rather the particular policies followed by the monetary authorities and, in smaller degree, the particular monetary arrangements in existence." ([10], p. 4)
In this 'Chicago' view there exists a financial system, different from that which ruled at the time of crisis but nonetheless consistent with capitalism, which would make serious financial disturbances impossible. It is the task of monetary analysis to design such a financial system, and of monetary policy to execute the design. In Simons' view this depression proof good financial society required a radical restructuring of the financial system. In Friedman's view the establishment of the good financial society requires only the adoption of a stable money growth rule by the Federal Reserve System, given that the reform represented by the introduction of deposit insurance has already taken place. 1/

1/ Friedman in his Henry Simons lecture [8] recognizes that Simons proposed thoroughgoing reform of the financial system whereas his own view is that all that was really wrong is the way in which the central bank exercises its control of the money supply. Simons being a skeptic even questioned the adequacy of thoroughgoing reform: "Banking is a pervasive phenomenon, not something to be dealt with merely by legislation directed at what we call banks. The experience with the control of that issue is likely to be repeated in the future; many expedients for controlling similar practices may prove ineffective and disappointing because of the reappearance of prohibited practices in new and unprohibited forms." [22 p. 172 in Economic Policy in a Free Society]. Note that Simons had a financial system rather than a narrow monetary view of the 'Banking' problem.

The alternative polar view, which I call unreconstructed Keynesian, is that capitalism is inherently flawed, being prone to booms, crises and depressions. This instability, in my view, is due to characteristics the financial system must possess if it is to be consistent with full blown capitalism. Such a financial system will be capable of both generating signals that induce an accelerating desire to invest and financing accelerating investment. 2/

2/ There is a minimum set of financial characteristics which an economy must possess for it to be capitalist. I don't believe this question has ever been properly faced. I don't believe I could set out a list which would meet with universal approval. The obvious characteristics of private ownership of the means of production and decentralized decisions implies in a complex society that financial instruments which make for both indirect and layered ownership exist. In addition the existence of a wide array of permissible liability structures and a large menu of financial assets is necessary; as well as institutions which facilitate the changing of portfolios and the adjustment of liability structures. (Keynes 15, Chapter XII) Thus markets in financial assets must exist and these markets for, so to speak, the financing of positions in second hand assets must also be available for financing the
creation of new tangible -- and intangible -- assets.

In addition as a corollary to the encouragement of innovation in production, innovation in financial usages must be permissible. [Minsky, 17]

An accelerating pace of investment is associated with high animal spirits of both entrepreneurs and financiers. In the absence of an infinitely elastic supply of finance from the monetary system, the accelerating investment is financed by velocity-increasing and liquidity-decreasing portfolio transformations. In addition, positions in the stock of existing real and financial assets are refinanced by similar portfolio transformations, so that over time liability structures emerge which can be serviced only if the euphoric expectations are fulfilled. In order to finance the increasing pace of investment and the more complicated liability structures, rising interest rates are required to induce the successive portfolio adjustments.

These 'better terms' on new issues, put out for investment purposes or for refinancing positions in the stock of assets, feed back upon and lower the market value of outstanding long-term debts. The emergence of a taut liability structure means that a not unusual short-fall of cash receipts can lead to a need to make position by selling assets. Rising interest rates mean that the assets available for sale may have market values less than face values. The combination of the transformation of paper losses into realized losses and the downward pressure upon asset market prices due to the attempt to make position by selling assets can trigger a financial crisis. This breaks the euphoric expectations and a deep depression will follow unless the central bank effectively acts as lender of last resort and stabilizes asset prices, and fiscal measures offset the initial fall in investment so that a cumulative decline in aggregate demand does not occur. 2/

2/ Awareness of the possibility of a financial crisis and a recognition of the Board of Governors responsibility in that eventuality is evident in the recent Board of Governors' review of the operations of the discount apparatus 1/1. 
It is my view that Keynes emphasized the primary importance of financial factors in determining how a capitalist economy functions. I believe this financial interpretation of Keynes is especially evident in Keynes' statement of what the 'General Theory' is all about in his rebuttal to Viner's review \[ \text{Viner,26, Keynes 14 } \] . In this rebuttal he emphasized the importance of uncertainty in determining decisions relating to wealth and the short run determination of the prices for investment output.  

1/ Shackle \[ 21 \] emphasizes the importance of Keynes' rebuttal to Viner, referring to it as the 4th of Keynes' great contributions. This restatement by Keynes of his views has been ignored by the dominant contemporary 'Keynesian' economists.

My interpretations of Keynes is not the conventional view which is mainly derived from Hicks' 'Mr. Keynes and the Classics,' an article which I believe misses the point completely. However, intellectual history is not our topic; our task is to help formulate a useful framework for analyzing the current behavior of American Capitalism and for evaluating the performance of the Federal Reserve System. It is my view that this requires a model which starts with a theory of asset management by private sectors and allows for the development of financial stringency or crisis as well as for the impact of such a crisis upon system behavior. After the crunch of 1966, the spectre of a great depression once again haunts policy makers.

2/ "This standard model that derived from Hicks' 'Mr. Keynes and the Classics' appears to me a singularly inadequate vehicle for the interpretation of Keynes' ideas." \[ 16, p. 401 \]

Clover refers to "The Keynesian Counterrevolution launched by Hicks in 1937 and now being carried forward with such vision by Piskin and other general equilibrium theorists" \[ 5, p. 103 \]. Most 'Keynesian' economists are devoted agents of the counterrevolution.
II. The Portfolio View of Asset Management

Capitalism requires that financial institutions and instruments exist which permit flexibility in financing. Before the impact and efficacy of money can be traced it is necessary to specify the financial institutions; monetary economics cannot escape being institutional economics. Once the problem of monetary theory is identified as revolving around the financing of positions in the stock of assets and the financing of additions to the stock, then a portfolio or asset management view of the monetary process is natural. In this view the liability structures of units impose cash flow commitments and these in turn become constraints upon behavior. 

In a portfolio view the impact of an initial monetary disturbance, say following an open market operation, is the result of changing relative prices among a wide array of financial and real assets. As perfect substitutes for items in the existing stock of assets can be produced, these changing relative prices stimulate or depress production. "At first (following an open market addition to the money supply) the additional money is excessive relative to the other forms of wealth held; the attempt by money holders to exchange their excess balances for other assets raises asset prices and lowers rates of return across the board. The decline in rates thus spreads to all financial and physical assets, so that an increase in the money stock may eventually stimulate new investment in many directions."

The transmission process involves production relations in finance, preference systems and expectations. These are typically assumed to be given and exogenous — or at least to be stable in the short run. However, if they are at times in fact variable and quickly changeable, they provide for the slippage which makes control of the monetary base or even the money supply an inadequate instrument of economic policy. If they are determined by economic variables, with perhaps discontinuous reactions, then our work, to be useful and interesting, must encompass such relations.
A financial innovation is equivalent to the introduction of a new production technique or a new product. Even though the new may be advantageous, there will be a period in which units experiment with and assimilate the new institution or instrument. The reintroduction of trading in Federal Funds in the 1950's did not see all banks shift immediately to active reserve management; wholesale CDs, the creature of the sixties, grew to $20 billion or so in years. The implications for household cash positions of bank credit cards and redi-credit schemes can only be conjectured at this date.

As a result of the existence of financial innovations and learning, the relation between money -- or the monetary base -- and economic activity changes. The evidence of Kaufman and Lott indicates that differences among countries in income velocity can be explained by the sophistication of the financial system, so that the greater the sophistication the greater the velocity. Thus during a period in which the financial system is rapidly becoming more sophisticated -- financial innovation and the diffusion of innovation is proceeding apace -- the rate of increase of economic activity compatible with any rate of increase in the money supply will rise.

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1/ The evidence presented indicates that income is an important component of the demand for money in all leading industrial countries. In addition income elasticities were found to be inversely related to the state of development of the money markets in the respective countries, being highest in Italy and Japan -- countries with the least developed markets, and lowest in the United Kingdom and the United States -- the countries with the most advanced financial centers. These slower attractions to money may be expected in response to a given percentage increase in income in countries with advanced money markets and ready availability of a large variety of high quality, interest yielding money substitutes than in less financially developed countries. (Kaufman and Lott, 13 p. 83)

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The diffusion of innovations is in part a pure learning process. Thus the use of a new instrument may increase at constant or even deteriorating relative prices. However profit opportunities and the threats of losses do affect the willingness to experiment. Both innovation and the speed of diffusion can be expected to respond to profit opportunities. 'Euphoric' investment demand, combined with rising costs
in conventional financial channels, will lead, via feedbacks on the potential payoffs to financial innovations, to an expansion in the effective ability to finance activity. This will take place even though some monetary variables will not be affected; monetary policy may be attempting to constrain the economy even though interest rates are constant, and a modest rate of increase in the reserve base, or in the money supply, can be associated with a rapid rate of increase in the financing of activity.

A rising interest rate structure will affect the relation between money and income in three ways: it will lead to an economizing of money within a fixed set of institutions and instruments; it will increase the speed of diffusion of recent innovations and it will make the introduction of new usages in finance more attractive.

It is difficult to disentangle preferences and expectations, for both cannot be measured objectively, relate to the all important impact of uncertainty upon decisions and react in parallel fashion to events. A portfolio reflects a choice of assets and liabilities made under uncertainty. Uncertainty affects portfolios in two ways: the first is that the expected cash receipts from assets and cash payments due to liabilities are uncertain; the second is that each decision unit has a preference system which embodies its taste for uncertainty.

1/ The economic significance of uncertainty was nowhere better summarized than by Keynes in [14].

Views as to the future of the world are based upon evaluations of the past. It is easy to accept that expectations of pay-offs from assets and payments on account of liabilities are based upon the observed performance of the economy and the particular sector or unit on which the investor, so to say, is betting. In addition tastes for taking chances are affected by observed pay-offs to those who have taken chances. Animal spirits are the result of observed bonanzas -- even though the typical pay-off from chance-taking may be small. The observed rise in
loan-deposit and the decline in government securities-deposit ratios of commercial
banks can be interpreted as the result of changes in bankers' preference.

Expectations and tastes for uncertainty are affected by success and failure of
the economy. Successful functioning results in decreasing the weight of unfavorable
events thus increasing the expected value and decreasing the variance of the pay-offs
from a contingency. In addition preference systems change; as a result of success
the aversion to risk 'decreases.' Symmetrically poor performance will decrease
expected pay-offs and 'increase' the aversion to risk.

The curvature of a utility-income preference system is not a genetic trait of
persons. It is a product of the behavior of the economy. With no change in the
weight attached to possible outcomes the expected utility of an uncertain proposition
will vary with a change in the taste for uncertainty.

Although the effect of the past upon expectations may be considered to be continu-
ous, it is possible to interpret history as showing that dramatic changes in the
taste for uncertainty have occurred. Dramatic events, in particular financial crises,
can be viewed as having quick and marked effects upon tastes for uncertainty. A
possible asymmetry in the evolution of preference systems with respect to uncertainty
exists. A great crash -- such as that of 1929-33 -- will lead to a sharp rise in
the aversion to risk, and it may take the better part of a generation for this
aversion to decrease.\(^1\) However, once the extreme of risk aversion is abandoned,
the 'new view' accepting uncertainty may take place at an accelerating rate, giving
rise to booms.

\(^1\) Keynes 15, Chapter XII.7 discusses this asymmetry -- that crises may come
suddenly but that a rebuilding of confidence may be time consuming: "A collapse in
the price of equities -- may have been due to the weakening either of speculative
confidence or the state of credit. But whereas the weakening of either is enough
to cause a collapse, recovery requires the revival of both." (p. 158)

Both the possibility of financial innovations and of rapid changes in preferences
systems and expectations reflecting events in the economy means that the stimulus for
portfolio adjustments may come from the functioning of the economy, not the operations of the authorities. So the world is not born de nova each day, inherited financial and real assets must enter into some units position as long as they exist. A rapid increase in the aversion to risk -- brought on for example by the experience of a credit crunch -- can shift desired portfolios away from layered financial assets toward cash. But the amounts of cash and non-cash (financial and real) assets are virtually fixed in the market period. A rise in the demand for money can only be affected by offering non-cash assets for money. Given fixed supplies of money and other assets this can lead to a sharp fall in the price of non-cash assets, so that the market price for second-hand reproducible assets may fall below their current production cost. Keynes, 14

Thus with a portfolio view of the monetary process it is possible to accept a state in which causation runs from money to activity, most of the time and nevertheless to argue that the most interesting economics centers around those states in which the causation runs from innovations, expectations and preference systems to activity. We are all are familiar with the Chicago slogan "money matters." May I suggest an alternative: money matters most of the time, at some but important times it is all that matters, and sometimes money hardly matters at all. The tasks of monetary theory are to make precise the conditions defining each of these states, the process of transition from one state to another and to indicate how transitions can be avoided or induced.
III. An Unreconstructed Keynesian Model

The fundamental instability of capitalism is upward. After functioning well for a time a capitalist economy develops a tendency to explode, to become 'euphoric.' This is so because an initial condition is a world with 'uncertainty, and in such a world success feeds back upon expectations and preference systems so as to increase 1) the desired stock of capital, 2) the desired debt-equity ratios for owners of real capital, 3) the willingness to substitute earning assets for money, and 4) the rate of investment. That is instead of starting from "...an Elysian state of moving equilibrium..." [2, p. 59 f], we start from an economy that is now doing well, better than in the past.

In a world with uncertainty a distinction between inside and outside assets is meaningful. Inside units are those whose behavior is determined by the performance of the economy --- households, business firms and financial intermediaries. Outside units are those whose behavior is independent of the performance of the economy (excepting to the extent that a theory of economic policy guides their behavior) --- governments, central banks, etc. The nominal (dollar) cash flow that an outside asset will generate is independent of the performance of the economy and no inside unit is committed to make payments because this asset is its liability. The nominal cash flow that an inside asset will generate depends upon the performance of the economy and for financial assets some inside unit is committed to make payments because this asset is its liability. Government debt, gold and fiat money are all examples of outside assets; real capital, corporate bonds and installment debt are all examples of inside assets. In addition there are mixed assets: an F.H.A. insured mortgage is an inside asset except that once the insurance becomes effective the asset becomes an outside asset to its owner; similarly, to a depositor fully covered by deposit insurance, deposits are outside assets although the bank may own inside assets. [23, 11, 17 f]

[Hair] [Swamy] [Evans and Show]
The price of a representative unit of the fixed stock of real and financial inside assets is determined, for a given uncertain stream of cash receipts, by the relative weight of outside and inside assets in the economy. That is, the mixture of uncertainty-free and uncertainty-bearing assets determines the price of the uncertainty-bearing assets, given that the price of government or gold dollars is fixed at $1. Abstracting from the financial layering process, the fundamental inside asset is the capital stock and the fundamental outside asset is the government debt money supply. Thus the price per unit of a fixed capital stock is a rising function of the amount of outside money; other things constant, the money supply determines the price level of the stock of capital goods. 

I am avoiding the term 'interest rates' or 'interest rate' in this section. If the price of an asset, financial or real, is known and the stream of cash it will yield is known, then an interest rate can be computed; the interest rate is an arithmetic result useful in comparing different time series of cash receipts. Certainly for financial contracts, new and outstanding, the important variable is the payment commitments and rights under varying circumstances; for a collection of real assets in a plant or firm, the corresponding cash flow is gross profit after taxes corrected for debt servicing. (I have tried to deal with this phenomena in Chapter 7.) Turvey, Chapter 7, argues that the interest rate is not really needed in the analysis of investment.

The other things constant include the amount of mixed assets. An increase in financial intermediation and of government endorsements will tend to raise the price per unit of capital as a function of the outside money supply. Preferences and expectations will also position the price of capital function and as these can be sensitive to the performance of the economy, these subjective elements can induce sizable shifts in the function. That is, the price of capital-money supply function, which is the analogue to the liquidity preference function, is, under particular circumstances, unstable. An upward and perhaps accelerating migration of the function will take place after a period of sustained prosperity without deep depressions. A sharp downward shift will take place after a financial crisis. The crisis is not
an exogenous or accidental event. The way in which investment and positions in
the stock of assets are financed during the upward migration of the price of
capital function sets the stage for the crisis.

1/ Differential government endorsements may also affect relative prices — thus
government endorsements available for the financing of new housing may have affected
the relative prices of new and old houses.

The price of a representative unit of the stock of real capital is
determined by the supply of outside money, given the \( (P_k, M) \) function.
Investment consists in producing perfect substitutes for some units in the stock of
capital. Thus the price of capital becomes the demand price for investment, assuming
the investment can readily be financed. There is an investment supply relating
the price per unit of investment goods to the pace of investment. Thus with a
money supply,

Diagram 1.

![Diagram](image)

\( M \), a capital stock, \( K_1 \), and financial intermediation, expectations and preferences
for risk given, the price per unit of capital is \( P_{K_1} \). The demand price for a unit
of investment output is \( P_{I_1} = P_{K_1} \). Given the supply curve of investment \( I_1 \) of
investment will take place. 1/ 2/

1/ Both Brainard and Tobin and Turvey link the price of equities
to the demand for new investment. "...the market valuation of equities, relative to
the replacement cost of the physical assets they represent, is the major determin-
ate of new investment.\textsuperscript{12} p. 103\textsuperscript{7} "For corporate investment, therefore, I'
suspect a simple short run investment function that makes investment an increasing
function of the general level of share prices in relation to the supply function
of new capital goods" \textsuperscript{25}, p. 172\textsuperscript{7}

The conjectures by Brainard and Tobin and Turvey of the linkage between
the stock market and investment are reminders of Keynes' view that, "Where the
capital development of a country becomes a by-product of the activities of a
casino, the job is likely to ill-done." \textsuperscript{15}, p. 159\textsuperscript{7} Much research needs to be
done on the relation between the stock market and real investment.

\textsuperscript{21} Witte \textsuperscript{27} makes the error of assuming an interest rate rather than a
stock of outside money; he doesn't recognize that the(P_k, M) function for given
K is the liquidity preference function.

An accumulation of real capital which accompanies a growth in
production potential.

A growth process would lower the price of capital function to K and shift
the investment supply curve to I. An increase in the money supply to M will
maintain the price of a representative unit of capital at P and increase investment
to I. In this manner stable monetary growth might be associated with stable
economic growth.

However a decrease in risk aversion, an improvement in expectations or a
greater sophistication of the financial system can shift the price of capital
function up, a shock to confidence can shift it down. It may not be feasible to
compensate for such shifts in the price of capital function by changing the money
supply.

This model has two price levels, the price level of capital P_k, and the price
level of investment P_i. The price level of investment is the same as the price
level of current output and is related to the wage rate. Price level rigidity in
this model is not an absolute rigidity in the price level, but a relative rigidity.
Thus in a "period" the maximum fall of the price of investment from an initial
level P_i may bring it to P_i. Over the same period the price level of the capital
stock could fall from P_k to P_k. Thus a shock to 'confidence' or a 'liquidity
crisis' that quickly lowers the price level of the stock of assets to P_k can, if
the minimum possible price of investment at that time is P_i, reduce the rate of
investment drastically. In addition it is worth noting that the maximum price
of capital along $K_2$ may be lower than $P_I$: this phenomena, if it exists, would be a true liquidity trap.

Diagram III

With a given stock of capital, $K_o$ outside money supply $M$, and view of uncertainty $U_o$, the price of a unit of capital is $P_{K_o}$. Owners finance their position in this stock of capital, valued at $P_{K_o}K_o$, by ` emitting liabilities. There exists a maximum amount of investment, $I_o$ per period, which can be financed at the same terms as the position in the capital stock is financed — the sources of $S_o$ are internal financing, creation of outside money, and limited portfolio adjustments. If the view of uncertainty remains unchanged, a steady growth in inside and outside money, to offset the effect of accumulation on the capital stock, will result in at most modest changes in financing terms, $I_o$.

However success breeds optimism, and optimism shifts the price of capital relative to $(K_o, U_1)$. $U_1$ representing an optimistic view of the unwritten. This raises the price per unit of the stock of capital to $P_{K_1}$. The pace of investment would be $I_1$, if it could be financed at the same terms as the holding of the stock of capital was financed. However the ratio of total demand for investment financing relative to the financing available at unchanged terms increases markedly — the rise in the ex-post external financing ratio during investment booms is evidence for this assertion.
The attempt to finance \( I_1 > S_0 \), by inducing portfolio transformations and more rapid increases in inside money, raises the costs of external financing. This rationing process lowers the amount of investment put into place to \( I_1' \). In the process of financing \( I_1' \) of investment, instruments are emitted which commit the investing unit to larger cash flows per dollar of investment than was necessary when investment was restricted to \( S_0 \).

The financial instruments emitted to finance \( I_1' \) are competitors in portfolios for the financial instruments outstanding in order to finance positions in \( K_0 \), as well as the financial instruments outstanding as a result of financial layering. The market price of the outstanding stock of financial assets must be marked down so that the per dollar expected, uncertain cash flows from the old financial instruments are the same as that from the new issues.

Thus the rise in the price of a unit of capital from \( p_{k_0} \) to \( p_{k_1} \) increases the pace of investment and causes losses, due to feedbacks from the financing process, to the holders of prior issued financial liabilities. On the other hand, the rise in the price of a capital unit from \( p_{k_0} \) to \( p_{k_0}' \) leads to widespread capital gains: and to these holders the apparent debt ratio has fallen. To realize these capital gains, transfers, which require the emission of debt instruments which reflect the higher price of capital \( p_{k_1} \), will take place. This too requires portfolio transformations to effect and thus causes upward pressures on financing terms.

The key to the impact of an investment boom upon the potential for a crisis in the economy is the need to finance investment and positions in the inherited stock of capital by emitting instruments which induce portfolio transformations. Portfolio transformations designed to finance accelerating investment activity are one process by which velocity is increased. Instead of thinking about a saving-investment process, the economic sequence runs from investment demand to the financing of investment to income and then to saving. The refinancing of positions in the stock of assets competes with the financing of new investment.
A portion of the external financing of investment is from now inside money. If the pace of money creation is steady, and an increasing pace of investment is financed, even improving views of the future will result -- the price level of capital will continue to rise. The resulting desire to increase the pace of investment will lead to portfolio transformations at rising terms: this will occur even if the money supply increases rapidly. A retreat from being an engine of inflation on the part of the monetary authorities, or pressure from the foreign exchanges, can cause a slowdown in the rate of increase in the money supply; in the case of a pure gold standard an arithmetic ceiling on production can lead to a slowdown in the growth of the money supply. Such a decrease will not immediately affect the amount of investment to be financed, thus the reliance upon velocity increasing portfolio transformations will increase. Sharp decreases in the market value of the outstanding stock of financial assets can take place. These extensive paper losses will be realized losses if units are forced to use such assets to meet payment commitments.

Often investment process financing decisions are discussed as if they were current decisions. Current investment decisions will result in investment spending and financing in the future. Thus at any moment of time there will be a large demand for financing which is inelastic, as it reflects predetermined investment process. This can mean a sharp rise in commitment terms following a slowdown in monetary growth in the context of an ongoing investment boom.

To the above view of the investment process a multiplier relation can be added to complete the model.

This view of how capitalism works centers around the investment decision, including the financing of investment, and the role of uncertainty in determining the price of assets. The accelerating investment boom is endogenous, and the requirements for financing an investment boom so change cash flow commitments and market prices of assets, that the potential for a financial crisis increases as the boom proceeds.
Under these circumstances, the domain of stability of the financial system decreases so that a not unusual event can trigger a serious crisis.

IV. The Effectiveness of Monetary Policy in the Recent Past.

Before the aptness or effectiveness of monetary policy can be judged, it is necessary to determine the constraints upon the monetary authorities. The United States "Central Bank" is a peculiarly decentralized institution. Organizations such as the F.D.I.C. and the H.R.B., as well as the F.H.A. are, along with the Federal Reserve System, part of this 'Central Bank.' The Federal Reserve may be the leading member of this syndicate, but it is constrained by the need to make sure that the specialized institutions can carry out their mandates.

The need to maintain "institutional integrity" is a constraint upon the Central Bank. That is, whereas the Federal Reserve is willing to see particular, isolated moderately sized banks and non-bank financial institutions fail, it cannot stand by without trying to prevent the failure of entire classes of institutions. This is so because the authorities believe, rightly or wrongly, that disrupting institutions will have dire consequences for the economy and because it is the will of Congress that particular sets of institutions survive and prosper. Thus the need to prevent any escalation of the obvious difficulties of savings banks and the closely related housing industry into a general collapse of the system and industry was, and remains, an effective constraint upon monetary policy.

Mutual Savings Banks and Savings and Loan Associations, are financial institutions poorly equipped to cope with rapidly rising interest rates. These institutions hold long-term fully amortized mortgages which carry interest rates that were current at their issue date. These savings intermediaries finance their position by emitting short term or call liabilities. That is their liabilities must meet the market on a well nigh day-to-day basis while their assets lag, often by many
years, behind current market terms.

There are two roads to ruin (negative net worth) for these savings institutions. One via a revaluation of assets, the second via the accumulation of operating losses. By convention mortgages not in arrears are carried on the books of savings institutions at face value. As a result no mortgage intermediary will be declared insolvent by the authorities as a result of falling market prices of its mortgages. On the other hand, if an institution needs to make position by selling such assets at the market such 'paper' losses are realized: the net worth of the organization must be adjusted to reflect this loss. Thus central bankers must prevent any large scale encashment of depreciated mortgages or they must provide some way for mortgage holders to obtain the face value of these depreciated assets if encashment is forced.

In addition, even though the fiction of face value is maintained, the cash flow these mortgages generate reflect the lower, past interest rates. On the other hand, the cost of money for deposit institutions is determined by current interest rates. A rise in deposit interest rates can transform a hitherto profitable institution into one making losses. Given the thin equity position of savings institutions, they cannot endure losses on the carry for very long. However, as the assets are long-lived, the turning over of the portfolio so that it yields returns consistent with the higher cost of money takes time. As a result, with any given initial set of assets, there exists a maximum to the cost of money which can be established and sustained, for each assumed course of total deposits and initial net worth, that will permit the survival of the institution. Thus the authorities must try to constrain deposit rates to levels consistent with the existing portfolios.

Thus there are two ways to bankruptcy: a quick execution, by revaluing assets at market or realizing losses in an effort to make position, and a slow bleeding to death, as losses accumulate on income account. The authorities need to prevent both paths from operating in periods when interest rates have risen. In 1966 at
the time of the crunch the authorities obtained and used the power to discriminate by size of deposit in setting ceiling rates on time deposits. This successfully aborted a switch of savings deposits from savings to commercial banks, which would have forced a large scale encashment of mortgages. In addition this discrimination has succeeded in lowering the effective cost of money to savings banks below what it would have been, thus decreasing the losses on income account.

Since the crunch of 1966, a constant threat of disintermediation has existed due to the large gap that has developed between long-term market rates and deposit rates. The unanswered question is how large a gap is consistent with the maintenance of deposits in savings institutions. That the retailing of corporate bonds does not seem to have increased significantly is an important indication of the value of deposit insurance and the strength of memories of the 1930's. Nevertheless, with the threat of disintermediation ever present, it is not surprising that the Federal Reserve is seeking ways of making discount facilities available to mortgage holders, thus providing means for 'encashment' at face or close to face value.\(^1\)

\(^1\) "...In addition, the redesigned window recognizes, and provides for, the necessity that -- in its role as lender of last resort to other sectors of the economy -- the Federal Reserve stands ready, under extreme conditions, to provide circumscribed credit assistance to a broader spectrum of financial institutions than member banks." \(^{1, p. 2}\)

It is easy for an academic to characterize these constraints upon the exercise of monetary powers as being based upon groundless fears. But the preference function of the authorities must contain some trade-off between the rate of increase of the price level and the subjectively determined likelihood of a run (disintermediation) on the savings institutions. An attempt to moderate the rise in interest rates by increasing the rate at which the reserve base increases is an appropriate use of monetary policy, even at the considerable risk of added price pressures. Thus the rapid expansion of the money supply since January of 1967 might very well be interpreted as an appropriate use of monetary control.
### Table I

**Growth Rates of Various Monetary Variables**

April 1965 - October 1967

<table>
<thead>
<tr>
<th>Time Interval</th>
<th>Money Stock</th>
<th>Money Stock + Time Deposits</th>
<th>Total Reserves</th>
</tr>
</thead>
<tbody>
<tr>
<td>April '65 - April '66</td>
<td>+ 6.0%</td>
<td>+ 9.5%</td>
<td>+ 4.8%</td>
</tr>
<tr>
<td>April '66 - Jan. '67</td>
<td>- 0 -</td>
<td>+ 3.8%</td>
<td>+ 0.6%</td>
</tr>
<tr>
<td>Jan. '67 - July '68</td>
<td>+ 7.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>July '68 - Oct. '68</td>
<td>+ 1.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan. '67 - Oct. '68</td>
<td></td>
<td>+ 9.7%</td>
<td>+ 8.2%</td>
</tr>
</tbody>
</table>


Accepting inflation may be an ineffective way of moderating the increase in interest rates. Through supply effects, price increases may feed back upon and raise interest rates. If the same inflation expectations motivate investors and purchasers of durables, the demand for newly produced long-term assets can be expected to increase. Once inflation expectations become general, an investment explosion can be triggered. Under these circumstances, the authorities may be forced to resort to a monetary stringency to break the euphoric expectations. That is, a credit crunch, a short but trying period in which significant losses and threats of losses on financial contracts are widespread, may be a conscious instrument of policy designed to moderate the demand for investment and to induce a taste for more conservative portfolios. [Minsky](#19)

Even though financial instability is endogenous to capitalism, the financial system and the economy are not always finely balanced in a knife edge. It is not necessary to have instantaneously responsive defensive open market operations fine tune the money market, as Roosa [20](#20) described. Financial instability becomes a present danger only after cash reserves have been thinned out by the financing of an investment boom and when some substantial bloc of financial units
are trying to obtain needed cash by selling or pledging assets which are not
normally used in this fashion. Exotic position-making activities threaten system
stability, especially when the exotic activity involves long-term assets and hence
possibilities of large losses.

A financial crisis not only affects the financing of positions in the stock
of real and financial assets, but it also disrupts the financing of investment.
Low and rapidly falling asset prices, an unwillingness of underwriters to make
commitments at any but punitive terms, and the use of cash flows from operations
to repay debt and raise cash holdings characterize the period after a credit crunch.

In order to evaluate the monetary policy of the past two years it is necessary
to take a position on the crunch of 1966 and the health of the savings intermedi-
aries. Was the crunch at least a mini-financial crisis and are the savings inter-
mediaries in truth insolvent? If the answer is yes to either or both questions,
then the authorities by a combination of direct controls and general monetary
expansion have succeeded in aborting the debt deflation process that
historically has followed such financial triggers and by preventing widespread runs
on the savings intermediaries may have papered over their weaknesses.

If the crunch was a successfully aborted financial crisis, the rise in
Vietnam expenditures beginning in the fall of 1966–winter of 1967, along with the
rapid expansion of the money supply, constitute a model use of expansionary fiscal policy
in coordination with an easy money policy to offset the threat of a deep depression.
An early use of such a combination of fiscal and monetary measures following the
stock market crash of 1929 would have greatly modified the history of the 1930’s.
For example, if in the midyear of 1930 expansionary monetary and fiscal policies
had been undertaken and sustained, the depths of the depression would have been
avoided. In fact if the policy had been successful so that no great depression
occurred, the authorities would possibly have been blamed for over-reacting --
especially if inflationary pressures followed.
Thus I would tend to give the monetary authorities higher marks for their performance in the past two years than I would give their critics among the monetary economists. The discipline on the whole has neglected the possible instability of the financial system. Consider the resources going into setting up and working with large, medium and small-scale econometric models. Once we ask how, if at all, can a financial crisis, with its accompanying threat to the integrity of entire sets of financial institutions, be generated within these models, the irrelevance of this research to the problems of Central Bankers and of a capitalist economy becomes evident.

In closing I would like to add that those who advocate the adoption of a simple rule for monetary policy are implicitly asserting that if their rule is followed financial instability will in fact be impossible. I suggest they prove this, using a model of the financial system which does not constrain the economy to stagnation and which is consistent with the existence of a dynamic capitalism in which private investment is sufficient for full employment growth is achieved.
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