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FINANCIAL MARKETS AND ECONOMIC INSTABILITY, 1965-1980*

Hyman P. Minsky†

Professor of Economics
Washington University, St. Louis

There is now a new "game in town." This new game is the serious effort by the Reagan administration to change the structural relations between the federal government and the private portions of the economy. In the interaction between financial markets and the instability of the economy over the years of turbulence since 1965, the federal government's fiscal powers and the Federal Reserve's monetary authority loom large as the "protector" against large-scale downside movements of the economy. To evaluate the likely effect of the Reagan program aimed at shrinking government, it is important to understand: (1) why the economy was increasingly turbulent in the past fifteen years and (2) why this turbulence did not result in a serious, deep, and persistent recession.

One characteristic of the conservative macroeconomics that now guides policy is a belief in the inherent stability of our type of economy. Rational expectations theory and the new classical economics in general are macroeconomic theories that take the analytical assumptions made in Walrasian General Equilibrium theory seriously.[1] They assume that the equilibrium seeking and sustaining result that the auctioneer achieves in the Walrasian formulation describes what market processes attain. Inasmuch as the equilibrium seeking and sustaining result for a Walrasian model has been shown to exist only for a relatively simple economic structure, one without money and sophisticated financial institutions, a leap of faith is involved in assuming that the in-fact behavior of our economy is stable.[2] If one looks carefully at the evolution of the financial structure since World

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†The author wants to thank Alice Lipowicz for her incisive comments on an earlier draft of this paper.

[1]James Tobin, *Asset Accumulation and Economic Activity* (Chicago: University of Chicago Press, 1980), Chapter II: Policy, Expectations, and Stabilization.

[2]Kenneth Arrow and Frank Hahn, *General Competitive Analysis* (San Francisco: Holden Day, 1971); and Frank Hahn, "Monetarism and Economic Theory," *Economica* 47, pp. 1-17.

War II and evaluates the impact of these changes on the domain of stability of the economy, the heroic nature of this leap of faith becomes apparent.[3]

Stability, in the macroeconomic sense, means that a close approximation to full employment at stable prices can be achieved and sustained by market processes. It is true that over the first twenty years (1946-1965) after World War II, with the exception of a burst of inflation when the Korean War broke out, a reasonably close approximation to the ideal of "full employment at stable prices" was achieved. This era of success was broken with the credit crunch of 1966, which in part was triggered by Federal Reserve measures aimed to halt an inflation which by present standards was mild. In the context of the financial structure of 1966, however, this policy triggered what the Federal Reserve took to be a threat of a financial crisis. In other papers the author has examined the evolution of financial markets, both in the interwar (1919-1939) period and the years since World War II. These papers have shown how financial markets evolved from being robust to being fragile as a result of profit-seeking activities centering around finance. The theory of endogenous instability, labeled the Financial Instability Hypothesis, and the characterization of financial structures will not be discussed in this paper.[4]

Since the recession of 1966 the economy has not achieved as close an approximation to full employment at stable prices as was true in the 1945-1965 period, but the tragedy of a deep depression has been avoided. The success both before and after 1965 was not achieved and sustained by market processes in the abstract. Market processes always work within the context of government and institutional structures that rule. In the crunches after 1965, Federal Reserve intervention as a lender of last resort was critical in determining the course of the economy. The success that was enjoyed in avoiding a great depression depended on Federal Reserve lender-of-last-resort interventions that broke the downside momentum of an emerging debt-deflation interaction.[5]

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[3]Hyman P. Minsky, "Finance and Profits: The Changing Nature of American Business Cycles," in *The Business Cycle and Public Policy 1929-80; a compendium of papers submitted to the Joint Economic Committee, Congress of the United States* (Washington, D.C.: U.S. Government Printing Office, 1980), pp. 230-244 (at head of title: 96th Congress, 2d session – joint committee print); and Albert N. Wojnilower, "The Central Role of Credit Crunches in Recent Financial History," *Brookings Papers in Economic Activity* 2, 1980.

[4]See Minsky, "Finance and Profits."

[5]Hyman P. Minsky, "The Crunch and Its Aftermath," *The Bankers' Magazine*, February/March, 1968; "The Crunch of 1966—Model for New Financial Crises?"

The credit crunch of 1966 was characterized by disorderly conditions in the market for state and municipal bonds, which resulted as some major commercial banks reacted to a runoff of certificates of deposit by trying to make position by selling such bonds. The Federal Reserve intervened by opening the discount window to banks that needed to make position and which promised to behave (the Federal Reserve emulated the successful panic-abating moves of the Bank of England in the 19th century).[6] Such panic-abating—or aborting—intervention by the Federal Reserve has the Federal Reserve acting as a "lender of last resort." One objective of this paper is to examine the effect of lender-of-last-resort intervention upon the workings of the economy and of the expectation that, if push comes to shove, the Federal Reserve, the Treasury, other government agencies, and even private organizations or "syndicates" acting as agents for the authorities will intervene as a lender of last resort in order to prevent a debt deflation from gaining momentum.

Following the credit crunch of 1966—with a lag—inflation accelerated. In the subsequent inflationary expansion, the measured unemployment rate never got down to the pre-1966 levels. Stagflation, the combination of inflation and unemployment, began with the credit crunch.

Since 1966 there have been three additional episodes of financial disturbance that brought forth lender-of-last-resort interventions by the Federal Reserve. These were:

(1) The Penn-Central/Chrysler finance episode of 1969-70,

(2) The Franklin National/Commercial Bank failure/R.E.I.T. debacle of 1974-75, and

(3) The Hunt/Bache, First of Pennsylvania, and Chrysler refinancing of 1980.

In each case the Federal Reserve intervened to prevent any cumulative interactive deflation. Sometimes its own resources were used, at other times the resources of surrogates were used. The intervention always involved refinancing some units on concessionary terms, and this had the effect of preventing an even greater decline in asset values than in fact took place.

Trans-action, March, 1968; and "Financial Crisis, Financial Systems, and the Performance of the Economy," in *Private Capital Markets*, Commission on Money and Credit Research Study (Englewood Cliffs, N.J.: Prentice Hall, 1964), pp. 173-380.

[6] Irving Fisher, "The Debt-Deflation Theory of Great Depressions," *Econometrica*, October, 1933; and John M. Keynes, "The Consequences to the Banks of the Collapse of Money Values," vol. 9, *The Collected Writings of John Maynard Keynes* (London: Macmillan, 1972), pp. 150-158.

In addition to the overt interventions by the Federal Reserve or surrogates to effect the refinancing of institutions that are unable to fulfill commitments, the structure of government interventions that now rules sustains financial institutions that under free market conditions would be bankrupt. The current position of savings and loan associations (S&Ls) is an example. Prior to the reforms of the New Deal, the standard mortgage was a relatively short-term instrument that at best was only partially amortized over its life, so that at the due date a large payment on account of principal was required. This constitutionally weak arrangement required mortgages to be refunded periodically. One New Deal reform was the introduction and the promotion to a dominant position of a fully amortized, long-term, flat-payment mortgage. This straight-line, fully amortized mortgage removed a major constitutional weakness from home financing as long as interest rates were stable.

Such a mortgage is a viable instrument for the portfolios of savings institutions only as long as market interest rates and the cost of funds to mortgage-holding organizations do not increase. The escalation of interest rates since the mid-sixties means that if assets are now priced at market rather than at face value, the equity position of most mortgage-holding institutions has been compromised. Furthermore, many are making current losses, for their cost of funds has risen above the income earned by assets. In spite of these losses and often negative book value, however, the institutions have been able to meet their payment commitments because they can still hold and even increase their liabilities. The "book value insolvency" and the current losses due to the unfavorable rate structures have been dominated by the guarantee embodied in deposit insurance.

Runs on banks and depository institutions of the kind that have occurred in history no longer occur, because deposit liabilities of these institutions are not now considered to be assets at risk. These assets are accepted into portfolios on two bases. As long as there is a margin of safety provided by both the net worth and the excess of income over the cost of money, then the assets are accepted in portfolios as a commercial proposition and the income and liquidity gains of the deposit holders are largely offset by the income and liquidity losses of the debtors to the banks. Once these assets are accepted into portfolios solely because of the government guarantee, however, then these assets become like government debt or fiat money. When a government endorsement is the basis for holding a deposit liability of banks and savings intermediaries, the inflationary effect on spending of the asset is not offset by the deflationary effect on spending of payments by the issuer of the institution's assets. The current sustaining of S&Ls by the Federal Savings and Loan Insurance Corporation (F.S.L.I.C.) is inflationary, and the Federal Reserve's policy actions with

respect to money market interest rates and the rate of growth of the reserve base are constrained by the predicament of the S&Ls and the F.S.L.I.C.

Thus lender-of-last-resort interventions have two quite separable effects. In the first instance, by overtly refinancing organizations like the Real Estate Investment Trusts (R.E.I.T.s) in 1975, they prevent the collapse of financial organizations, the writing down of assets in various portfolios, and a marked decline in the value of underlying real assets as financing terms became strict. Secondly, by extending central bank protection to particular assets and institutions, the Federal Reserve "endorses" the continued use of that instrument and the viability of institutions. Thus the spectrum of financing forms that are available increases. With the availability of finance sustained, asset values are sustained and increased. Inflationary explosions can take place when asset values rise.

The history of financial practices and the relative rates of change of different types of financial organizations in the years since 1945 are a fascinating story, both of the evolution of economic institutions as a result of units seeking out profit opportunities and of the way the central bank responds when institutions and usages are under pressure. In each of the major crunches since 1966, the Federal Reserve legitimized innovative financial practices. In the years leading up to the credit crunch of 1965, bank negotiable certificates of deposit were the new instrument. In the credit crunch, commercial banks were protected against adverse effects of the runoff of negotiable certificates of deposit. Between 1966 and 1969 the commercial paper market exhibited rapid growth. In 1969/70 the Federal Reserve "legitimized" the commercial paper market by aiding and abetting the refinancing of Chrysler's finance arm by banks when Chrysler no longer could market commercial paper. After the liquidity squeeze of 1970 the Eurodollar market grew at an enormous rate and a "new" set of financial institutions, the R.E.I.T.s, experienced explosive growth. In 1974/75, by "paying off" all of Franklin National's Eurodollar liabilities before closing the bank, the Federal Reserve implicitly underwrote the bank liabilities of all American banks in the Eurodollar market. Furthermore, by aiding and abetting commercial banks to live up to their commitments to refinance the R.E.I.T.s that borrowed in the commercial paper market, the Federal Reserve once again ratified the practice of using bank lines of credit to "backstop" extra bank financing.

In the 1980 crisis three disparate organizations were in trouble at the same time: (1) First of Pennsylvania (a giant bank), (2) Chrysler, and (3) the Hunts and their broker, Bache and Company. Aside from the fact that the three organizations were very large and were being adversely

affected by extraordinary levels to which interest rates had risen, these situations had little in common. First of Pennsylvania was in trouble mainly because of its asset structure, and Chrysler was a giant manufacturer who had been in trouble for some time before the need for concessionary refinancing became acute. In contrast to the three prior Federal Reserve interventions, no new innovation in finance was being tested during this period *unless* it is argued that the Federal Reserve and federal government guarantee of giant businesses was being tested.

The Hunt/Bache/silver affair was a "classic" case of a speculation which involves capitalizing interest to hold an asset in anticipation of price appreciation. If the assets being held add up to a large "value," then the growth of asset prices during the speculative boom and the growth of the financing absorbed in the speculation will pull financing rates up toward the level of the anticipated appreciation rate that is inducing units to hold the asset. Inasmuch as the continued appreciation of the asset depends upon limiting the supply that is available at the ever-rising price of the asset, when the carrying costs approach the expected appreciation rate holders will sell out and the speculation will burst. This bursting of the speculation by interest rate escalation took place in the Hunt case.

By the logic of ideas that promoted the introduction of a lender of last resort in the economy, there was no cause for the Federal Reserve to have legitimized the operation of the Hunts and Bache and Company by using its good offices to help in the refinancing. A central bank that is conscious of its lender-of-last-resort responsibilities and of their potential effects must also have powers to induce financial conservatism on the part of the various units.[7] This means that preemptive intervention, such as took place in the First of Pennsylvania and the Hunt debacles, should be rare events, and, if such preemptive intervention takes place, the Federal Reserve must then take legislative or administrative initiatives to prevent any recurrence. Regulation is a substitute for flirting with disaster.[8]

Over the past fifteen years the Federal Reserve interventions have served to stop a debt deflation process in its early stages. In 1980 the interventions took place before losses were fully realized. The quite explicit protection that is advanced, as well as the easing of the reserve position of banks where the Federal Reserve intervenes in a financial "crisis," quite

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[7]R. Hawtrey, *The Art of Central Banking* (New York and London: Longmans Green, 1932).

[8]Hyman P. Minsky, "The New Uses of Monetary Powers," *Nebraska Journal of Economics and Business*, Spring, 1969.

clearly set the stage for a subsequent expansion of financing and thus for the inflation that, with a lag, has followed crunches. The preemptive intervention by the Federal Reserve in the spring of 1980 helped make the recession that followed short and mild, and was in part responsible for the acceleration of inflation and of interest rates that took place late in 1980.

In 1981 the Federal Reserve is operating in the context of the extremely vulnerable position of savings and loan associations, mutual savings banks, and electric utilities. It knows that if the F.S.L.I.C. and the Federal Deposit Insurance Corporation (F.D.I.C.) are forced to close or refinance S&Ls or mutual savings banks, the Federal Reserve will need to make resources available to the market: neither F.S.L.I.C. nor F.D.I.C. can carry out their responsibilities without Federal Reserve cooperation. Federal Reserve cooperation means that reserves are made available to banks and to the market on the basis of what is needed to refinance the institutions without triggering large-scale interest rate increases, rather than on the basis of a "money growth" rule target.

The higher money market interest rates, the greater the current operating losses of savings and loan associations and mutual savings banks and the greater the likelihood that the Federal Reserve will need to intervene as a lender of last resort. In terms of the money supply rules that now weigh so heavily in policy making, the Federal Reserve is faced with a trade-off: it can either relax its constraint now, in the hope that somewhat lower interest rates will result which will enable the savings intermediaries to survive, or it can sustain constraint knowing that if widespread failures occur it will have to abandon constraint and help refinance floundering institutions.

Thus it is not possible for the Federal Reserve to be monetarist in the fragile financial situation that now rules. After all, the monetarist—or at least Friedman's and Schwartz's—indictment of the Federal Reserve's behavior in the early 1930s is that the Federal Reserve did not go all out in preventing bank failures that were so much a part of the process by which the money supply shrank.

The Federal Reserve has a choice. It can be monetarist and stand back and allow widespread failures by adhering to a money constraint rule, which will in the present context lead to a strong rise in interest rates, or be flexible in its money growth rule and accommodate the market. It has a choice, but it really is not free to choose. Short-run responsibility, as well as the fears that something deeper and longer than anything experienced since 1945 is possible, will make the Federal Reserve lean toward an accommodating posture.

The lender-of-last-resort interventions are not the only reason we have not had a major depression. In addition, big government through its deficits has sustained business profits. In an economy with an elaborate set of private business debts it is necessary to sustain business profits if asset values and the ability of business to fulfill their commitments on debts are to be sustained. A large and, as a result of the increase in business debts and the rise in interest rates, an increasing portion of the difference between total receipts and out-of-pocket labor and material costs of business is committed to meet payments on debts. Inasmuch as going into debt is a vital step in the production process of our type of economy, the availability of debt financing determines the level of business activity. But a major portion of the funds available for debt financing as well as the risk premium in financing charges are determined by the in-fact fulfillment of commitments on outstanding indebtedness.

Total profits depend upon the composition of output and the savings or spending proclivities of the various sectors. Ever since modern macroeconomics began in the seminal work of Keynes, Kalecki,[9] and their younger colleagues, it has been known that under extreme assumptions profits equal investment:

$$\pi = I \qquad (\pi = \text{profits}, I = \text{investment}) . \tag{1}$$

Under more relaxed and realistic assumptions, after-tax profits equals the sum of investment, the government deficit, the surplus on the balance of trade and consumption out of after-tax profits minus the savings out of wage income:

$$\pi^* = I + Df + BTS + c\pi^* - sWN . \tag{2}$$

(π^* = after-tax profits, Df = the deficit on the government account, BTS = balance of trade surplus, $c\pi^*$ = consumption financed by profits, and sWN = savings out of the wage bill.)

For the purposes at hand, the relation among investment, government deficits, and the balance of trade are of primary importance. This is not to deny the importance of savings out of wage income and consumption financed by profit income. A decline in the savings ratio out of wages and a parallel rise in the consumption ratio out of profit income will raise profits. As profits are the mark upon labor and material costs per unit of

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[9] Michael Kalecki, *Selected Essays on the Dynamics of a Capitalist Economy (1933-1970)* (Cambridge: Cambridge University Press, 1971); and Hyman P. Minsky, "The Financial Instability Hypothesis: A Restatement," *Thames Papers in Political Economy*, North East London Polytechnic, 1978, and *John Maynard Keynes* (New York: Columbia University Press, 1975).

output times output, a rise in profits means a rise in prices for any given wage rate. If the profit per unit of output increases, then prices rise relative to money wages.

The government deficit is the difference between tax receipts and spending. As a first approximation they can be taken to be a linear function of income. Thus:

$$T_x = t_0 + t_1 Y \qquad t_0 > 0, \quad 0 < t_1 < 1$$

$$S_p = s_0 + s_1 Y \qquad s_0 > 0, \quad -1 < s_1 < 0, \; s_0 > t_0$$

The budget deficit:

$$Df = S_p - T_x = s_0 + s_1 Y - t_0 - t_1 Y$$

$$Df = s_0 - t_0 + (s_1 - t_1) Y .$$

The deficit is at its maximum when $Y = 0$ and is zero when

$$\bar{Y} = \frac{t_0 - s_0}{s_1 - t_1} = \frac{s_0 - t_0}{t_1 - s_1} .$$

If income falls to Y^* so that $\Delta Y = \bar{Y} - Y^* (\bar{Y} > Y^*)$, the deficit is:

$$Df = s_0 - t_0 + (s_1 - t_1) Y^* s_0 - t_0 + (s_1 - t_1) \bar{Y}$$

$$= [s_0 + (s_1 - t_1)] Y - (s_1 - t_1) Y, \Delta Y = Y^* - \bar{Y} < 0$$

$$= (s_1 - t_1) \Delta Y .$$

If $\pi = I + Df$ and I falls ($\Delta I < 0$), then π will be unchanged if $\Delta \pi = \Delta I + \Delta Df = 0$ or $\Delta Df = -\Delta I$. This implies that $\Delta I = (t_1 - s_1) \Delta Y$. If initially income is at the zero deficit level $\bar{Y}$, then the fall in income $\Delta Y = \frac{-\Delta I}{t_1 - s_1}$ is necessary if profit is to be unchanged.

The steeper the tax and spending schedules (the greater t_1 and $-s_1$), the smaller the drop in income that is necessary to offset any fall in investment.

The progressive income tax, a spending system that is heavily tilted toward transfer payments, and a liberal government that reacts to rising unemployment by deficit-augmenting legislation will lead to an explosive rise in the government deficit when a recession takes place. As a result, profits do not collapse when income and employment decrease and the downside potential of the economy is minimized.

In Table 1, the behavior of investment, the deficit, and the balance of trade over the period covered by the recession of 1981 are detailed. Over

Table 1

Investment, Government Surplus, and Balance of Trade
United States
1979 III - 1980 IV

	Gross Domestic Investment	Federal Government ~~Surplus~~ Deficit	U.S. Net Export + Receipts −	
	Seasonally Adjusted Annual Rates			Total
1979 III	421.7	+15.2	.7	437.6
IV	410.0	+24.5	−7.8	426.7
1980 I	415.6	+36.3	−8.7	443.2
II	390.9	+ 66.5	5.6	463.0
III	377.1	+ 74.2	32.6	483.9
IV	398.1	+ 71.9	14.9	484.9

Source: Board of Governors of the Federal Reserve System, Division of Research and Statistics, Flow of Funds Accounts, 4th Quarter, 1980.

the period of the decline centering around 1980 II the total of these profit-determining spendings was sustained. In 1974/75, as well as in the earlier recessions, a similar set of offsetting changes in the determinants of profits took place.

Business cycle experience, of the period since the emergence of financial fragility with the crunch of 1966, shows that recessions either are triggered by or they soon lead to a threatened breakdown of some significant set of financial markets—without a crunch no recession takes place. The effects of the crunch are quickly attenuated by the lender-of-last-resort intervention of the Federal Reserve and the opening up of a large deficit by the federal government. In contrast to some of the claims of users of rational expectation to the effect that policy does not matter, there can be little doubt that if the Federal Reserve and Treasury policy had not "pre-empted" the financial trauma that was building up in the spring of 1980 the recession would have been significantly more severe. Furthermore, the parameters that enter into designing the tax and spending relations determine the extent of the decline in income that is necessary for profits to be stabilized. As long as profits are stabilized at or close to the "peak level," a deep and prolonged recession cannot occur. Furthermore, once the contribution of the government deficit to profits increases, the balance sheet of business improves rapidly. Not only do deficits associated with

big government sustain profits, but the substitution of government debt for private debt in portfolios when a deficit is generated during a recession leads to an objective situation in which business is willing to increase its indebtedness because its liability structure has become less demanding.

The combination of lender-of-last-resort interventions and the mildness of recessions means that crunches do not increase the felt risk from experimenting with new financial forms and new institutions. Market operators have learned that the Federal Reserve will intervene as a lender of last resort if necessary. Thus, in the year since the Hunt/Bache affair, the pace of financial innovations has not diminished.

A significant institutional evolution now going on is the explosive growth of money market funds. To the extent that they are drawing funds from savings banks, they are part of the problem that the authorities face in keeping the covertly insolvent savings institutions from becoming overtly bankrupt. The money market funds are evolving in response to profit opportunities in the market. The codicils that guide the operations of these funds are being modified so that they can increase the direct financing of business by way of bankers acceptances and open market paper: they are becoming banks without loan officers. Furthermore, an integration of accounts at brokerage firms is taking place. Thus Merrill-Lynch is now integrating their customers' position in margin accounts with a money market fund that can be drawn on by credit cards and checks. The end result of such evolution will be the emergence of fully invested households whose subjective liquidity is much greater than its objective liquidity. If equity in common stocks now serves as the base for open lines of credit, can equity in homes be far behind? In the money market funds we are seeing the emergence of a new uninsured banking system that, in the first instance, increases spending in an already inflationary economy even as it increases the crisis potential of the economy.

The Reagan reform of the tax and spending system will have the effect of decreasing the slope of both the tax and spending schedules, s_1 and t_1 will fall even as the schedules are lowered. This means that a greater fall in income will be needed to offset the effect on profits of a fall in investment. Presumably it will take longer to achieve such a fall. This increases the prospect that the aggregate profits will be stabilized at a lower level, so that the burden of the outstanding private debt increases. Because income and employment have fallen by more than they would have with the old tax and spending programs, excess productive capacity in the recessions will be greater than we now achieve. Even though profits are sustained at a level that prevents a full-blown debt deflation, the greater depth of the

decline will delay recovery. The next recession could be both deeper and longer than any we have experienced to date in the post-Roosevelt world.

An economy in which the freedom to innovate in finance exists and in which the central bank and Treasury intervene to protect the economy against recursive debt deflations and deep and protracted recessions is prone to inflation. Shrinking the size of government will decrease inflationary potential exactly as it increases the downside vulnerability of the economy. Reagan's program will be effective in diminishing the inflationary thrust only if the administration sticks to its spending and tax cutting program in the face of a decline in income and if the Federal Reserve is induced to follow monetarist precepts and stand aside even as a debt deflation accelerates. The scenario of a government that tries to balance the budget in the face of falling income and a Federal Reserve that stands aside as a debt deflation accelerates is, of course, the horror story of 1929-33.