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Notes on the Susceptability of the U. S. Economy to a Financial Crisis

Hyman P. Minsky Ph.D.

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by

Hyman P. Minsky

Washington University
St. Louis

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1. The susceptibility of the U. S. economy to a financial crisis due to internal conditions can be split into two parts: the susceptibility of the financial system to a financial disturbance and the impact upon the real economy. (income, employment and prices) of such a disturbance if it occurs.

2. A financial disturbance is viewed as a shock. What follows the shock depends upon the reaction of both "financial" and "real" portions of the economy. Inasmuch as the "real" reactions will feed back upon the financial system (real assets are simultaneously financial assets) and tend to either amplify or dampen the financial repercussions of the initial disturbance, the likelihood of a full fledged crisis occurring with any set of financial relations cannot be divorced from the structure and behavior of real income. In particular, a U. S. economy in which the Federal Government sector is in excess of 10% of G.N.P., as it is currently, can be expected to react differently, after an initial disturbance, with respect to both income and the subsequent financial reactions, than an economy in which the Federal Government sector is in the neighborhood of 1% of G.N.P., as it was in 1929.

3. Whether financial disturbance and crisis prone situations necessarily follow from characteristics essential to capitalism or whether they are due to human error or institutional flaws which can be readily eliminated need not be dealt with at this time. Our immediate concern is with the stability properties of the existing financial system. However once the determinants of the likelihood of a financial disturbance taking place are identified,both the arena within which human error may play a part and the institutional characteristics that might require modification in the interests of increasing the stability of the financial system can be identified.

4. A distinction is made between a financial disturbance and a financial crisis. A financial crisis is a widespread event, with large scale declines in

asset values, generalized difficulty in refinancing positions, the taking of losses in an effort to meet cash needs and the appearance of markets which "cease" to function. Institutions quite generally behave differently after a crisis than before. A financial disturbance is a failure, illiquidity or the taking of losses to meet payment commitments on the part of a unit or sector of the economy. A financial disturbance can be as small as the failure of a minor non-financial firm and as such it is a daily occurrence. It can also be as extensive as the problems faced by the California savings and loan associations in 1966, the losses taken on municipals by banks in the same year, or the run on commercial banks in 1969 via the run-off of C.D's. The border between interesting financial disturbances and minor financial crisis is vague and narrow, perhaps it can only be drawn after the event.

5. The economy is not viewed as always being on the verge of a financial crisis; markets are able to offset and absorb losses as well as "shortfalls" in cash flows. The type of instability envisaged by Roosa, when he wrote about the New York Money Market in the 1950's, is <u>not</u> at issue here.

6. The financial system is broadly conceived. Each unit in the economy is a financial unit and can be viewed as a bank with effective liquidity and solvency constraints upon its behavior. In the analysis of financial stability the liquidity constraints are essential. Market developments which affect technical solvency become important when the need arises to use price sensitive financial assets to acquire cash.

7. The factors underlying the ability of a unit to meet its payment commitments are the ratio of cash receipts, net of current operating expenses, to payment commitments and the ability to offset a shortfall of cash receipts or an unexpectedly large surge of cash payments by selling assets or emitting liabilities on not too unfavorable terms. The sale of assets or the emission of liabilities

for cash is called position-making activity. The larger the amount of position-making activity and the more exotic or unusual the instruments used the greater the danger that either insufficient cash will be raised or that the 'solvency' of the unit will be impaired, i. e. the greater the danger of a financial disturbance.

8. For each unit or sector, the likelihood of a financial disturbance depends upon:

(1) The ratio, over various periods, of cash payment commitments due to liabilities to the normal or usual sources of cash, including net liability emission as a source of cash.

(2) The ratio over a period of cash plus protected assets to payment commitments, in particular demand and contingent commitments, due to liabilities.

(3) The ratio, as above, of explicit or implicit refinancing agreements or rights to payment commitments.

(4) The ratio of assets whose face value reflects recent increases in asset prices to total assets.

(5) The ratio of long-term assets with fixed interest rates to total assets, especially in the portfolios of institutions which continuously finance their position at current interest rates.

9. The first of the above ratios states that there exists a network of payments and that the liability structure can be read as payment commitments. The important aspect is how are these payments to be met? The normal source is income receipts for households, gross profits after taxes for business firms and tax receipts for State and Municipal governments. On the other hand, financial institutions expect to meet payment commitments by the cash flows their assets generate as well, by a "normal" growth in liabilities and by dealing in assets.

10. The next two items refer to how units, especially financial institutions but also all units that follow a policy of being fully invested, will meet a need for cash if there is a surge of withdrawals, a shortfall of income or expected receipts, or if costs exceed expectations on income account. Such activity is by analogy with banking practice labeled position-making activity. In the immediate post-war period such surges of needs for cash payments could be met by drawing down cash on hand, or selling Treasury Bills. The techniques and instruments used in position-making have changed markedly over the post-war period, not only for financial institutions but for business firms and households.

11. The final two items refer to the impact of a boom on balance sheets. A boom has three not independent aspects: a marked increase in desired capital stock combined with an ability and willingness to finance an increased pace of investment, a runup in the price of the stock of real and equity assets, and a rise in interest rates. The financing of the increased investment takes place via portfolio transformations, that result in closer articulation of cash payments to cash receipts, as well as by a running down of the ratio of traditional position-making instruments to cash flows. The runup of asset values means an increased vulnerability of asset prices to a failure of expectations or a need to use these assets to make position. The increase in interest rates means that at least paper losses accompany the boom, and if these paper losses are heavily concentrated in a region or a sector a source of financial disturbance is revealed during the expansion.

12. In the mid-sixties the U. S. economy experienced a change of state, it became "euphoric." Whereas in the earlier post-war period prosperity was thrust upon the economy, in the mid-sixties business and households alike accepted the emergence of a new era of permanent prosperity. The current (1969 Fall)

resistance of private spending to both monetary and fiscal restraint is indicative of the change in state.

13. Stable growth is an impossibility for the American economy, with its history of financial and economic instability. The achievement of growth that looks like it will continue, raises asset values, so that desired investment increases at an increasing rate. Simultaneously the expectation of continued expansion decreases the value of protected or safe balance sheets. Thus even in the face of monetary constraint, portfolio transformations will finance the accelerating investment. Both borrowers and lenders are affected by boom expectations: the borrower is willing to hazard a closer articulation of expected cash receipts to payment commitments, the lender accepts balance sheets that previously would have been rejected. The expectation of steady growth or the belief that a serious depression cannot occur tends to raise velocity.

14. Once an investment boom is set off then either an accelerating rate of inflation must be accepted, financing terms must be allowed to rise so high that private spending is constrained or the expectations that lead to the boom must be broken. Assuming that inflation at an accelerating rate is unacceptable, then the apparent options are rationing by financing terms along a stable investment function or shifting the investment function via a shock to expectations.

15. The world is not born <u>de nova</u> each day; higher financing terms result in a fall in the market value of inherited fixed interest paper. If institutions exist which are vulnerable to 'operating' and 'paper'losses once interest rates rise then two policy options do not exist. High and rapidly rising interest rates set the stage for sectoral financial distress. Thus ignoring policy options such as investment licensing or wage and price controls, the only way a boom can be brought to an end, given these institutional limitations, is if a financial disturbance takes place which leads to a general reconsideration of desired portfolios.

16. A reconsideration of desired portfolio composition leads to a sharp reduction in the price of equity assets and real capital and in investment and aggregate demand. These changes, in turn, reinforce the shifting of desired portfolios, reduction in equity prices and the decline in investment. In the absence of stabilizers the above is a scenario for a deep depression. As is well known a large Federal Government sector combined with an income-sensitive tax take tends to stabilize aggregate demand.

17. The large Federal Government sector also stabilizes the financial system. The deficit feeds protected assets (government debt) into balance sheets. If there are constraints upon the type of liability that the Treasury can emit, then the deficit will take the form of an increase in the money supply or in near monies (Treasury Bills). By stabilizing both income and the financial sectors, a large Federal Government sector not only prevents a serious depression, it also sets the stage for a renewed expansion.

18. If as in 1967 a potential recession is offset not just by stabilized but by increased Government spending, then the stabilizing and stage setting for future expansion attributes of the Federal Government are accentuated. This is especially so if expectations are reinforced that the monetary and fiscal authorities will not allow financial difficulties to escalate to a financial crisis and will not permit a serious depression. With a Federal Government sector that is 10% of G.N.P. the income reaction to financial shocks is initially attenuated and then offset. A Government sector that effectively stabilizes the economy may leave us with only unacceptable options: a larger regime of direct controls or accelerating inflation.

19. For a smooth transition from an accelerating expansion to sustainable growth to be possible it must be possible to have high and rising interest rates. In our complex innovative financial system it may be true that

strong investment demand will almost always be financed by portfolio transformations at interest rates well below those necessary to effectively constrain investment. That is, interest rate rationing is not really a possibility, for portfolio transformations will continue until financial relations are such that a slight shortfall of expectations will lead to serious financial disturbances.

20. However, even if the above is not true, institutional weaknesses centering around the standard mortgage and the housing-oriented savings and insurance institutions prevent unconstrained reliance upon interest rate increases. In addition, direct controls upon commercial banks are rationalized by the need to protect such institutions. Such direct controls tend to facilitate the growth of non-bank as over against bank financing, which in the language used above increases the ratio of unprotected to protected assets in portfolios.

21. Monetary policy is constrained by the need to prevent a run or disintermediation from savings and loan associations and mutual savings banks. The present deposit rate pattern was set in the aftermath of 1966. These institutions have had three years in which higher interest rate assets have been added to their portfolios. They can now afford higher rates on their deposits, certainly commercial banks can afford significantly higher deposit rates.

22. I see no reason whatsoever for ceilings on wholesale C.D's. at commercial banks; I see very good reasons why the emitter of protected assets should be allowed to emit competitive liabilities. High interest rate C.D's. are a smaller risk to financial stability than commercial paper, participations, repurchase agreements or Eurodollar manipulations.

23. The substitution of a variable interest rate mortgage for the present standard mortgage is a necessary step for the elimination of an institutional flaw. I suggest that at all times the standard F.H.A. insured mortgage should be written at an 8% or some other sufficiently high interest rate. If the market rate is

higher, then the length of the mortgage life will be extended; if the market rate is lower, then the debtor will be given the option of reducing the unpaid balance at a faster clip or paying a smaller amount per month. The contractural payment will remain the same, the expectation is that usually there will be a rebate analagous to the dividends on an insurance policy.

24. This model has not been tested empirically. One reason is that the relevant events are rare. Neil Murphy and Harry Weintraub at F.D.I.C. are engaged in a simulation study of intertemporal cash flows under uncertainty using numbers based upon mutual savings banks. The theory underlying their study is consistent with the cash-flow and position-making arguments advanced here.