I. Introduction

The fundamental question of monetary theory is whether the historical and continuing instabilities of capitalist economies (i.e. business cycles) are due to the monetary and financial characteristics of the economy. This definition of the problem that monetary theory is to address is quite different from that which is posed in standard monetary analysis where the question is how to determine absolute prices after a real production and exchange process determines relative prices. Inasmuch as the questions we posed implies that relative prices can vary over the cyclical phases of the economy, the dichotomy, between the determination of relative and absolute prices so important in standard theory, is ruled out: monetary processes are major determinants of relative prices. (H. Simms: Floyd Gentry)

It is worth noting that monetary phenomena - in the guise of real balance effects - are the ultimate stabilizing factor in say the Patinkin version of monetary economics - in the problem of monetary economics as we pose it the question is whether monetary phenomena are basically destabilizing phenomena. It is also important to note that we define the problems with respect to the monetary and financial characteristics of the economy. We need to look at money not as an abstract phenomenon but rather as a result of specific financial processes within a precisely defined set of institutions. A further question, which follows if the cyclical flaw of capitalism is in all or in part imputed to the monetary and financial mechanism, is whether the features of the monetary and financial institutions which are held to be responsible for the flaw are essential or non-essential to capitalism. If the flaw is mainly due to non-essential characteristics then it is either due to human error or institutional weaknesses which can be eliminated by reform. In this "no-flaw" view there exists a
"financial good society" and a handbook of policy rules for central bankers which will forever more banish cyclical instability.

The theme of this paper is that financial instability is a consequence of an essential attribute of capitalist finance - the debt financing of both positions in assets and of investment - and of the nature of money in a capitalist economy. Because financial processes clearly affect the price level of assets, positions in which are debt financed, and the extent to which debt financing of investment takes place - these processes determine the relative prices of asset stocks and output. Thus financial processes determine output, employment and price level instability. Furthermore as real activity generates flows that are used to meet financial commitments, internally reinforcing real and financial booms and debt deflation contractions can be set off. Thus the argument of this paper is that financial instability, a severe example being the period of the great crash of 1929-33, mild examples being the crunch of '66, the squeeze of '69, and the current (1974-75) problems, are an essential characteristic of capitalist economies.

One can read almost all of the textbooks, and most of the current journal literature without being made aware that the overriding issue in monetary economics is whether capitalism is flawed in that it is inherently subject to booms and busts. However this was clearly the concern of Keynes and the Chicago school of the 1930's.

True the monetarists, and especially Friedman and Schwartz, argue that the business cycles of experience can be explained by variations in the rate of growth of the money supply. In this doctrine these variations in the rate of growth of the money supply that are responsible
for cycles are due either to the poorly conceived, designed, or executed policy with respect to the money supply or to correctable institutional flaws in the public and private mechanisms that determine the path of the money supply. In point of fact the current crop of monetarist economists are not advancing any serious program of institutional reform - such as the 100% money proposals of the "Chicago" school in the 1930's. It is important to note that the reforms advocated by Simms looked far beyond reform of the narrow banking and monetary institutions towards a rather pervasive reform of financial practices and the organization of industry.

Thus the policy recommendations of the current crop of monetarist economists - that the authorities can and should set and maintain a rate of growth of money supply at approximately the same rate as the trend rate of growth of gross national product - is based upon an implicit view that the present institutions, while not necessarily perfect, are good enough.

The monetarist view is based upon a quite unwarranted assertion as to the content of price theory. They seemingly believe that price theory, in its "Walrasian General Equilibrium" theory form, demonstrates that a monetary economy, if undisturbed by outside shocks, will generate a moving general equilibrium characterized by steady, sustainable growth. In fact no such proposition has been demonstrated. (F.H. Hahn, "Professor Friedman's Views on Money," Econometrica, November, 1971, pp. 61-80.)

The theoretic models upon which the claim is based treat time - with its resultant uncertainty - finance, and money by making truly heroic assumptions. Thus it is a large leap of quite blind faith to go from
the propositions derived in the theory - which even so are not quite what is needed to validate the assumptions of the monetarists - to statements about how any particular real world economy operates. To put the above in a general way, modern general equilibrium theory is a series of propositions about an abstract economy, monetary economics, especially in its policy - prescriptive aspects, makes statements about some particular actual economy - i.e. this economy.

In particular the Walrasian model that the monetarists refer to does not allow for speculative decisions of the nature that are essential to the financing of investment and of holdings of real capital assets in a modern capitalist economy.

There are VII parts to this paper. In part II The Nature of Money is examined. In part III the economic determinants of budget constraints for various types of demand is taken up. It is here argued that the key private budget constraint affected by money destruction or creation and growth borderline is investment and that furthermore money is created and destroyed in financing position in assets. In part IV a theory of the pace of investment is put forth and in part V it is shown how in with a modern banking system and complex financial structure the "demand for finance draws forth a supply". In part VI it is once again emphasized how the viability of a financial structure depends upon the adequacy of cash flows from operations. The final section, part VII, summarizes the argument.
II. The Nature of Money

In a modern capitalist economy money is mainly the liability of profit maximizing, privately owned and managed commercial banks. In the United States at year end 1974 the money stock (demand deposits and currency) as defined by the Federal Reserve System totaled $283.8 billions. Of this total $67.7 billions was currency, which is a liability of the Treasury and the Federal Reserve System, and $216.1 billions was demand deposits, which is a liability of the commercial banks. More than 75% of the money supply consists of bank demand deposits.

Some analysts argue that the appropriate money supply consists of time and savings deposits at commercial banks in addition to demand deposits and currency. At year end 1974, these deposits totaled 330.1 billions, so that the extended money supply totaled $613.9 billions. Of this amount almost 90% was a liability of commercial banks.

(Data from Federal Reserve Bulletin; Table titled Components of Money Stock Measures and Related Items.)

To get a better view of the money supply process it is necessary to look at the behavior of commercial banks. The total resources for all banks in the United States at the end of December 1974 - there were 14,457 such institutions - was $871.2 billions; of this amount $669.8 billions were demand and time deposits, $61.0 billions were other borrowings and $64.0 billions were the capital accounts. The capital accounts give us the book value of the owners investment.

The owners investment, other borrowings, and deposits finance bank ownership of assets. As is evident, with $871.2 billions of total assets and $64 billions of owners equity, banks are highly levered organizations: banks borrow $12.6 for every $1 of capital. At the end of December '74 banks assets were as follows: $546.7 billions of loans, $54.4 billions of U.S. Treasury Debt, $138.8 billions of securities other than U.S.
Treasury $126.1 billions of cash assets, and some $15 billions of other assets.

Banks are profitable because the interest and fees they get from lending, owning securities, and the services they render exceed the interest banks pay on time deposits and the costs of operations (which includes the cost of handling checks drawn on demand deposits). If for example a bank makes 1% net income after taxes on its total assets and if it is levered to the extent the average indicates, then it would make 13.6% on its book value. Banks usually have a conservative dividend policy, so that a representative bank might pay about 1/3 of its earnings as dividends. This means that the book value of a representative bank would grow at 9.2% per year by way of retained earnings.

If the banks that retain earnings are to do as well on their new capital as they have done on their old capital, they will need to lever their retained earnings by the same factor of 13.6 through borrowings. Thus banks in their profit seeking activities, will endeavor to have their deposits and other debts grow at the same rate as their book value; only in this way can their total assets grow at the same rate as their owners investment. Furthermore banks as profit maximizing institutions will try by their operations, to increase their leverage ratios.

The observed 13.6 to 1 asset/book value ratio is the result of offsetting pressures upon the banks. The regulatory authorities, mainly by way of their examination procedure, press banks to have "adequate capital": i.e. to hold the ratio of assets to book value down. The drive for profits makes banks work at evading this constraint: i.e. banks want to increase this leverage ratio.

In addition to the growth in capital accounts due to retained earnings, bank capital accounts can grow by way of new issues of bank stock - either
by existing banks or by new banks. (In spite of bank mergers in branch banking states, the number of banks has shown a moderate increase during the post-war years.) When bank capital is increased by means of either retained earnings, or, new issues, the funds invested in the banks are available to finance non-bank activity. Thus the growth of banking capital does not "absorb" resources (ignoring bank facilities and bank equipment) - it merely determines the channels through which activity and positions in capital assets are financed.