

THE FINANCIAL INSTABILITY HYPOTHESIS:
AN INTERPRETATION OF KEYNES AND AN
ALTERNATIVE TO "STANDARD" THEORY

Hyman P. Minsky

Professor of Economics

Washington University, St. Louis

INTRODUCTION

Professor Jacob Viner of the University of Chicago wrote a long and serious review of Keynes's *General Theory*—the only review which drew forth a rebuttal by Keynes. Professor Viner maintained that the *General Theory* really did not make a sharp break with traditional economics and that Keynes achieved novel results because velocity was allowed to vary and prices and wages were assumed to be rigid.¹ Professor Viner's review pointed toward the neoclassical synthesis, which can be said to have reached maturity with Patinkin's work at Chicago.²

In his rebuttal Keynes rejected Professor Viner's interpretation and offered a concise statement of the *General Theory*.³ Once Keynes's rebuttal to Viner is used as a key to disentangle the new from the old, an interpretation of the *General Theory* as "a theory of why output and employment are so liable to fluctuations" emerges.⁴ The interpretation of the *General Theory* that follows from Keynes's argument is inconsistent with both the Hicks-Hansen formulation of Keynesian theory and the neoclassical synthesis.⁵ Furthermore, the interpretation of the *General Theory* that is consistent with Keynes's rebuttal to Viner leads to a theory of the capitalist economic process that is more relevant and useful for understanding our economy than the standard neoclassical theory. This

¹Jacob Viner, "Mr. Keynes on the Causes of Unemployment," *Quarterly Journal of Economics*, November, 1936.

²Don Patinkin, *Money Income and Prices* (Evanston, Ill.: Row, Peterson, 1956; 2nd ed., New York: Harper and Row).

³J. M. Keynes, "The General Theory of Employment," *Quarterly Journal of Economics*, February, 1937.

⁴*Ibid.*, p. 221.

⁵John R. Hicks, "Mr. Keynes and the Classics, A Suggested Interpretation," *Econometrica*, April, 1937; and Alvin H. Hansen, *Fiscal Policy and Business Cycles* (New York: W. W. Norton & Co., 1941).

theory, which builds upon an interpretation of Keynes, is the "financial instability hypothesis."⁶

The main objective of this paper is to state succinctly the financial instability hypothesis, and to indicate briefly why it is better suited to our economy than the dominant neoclassical synthesis. Before proceeding to the statement of the financial instability view, a brief argument is essayed to show how an interpretation of the *General Theory* that rests upon Keynes's rebuttal to Viner leads to the financial instability hypothesis.

The legitimacy of the financial instability hypothesis as an interpretation of Keynes is not as important as the relevance of this hypothesis to our economy. The connection between Keynes and the financial instability hypothesis is emphasized because the author's version of the financial instability hypothesis did arise out of an attempt to understand Keynes in light of the crunches and other financial disturbances of the past decade. Even though extreme financial disturbances took place during the gestation period of the *General Theory*, subsequent interpretative literature has ignored financial instability.

INTERPRETATION OF THE *GENERAL THEORY* IN LIGHT OF KEYNES'S REBUTTAL TO PROFESSOR VINER

From the perspective of the standard economic theory of Keynes's day and the presently dominant neoclassical theory, both financial crises and serious fluctuations of output and employment are anomalies; the theory offers no explanation of these phenomena. In the *General Theory* Keynes developed a theory of the capitalist process which was able to explain financial and output instability as the result of market behavior in the face of uncertainty. Unfortunately, the statement of this new theory is often obscured by vestiges of the old theory. A clear and precise statement of the new was not achieved by Keynes until his rebuttal to Viner. The view of the *General Theory* that emerges, once the reply to Viner is used as a key, is markedly different from the standard interpretation.

The new theory that emerges focuses upon the investment decision within the context of capitalist financial practices as the key determinant of aggregate activity. In his rebuttal to Viner, Keynes insisted that the main propositions of the *General Theory* center around the disequilibrating forces that operate in financial markets. These disequilibrating forces

⁶G. L. S. Shackle has long maintained that Keynes's *Quarterly Journal of Economics* article is the "ultimate distillation" of Keynes's thought on money. See G. L. S. Shackle, *Keynesian Kaleidics* (Edinburgh University Press, 1974). Also see Hyman P. Minsky, *John Maynard Keynes* (Columbia University Press, 1975), for a detailed argument about the legitimacy of this alternative interpretation.

directly affect the valuation of capital assets relative to the prices of current output, and this price ratio, along with financial market conditions, determines investment activity. The *General Theory* is thus concerned with how these two sets of prices (capital and financial assets on the one hand, and current output and wages on the other) are determined in different markets and by different forces in our economy, and why such an economy is "so given to fluctuations."

Construction of standard economic theory—the neoclassical synthesis—starts by examining bartering, such as might take place at a village fair, and proceeds by adding production, capital assets, money, and financial assets to the basic model. Such a village fair paradigm shows that a decentralized market mechanism can lead to a coherent result, but it cannot explain the periodic rupturing of coherence as an endogenous phenomenon. In Keynes's view, the rupturing of coherence originates in financial usages and spreads by way of investment activity. In order to explain how this takes place, it is necessary to abandon the village fair paradigm and the definition of money as merely an expediter of transactions.

In the *General Theory* Keynes adopts a City or a Wall Street paradigm: the economy is viewed from the board room of a Wall Street investment bank. Theorizing starts by assuming a monetary economy with sophisticated financial institutions. In such an economy, money is not just a generalized ration point that makes the double coincidence of wants unnecessary for trading to take place; money is a special type of bond that emerges as positions in capital assets are financed. Keynes clearly stated this conception of money in a 1931 essay:

There is a multitude of real assets in the world which constitutes our capital wealth—buildings, stocks of commodities, goods in the course of manufacture and of transport, and so forth. The nominal owners of these assets, however, have not infrequently borrowed *money* in order to become possessed of them. To a corresponding extent the actual owners of wealth have claims, not on real assets, but on money. A considerable part of this "financing" takes place through the banking system, which interposes its guarantee between its depositors who lend it money, and its borrowing customers to whom it loans money wherewith to finance the purchase of real assets. The interposition of this veil of money between the real asset and the wealth owner is a specially marked characteristic of the modern world.⁷

⁷J. M. Keynes, "The Consequences to the Banks of the Collapse of Money Values," in *Essays in Persuasion*, vol. IX of the *Collected Writings of John Maynard Keynes*.

This conception of money, as a financing veil between the "real asset and the wealth owner," is a natural way for a banker to view money, and is fundamental to understanding both Keynes and our economy.⁸

To Keynes, we live in a world ". . . in which changing views about the future are capable of influencing the quantity of employment."⁹ The current variables most directly affected by changing views about the future are financial variables, such as the market valuation of capital assets, the prices of financial assets, and behavior with respect to liability structures both by businessmen and by their bankers. Once a financial perspective is adopted, time cannot be interpreted away as just adding additional commodities to the economy. In Keynes's theory, "time" is calendar time and the future always is uncertain.¹⁰ Thus investment and financing decisions are made in the face of intractable uncertainty, and uncertainty implies that views about the future can undergo marked changes in short periods of time. In particular, changing views of the future affect the relative price of various capital assets and financial instruments, as well as the relation between capital-asset price and the price of current output.¹¹

In Keynes's view, the financial attributes of a capitalist economy lead to the observed unstable behavior. In an economy with a sophisticated financial system, the financing veil encompasses many more financial instruments than any narrow—or even extended—money concept includes. In particular, Keynes's financing view of money means that ". . . money enters into the economic scheme in an essential and peculiar manner . . ."¹² This is in marked contrast to the classical and today's standard neoclassical

Keynes (MacMillan, St. Martins Press, for the Royal Economic Society, London and Basingstoke, 1972), p. 151.

⁸Dudley Dillard, "The Theory of a Monetary Economy," in K. K. Kurihara, ed., *Post-Keynesian Economics* (London: George Allen and Unwin, 1955). Dillard offers an interpretation of Keynes which goes far toward the interpretation offered here. Unfortunately, this article did not have a major impact.

⁹J. M. Keynes, *The General Theory of Employment, Interest and Money* (New York: Harcourt, Brace, 1936), p. vii.

¹⁰John R. Hicks, "Some Questions of Time in Economics," in *Evolution, Welfare and Time in Economics: Essays in Honor of Nicholas Georgescu-Roegen* (Lexington, Mass.: Lexington Books, 1976), pp. 135-151. In this essay Hicks finally repudiates the potted equilibrium version of Keynes embodied in the IS-LM curves: he now views IS-LM as missing the point of Keynes and as bad economics for an economy in time.

¹¹Keynes, *Quarterly Journal of Economics*.

¹²Keynes, *The General Theory*, p. vii.

economic theory, for, in both, money does not affect the essential behavior of the economy.

There are interesting problems in the history of ideas revolving around the loss of those aspects of Keynes's *General Theory* that point to the business cycle interpretation of that seminal work, but these will not be considered here. Instead, the rest of this article will be concerned with a statement of the "financial instability hypothesis" as a theory which endeavors to explain "the phenomena of the Trade Cycle."¹³ This hypothesis is one among a number of interpretations of Keynes which differ from the standard interpretation.¹⁴ The claim to "legitimacy" of this interpretation will not be documented further; the hypothesis will be put forth not as an interpretation of Keynes but rather as an alternative to current standard neoclassical theory.

THE FINANCIAL INSTABILITY VIEW OF OUR ECONOMY

The first twenty years after World War II were characterized by financial tranquility. No serious threat of a financial crisis or a debt-deflation process (such as Irving Fisher described¹⁵) took place. The decade since 1966 has been characterized by financial turmoil. Three threats of financial crisis occurred, during which Federal Reserve interventions in money and financial markets were needed to abort the potential crises.

The first post-World War II threat of a financial crisis that required Federal Reserve special intervention was the so-called "credit crunch" of 1966. This episode centered around a "run" on bank-negotiable certificates of deposit. The second occurred in 1970, and the immediate focus of the difficulties was a "run" on the commercial paper market following the failure of the Penn-Central Railroad. The third threat of a crisis in the decade occurred in 1974-75 and involved a large number of over-extended financial positions, but perhaps can be best identified as centering around the speculative activities of the giant banks. In this third episode the Franklin National Bank of New York, with assets of \$5 billion as of December, 1973, failed after a "run" on its overseas branch.

Since this recent financial instability is a recurrence of phenomena that regularly characterized our economy before World War II, it is reasonable

¹³*Ibid.*, p. 313.

¹⁴Paul Davidson, *Money and the Real World* (London: MacMillan, 1972); Sidney Weintraub, *Classical Keynesianism, Monetary Theory and the Price Level* (Philadelphia: Chilton, 1961); and Axel Leijonhufvud, *On Keynesian Economics and the Economics of Keynes* (New York: Oxford University Press, 1968).

¹⁵Irving Fisher, "The Debt-Deflation Theory of Great Depressions," *Econometrica*, 1933.

to view financial crises as systemic, rather than accidental, events. From this perspective, the anomaly is the twenty years after World War II during which financial crises were absent, which can be explained by the extremely robust financial structure that resulted from a Great War following hard upon a deep depression. Since the middle sixties the historic crisis-prone behavior of an economy with capitalist financial institutions has reasserted itself. The past decade differs from the era before World War II in that embryonic financial crises have been aborted by a combination of support operations by the Federal Reserve and the income, employment, and financial effects that flow from an immensely larger government sector. This success has had a side effect, however; accelerating inflation has followed each success in aborting a financial crisis.

Looking at the economy from a Wall Street board room, we see a paper world—a world of commitments to pay cash today and in the future. These cash flows are a legacy of past contracts in which money today was exchanged for money in the future.¹⁶ In addition, we see deals being made in which commitments to pay cash in the future are exchanged for cash today. The viability of this paper world rests upon the cash flows (or gross profits after out-of-pocket costs and taxes) that business organizations, households, and governmental bodies, such as states and municipalities, receive as a result of the income-generating process.

The focus will be on business debt, because this debt is an essential characteristic of a capitalist economy. The validation of business debt requires that prices and outputs be such that almost all firms earn large enough surpluses over labor and material costs either to fulfill the gross payments required by debt or to induce refinancing. Refinancing takes place only if gross profits are expected to be large enough to either validate the new debt or induce further refinancing.

Gross profits in the production of consumer goods depend upon the expenditures on consumer goods by wage earners in consumption and investment goods production and by those who receive income from other than the production process. If the simplifying assumption is made that wage income is received only from the production of consumer and investment goods, that only wage income is spent on consumption goods, and that all of wage income is so spent, then the markup on labor costs in the production of consumer goods will be the wage bill in the production of

¹⁶The *q*, *c*, and *l* of Chapter XVII, "The Essential Properties of Interest and Money," *The General Theory* [Keynes, op. cit.], are best interpreted as cash flows or cash flow equivalents. See H. P. Minsky, *John Maynard Keynes* (New York: Columbia University Press, 1975), ch. 4, "Capitalist Finance and the Pricing of Capital-Assets."

investment goods.¹⁷ This simple formula can be expanded to allow for wage income from state employment, income received from transfer payments, consumption spending out of profits, and savings by receivers of income. Total spending on consumer goods yields a realized markup on labor costs in the production of consumer goods. The markup on labor costs generates the gross profits from operations.

Profit margins in the production of investment goods are not determined in as direct a manner as for consumption goods. Profit flows are always determined, however, by the relative scarcity of specific capital assets. The relative scarcity of capital assets used to produce investment goods, and thus the difference between gross revenues and wage costs in the production of investment goods, depends upon the pace of investment. The funds that are available to meet commitments on debts of both consumer- and investment-goods producers are a function of investment. It follows that present acceptable liability structures reflect current speculations on the course of future investment.

Not only are gross profits after taxes the funds available for the validation of the debts which were used to finance control over capital assets, but the excess of gross profits after taxes over debt payment commitments is the cash flow that accrues to equity share holders. Equity share prices are the result of capitalizing the expected residual cash flows. Equity share prices—which fluctuate in a world with Wall Street—are a determinant of the market valuation of capital assets as collected in firms. The market value of capital assets affects the demand price for investment goods, which, together with supply conditions of investment goods and conditions in financial markets, determines investment.

If our world includes government purchases of goods and services and transfer payments, then gross profits in the production of consumer and investment goods also depend upon government deficits. In our present world, a sharp shift to government deficit financing—as occurred in the four quarters 1974 IV-1975 III—not only sustains demand but also sustains and may even increase business profits. The business profits implications of big government offset a tendency for the debt-sustaining capacity of business to diminish whenever financial market disturbances induce a decline in consumer and business spending. The economy has behaved differently in the postwar period than in earlier epochs, mainly because of the increase in the relative size of the federal government, not necessarily because of any greater skill of policy makers.

¹⁷Michal Kalecki, *Theory of Economic Dynamics* (London: Allen and Unwin, 1965).

The behavior of our economy therefore depends upon the pace of investment. In a capitalist economy the valuation that is placed upon capital assets, which determines current investment, and the ability to fulfill contractual commitments, which determines financing possibilities, depend critically upon the pace of gross profits. Gross profits, in turn, are largely determined by investment. Thus the ability to debt finance new investment depends upon expectations that future investment will be high enough so that future cash flows will be large enough for the debts that are issued today to be repaid or refinanced.

An economy with private debts is especially vulnerable to changes in the pace of investment, for investment determines both aggregate demand and the viability of debt structures. The instability that such an economy exhibits follows from the subjective nature of expectations about the future course of investment, as well as the subjective determination by bankers and their business clients of the appropriate liability structure for the financing of positions in different types of capital assets. In a world with capitalist financial usages, uncertainty—in the sense of Keynes—is a major determinant of the path of income and employment.

The natural starting place for analyzing the relation between debt and income is to take an economy with a cyclical past that is now doing well.¹⁸ The inherited debt reflects the history of the economy, which includes a period in the not too distant past in which the economy did not do well. Acceptable liability structures are based upon some margin of safety so that expected cash flows, even in periods when the economy is not doing well, will cover contractual debt payments. As the period over which the economy does well lengthens, two things become evident in board rooms. Existing debts are easily validated and units that were heavily in debt prospered; it paid to lever. After the event it becomes apparent that the margins of safety built into debt structures were too great. As a result, over a period in which the economy does well, views about acceptable debt structure change. In the deal-making that goes on between banks, investment bankers, and businessmen, the acceptable amount of debt to use in financing various types of activity and positions increases. This

¹⁸ Actually all that has to be assumed is that the economy has not always been in equilibrium and that the memory of disequilibrium "lingers." In general equilibrium theory the assumption is made, by means of recontracting or Walras's peculiar auctioneer, that all economic action occurs in equilibrium. The theory that is designed to demonstrate that decentralized markets lead to coherence (equilibrium) is based upon a postulate that the economy is now and has always been in equilibrium. The disequilibrium of neoclassical theory is a "virtual," not an "actual," disequilibrium.

increase in the weight of debt financing raises the market price of capital assets and increases investment. As this continues the economy is transformed into a boom economy.

Stable growth is inconsistent with the manner in which investment is determined in an economy in which debt-financed ownership of capital assets exists, and the extent to which such debt financing can be carried is market determined. It follows that the fundamental instability of a capitalist economy is upward. The tendency to transform doing well into a speculative investment boom is the basic instability in a capitalist economy.

Innovations in financial practices are a feature of our economy, especially when things go well. New institutions, such as Real Estate Investment Trusts (REITs), and new instruments, such as negotiable Certificates of Deposits, are developed and old instruments, such as commercial paper, increase in volume and find new uses. But each new instrument and expanded use of old instruments increases the amount of financing that is available and which can be used for financing activity and taking positions in inherited assets. Increased availability of finance bids up the prices of assets relative to the prices of current output, and this leads to increases in investment. The quantity of relevant money, in an economy in which money conforms to Keynes's definition, is endogenously determined. The money of standard theory—be it the reserve base, demand deposits and currency, or a concept that includes time and savings deposits—does not catch the monetary phenomena that are relevant to the behavior of our economy.¹⁹

In our economy it is useful to distinguish between hedge and speculative finance. Hedge finance takes place when the cash flows from operations are expected to be large enough to meet the payment commitments on debts. Speculative finance takes place when the cash flows from operations are not expected to be large enough to meet payment commitments, even though the present value of expected cash receipts is greater than the present value of payment commitments. Speculating units expect to fulfill obligations by raising funds by new debts. By this definition, a "bank" with demand and short-term deposits normally engages in speculative finance. The REITs, airlines, and New York City engaged in speculative finance in 1970-73. Their difficulties in 1974-75 were due to a reversal in present values (the present value of debt commitments exceeding the

¹⁹ Hyman P. Minsky, "Central Banking and Money Market Changes," *Quarterly Journal of Economics*, May, 1957.

present value of expected receipts), due both to increases in interest rates and a shortfall of realized over previously anticipated cash flows.

During a period of successful functioning of the economy, private debts and speculative financial practices are validated. However, whereas units that engage in hedge finance depend only upon the normal functioning of factor and product markets, units which engage in speculative finance also depend upon the normal functioning of financial markets. In particular, speculative units must continuously refinance their positions. Higher interest rates will raise their costs of money even as the returns on assets may not increase. Whereas a money supply rule may be a valid guide to policy in a regime dominated by hedge finance, such a rule loses its validity as the proportion of speculative finance increases. The Federal Reserve must pay more attention to credit market conditions whenever the importance of speculative financing increases, for the continued viability of units that engage in speculative finance depends upon interest rates remaining within rather narrow bounds.

Units that engage in speculative finance are vulnerable on three fronts. One is that they must meet the market as they refinance debt. A rise in interest rates can cause their cash payment commitments relative to cash receipts to rise. The second is that, as their assets are of longer term than their liabilities, a rise in both long- and short-term interest rates will lead to a greater fall in the market value of their assets than of their liabilities. The market value of assets can become smaller than the value of their debts. The third front of vulnerability is that the views as to acceptable liability structures are subjective, and a shortfall of cash receipts relative to cash payment commitments anyplace in the economy can lead to quick and wide revaluations of desired and acceptable financial structures. Whereas experimentation with extending debt structures can go on for years and is a process of gradual testing of the limits of the market, the revaluation of acceptable debt structures, when anything goes wrong, can be quite sudden.

In addition to hedge and speculative finance there is Ponzi finance—a situation in which cash payments commitments on debt are met by increasing the amount of debt outstanding.²⁰ High and rising interest rates

²⁰ Charles Ponzi was a Boston "financial wizard" who discovered that by offering high returns on "deposits" he could acquire a large amount of "deposits." As long as his total borrowing grew at a faster rate than his promised "interest," he could fulfill his commitments by increasing his debts. Once his deposits began to grow at a slower rate than his interest obligations, he could not meet his commitments. Inasmuch as debts are used to pay interest (or dividends), a Ponzi scheme eventually collapses. Any time present cash returns to liability earners are paid on the basis of expected

can force hedge financing units into speculative financing and speculative financing units into Ponzi financing. Ponzi financing units cannot carry on too long. Feedbacks from revealed financial weakness of some units affect the willingness of bankers and businessmen to debt finance a wide variety of organizations. Unless offset by government spending, the decline in investment that follows from a reluctance to finance leads to a decline in profits and in the ability to sustain debt. Quite suddenly a panic can develop as pressure to lower debt ratios increases.

There is, in the financial instability hypothesis, a theory of how a capitalist economy endogenously generates a financial structure which is susceptible to financial crises, and how the normal functioning of financial markets in the resulting boom economy will trigger a financial crisis.

Once endogenous economic processes take the economy to the brink of a crisis, Federal Reserve intervention can abort the development of a full-fledged crisis and a debt deflation. Experience in the past decade has shown that the decline in investment and consumer debt-financed spending that follows after an aborted debt deflation leads to a decline in income. In today's economy, positive fiscal actions and the built-in stabilizers lead to massive government deficits as income falls. Such deficits sustain income, sustain or increase corporate profits, and feed secure and negotiable financial instruments into portfolios hungry for safety and liquidity. As a result, the economy recovers rather quickly from the recession but, because the Federal Reserve intervention has protected various financial markets, the recovery can soon lead to a resumption of an inflationary boom.

CONCLUSION

The controversy over the interpretation of Keynes is not as important as the question of whether today's standard economic theory—the neo-classical synthesis—is a valid tool for analyzing and prescribing for our economy. The cyclical behavior and financial instability of our economy can be viewed as the "critical experiment" that refutes the validity of the neoclassical synthesis. Once it is accepted that the neoclassical synthesis "won't do," the question becomes: "What will do?"—"What is an apt economic theory for our economy?"

The construction of new theory is difficult. The task becomes much more feasible if one can stand on the shoulders of giants. Keynes addressed the question of whether standard theory "will do" in an era characterized

future cash flows, then the financing has "Ponzi" aspects. By the above criteria, many REITs engaged in Ponzi finance when they paid dividends on the basis of accruals.

by strong business cycles and financial instability. He came to the conclusion that inherited theory would not do, and he proposed an alternative theory. Over the past forty years one interpretation of Keynes's theory, which virtually ignored Keynes's concern with financial markets and financial usages, has been largely assimilated to standard theory. Now that the problems of economic and financial instability loom large in the world, the question is relevant as to whether those parts of Keynes's theory that point toward a financial and cyclical view of the economy (which were largely ignored in constructing today's standard theory) can serve as a basis for the needed new theory.

The financial instability hypothesis is an attempt to build a theory that is relevant for a financially sophisticated capitalist economy and to show why such an economy is unstable. This theory builds upon Keynes by deemphasizing those parts of the *General Theory* that were seized upon in the integration of Keynes and the classics, and emphasizing those parts that were largely ignored. Because Keynes, in his rebuttal to Viner, emphasized the parts of the *General Theory* that look toward the effect of financial usages in a capitalist framework upon the stability of the economy, the financial instability hypothesis has a strong claim to legitimacy.

Legitimate or not as "Keynesian doctrine," the financial instability hypothesis fits the world in which we now live. In a world with sharp turnabouts in income, such as that experienced in 1974-75, the rise and fall of interest rates, and the epidemic of financial restructuring, bailouts, and outright bankruptcy, there is no need to present detailed data to show that a theory which takes financial instability as an essential attribute of the economy is needed and is relevant.

Policy implications follow from the financial instability hypothesis. One is that fine-tuning, except as a transitory phenomenon, is impossible within the existing financial framework. Another is that policies which work in one financial regime, such as the robust finance of 1946-65, may not be effective in another regime, such as the fragile finance that has ruled in the past decade. A third is that, in order to do better than hitherto, we have to establish and enforce a "good financial society" in which the tendency by business and bankers to engage in speculative finance is constrained.