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## **The Evolution of Financial Institutions and The Performance of the Economy**

*Hyman P. Minsky*

Jack Gurley punctured the pretensions of Friedmanian monetary theory some twenty-five years ago when he characterized it as holding that "money is a veil, but when the veil flutters, real output sputters."<sup>1</sup> Gurley's words exposed the contradiction of monetarism—that money is neutral but that monetary changes are the main causal factors in the real income and employment changes of business cycles. The proposition that money is neutral and the axiom of reals that underlie neoclassical theory are inconsistent with the view that money matters in anything besides the determination of the nominal price level.<sup>2</sup>

Gurley's paradox was the inspiration for Robert E. Lucas's key neutrality-of-money paper. As is well known, the fundamental construct of the neoclassical tradition is a labor market represented by supply and demand curves in which the quantities supplied or demanded are functions of the real wage and employment. Lucas, and Milton Friedman before him, construct mechanisms by which those who supply and those who demand, interpret, or perceive nominal price and wage changes (which to both Lucas and Friedman are due to changes in the money supply) in different ways. Because of these "imperfections," changes in the money supply will lead to changes in real output. In Lu-

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cas the misinterpretations or misperceptions lead to income losses that serve as a teaching device. By this complex and round-about way, Lucas is able to achieve the “short-run” or “transitory” non-neutrality that monetary business cycle theory requires, without abandoning a “long-run” or “essential” neutrality.<sup>3</sup>

In the Friedman and Lucas constructs the money supply is “exogenous” in the sense that the central bank can determine what happens to the money supply. The relation of money to bank asset acquisition and the relation of bank assets to borrowers’ uses of money are not considered. However, we know that what is called “money” in our economy is largely the result of bank profit-seeking activity and that businesses borrow from banks for gain or profit. Furthermore, we know that what is called money changes through time, and we all know that the instruments used by borrowers to acquire funds change through time. Instead of resolving Gurley’s paradox by constructs involving the labor market and ignoring the financial linkages, it is much simpler and richer to go directly to the systems that create money and inquire whether the characteristics of money-creating systems throw light upon the neutrality or non-neutrality of money.<sup>4</sup>

In a modern capitalist economy the institution of money is inextricably tied to the institution of banking. Banking, in turn, cannot be disentangled from the financing of asset ownership and investment activity. The expected profitability of owning assets and investing on the one hand, and of lending or arranging lending on the other, forms natural links between money and activity. Furthermore, as with any profit-seeking operator, the routine profits of doing as was done in the past, are dominated by the profits envisaged as available to successful innovators.

The profits available from innovating in finance are described in newspapers every day. The 1985 game of mergers and acquisitions shows us that the profits available to bankers from innovating in finance are affecting the organization of business and the strategies of business management. Innovations in banking have real consequences.

In a capitalist economy the purpose of activity is to make money. For business, making money means making profits. Every business-person worthy of hire knows that market power facilitates making money. As Joseph A. Schumpeter emphasized, innovation is a source of market power; it yields a transitory monopoly position. The monopoly power is transitory because monopoly profits lure imitators and followers, who sooner or later erode the advantages of the innovator.<sup>5</sup>

Market power and the resulting monopoly profits of innovators are a

necessary part of the process by which technical progress and accumulation takes place in a capitalist economy. Without the transitory extra profits, the incentive to change and to progress would be much weakened. Whereas to John R. Hicks the “best of monopoly profits is an easy life,” to Schumpeter, entrepreneurs are energized by the prospect of monopoly profits. The greater dynamic efficiency of an innovating economy is offset by the allocational inefficiencies due to the exercise of monopoly power.

In our economy, innovations are not restricted to products and production techniques. Innovations occur in marketing, in advertising, and in the way business is organized. Innovations also occur in banking and finance. Often the innovations in organization and finance are necessary for the spread of new products and new techniques. The corporation as the dominant means of organizing production is an outgrowth of the development and use of expensive and long-lived capital assets in production. Specialized sales finance houses were a financial innovation that expedited the mass marketing of automobiles. Other examples can be cited in which progress in production and productive techniques were complementary with the development of products and production techniques.

The innovations in financing relations, instruments, and institutions that result from profit-seeking drives of bankers, other financial middlemen, and borrowers are not always conducive to progress. We are all familiar with Keynes’s remark:

Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation. When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done.<sup>6</sup>

However, we are not as familiar with what followed immediately after the above:

The measure of success attained by Wall Street, regarded as an institution of which the proper social purpose is to direct new investment into the most profitable channels in terms of future yield, cannot be claimed as one of the outstanding triumphs of laissez-faire capitalism—which is not surprising, if I am right in thinking that the best brains of Wall Street have been in fact directed towards a different object.<sup>7</sup>

To Keynes, speculators make money by the appreciation of the value of their assets, whereas enterprisers make money by the yield—the income—assets earn as they are used in production. In a capitalist

economy, an implicit price system of capital assets—the real capital of the economy—is determined in markets, just as is the price system of current output. This implicit price system is buried in the explicit price system of shares and bonds visible in financial markets and in the prices set in mergers and acquisitions. The merger and acquisition game involves the buying, selling and spinning off of bundles of capital assets and market positions as embodied in firms and parts of firms. Prices are set on firms and parts of firms in this activity. The starting point for bids on existing firms is the market valuation of the equity and debt liabilities.

The prices of firms set in financial markets are valuations of the cash flows that the firms are expected to earn. These expected cash flows reflect the technical conditions of production as embodied in the capital assets of the firm, the costs of other inputs required for production, the market position of the enterprise or parts of the enterprise, and the environment in which revenues are going to be earned. The most significant part of the environment in which cash flows are to be earned is the state of aggregate demand. The price system of firms and of capital assets cannot be derived from production characteristics alone; this price system being a capitalization of profits depends upon the state of expectations about aggregate demand over a long period horizon.<sup>8</sup>

The capital assets collected in an innovating organization successful in achieving market power will be priced so as to capitalize the cash flows due to this market power. Thus, equally costly investment goods will have different implicit prices as capital assets according to the expected market power of the firm and the expected ability of the firm to exploit this market power. Inasmuch as the difference between the expected valuation of capital assets and the purchase price of investment output is a motivation for purchasing investment output, both market power and a favorable expected aggregate demand are necessary for investment activity to flourish. Investment in a capitalist economy cannot be explained by reference only to the technical productivity of capital.

The successful exercise of entrepreneurial skill in innovating will lead to a capital gain as the increase in the size and assurance of expected cash flows due to the acquired market power are transformed into the prices of assets. If the innovator carves out a substantial cash flow protected by market power, the appreciation of the ownership interest can be likened to a “bonanza.” The success of capitalism as a system conducive to innovation rests upon the powerful lure of a bonanza. But a bonanza can be realized only if financial markets are able to transform expected monopoly quasi-rents into asset prices.

Keynes's sharp distinction between speculation and enterprise is not wholly warranted. Innovative activity is always speculative in the sense of Keynes, for a major motivating force is the capital gain that follows from carrying it off. Furthermore, for the lure to be effective, financial markets must be able to transform the capital gain due to innovation and the subsequent market power into the generalized wealth of the innovator. Mechanisms for public offerings and for selling off enterprises must therefore be part of the institutional arrangements in finance if innovation is to be fostered.

A major determinant of the prices at which firms can be bought and sold is the current view of the amount of debt the cash flows of the underlying enterprise can carry. Whereas there are technical limitations on production possibilities and whereas consumer preference may be viewed as subject to only slow change, the apt liability structure for carrying a set of assets is not technically determined and is capable of rapid change. This is so because the debt-carrying capacity of any unit depends not just on expected cash flows, but also on the margins of safety that borrowers and lenders find necessary.

A time series of expected cash flows is associated with every bundle of capital assets that firms organize into production units. This time series of expected cash flows reflects not only the technical conditions of production, but also the market power of the firm and the views of borrowers and lenders about the future course of the relevant market and the economy. Because of the rewards and penalties involved—which we will not specify but which we assume are serious—the potential for default on liabilities is an effective barrier against the issuance of debt. Thus, the greater the subjective likelihood that a serious aggregate downside movement of profits will occur, the greater will be the margin of safety between expected cash flows from the enterprise and the cash flows that the debts require for their validation. It follows that if the subjective likelihood of a serious downside movement of aggregate profits declines, then the margins of safety required will diminish. This implies that the financed demand for the firm as a going concern will increase, leading to a rise in the market price of the firm's equity assets.

Let us make the simple observation that practical people who abhor abstract theoretical reasoning form expectations largely on the basis of experience. Thus, the fact that over the past four decades no serious downside movement of aggregate profits has taken place will decrease the margin of safety between expected cash flows and payments on debts required by both borrowers and lenders. If this practical experience is reinforced by authoritative views that the prior downside movements of overall profits was largely the result of errors of commission

and omission by the authorities, that there are no endogenous forces making for such a collapse of profits and that the authorities now know better so that error will not now occur, then there is further cause to reduce borrowers' and lenders' margins of safety. Thus, when the prevailing theoretical views reinforce the opinions of practical people, the refinancing of firms, which raises the market value of firms even as it increases indebtedness relative to cash flows, becomes the game of the day.

A reduction in the margins of safety means that much more debt than before can be carried by an expected cash flow. But carrying much more debt, especially where corporate income taxes exist, means that the total value of the liabilities—the sum of debts and the market value of common shares—can increase. The erosion of buyers' and lenders' requirements for margins of safety between expected cash flows and the cash flows required to validate debts means that the managements and bankers willing to raise debts relative to cash flows can offer a price significantly higher than an initial market price for the existing equity shares. Takeovers are a technique by which indebtedness adjusts to the erosion of felt risk.

The recession of 1981–82 was the third main recession since 1966. The 1969–70, 1974–75, and 1981–82 recessions were of increasing severity and were associated with financial market disturbances also of apparently increasing severity. Despite the depth of the recessions of 1974–75 and 1981–82 (the 1969–70 recession was significantly milder), the total business cash flow (gross profits after taxes) never declined. Because of the power of government deficits to sustain profits, profits were higher in those quarters of 1975 and 1982, where the recession was deepest, than they were a year earlier, when the recession was just beginning.<sup>9</sup>

The constrained downside behavior of aggregate business profits in these recent recessions show that a big government capitalist economy is not necessarily vulnerable to a collapse of aggregate business profits. The success of the Federal Reserve and the other arms of our peculiarly decentralized central bank in containing the effects of strained bank and other financial institution liquidity and solvency shows that effective central banking can prevent generalized declines in asset values. It is no accident that a further explosive growth of business and household debts followed upon the success of the economy in riding out the recession of 1981–82. The massive retirement of equity shares and the debt-financed takeovers that are such a prominent part of the current

picture are results of the constrained downside behavior of the economy in the recent recessions.

The apparent resilience exhibited after the progressions of recessions and financial trauma of the years since the credit crunch of 1966 has contributed to the evolution of the financial structure. In each of the crises an institutional innovation was validated. In the 1966 credit crunch the use of certificates of deposits was legitimized; in 1969–70 the commercial paper market was protected; in 1974–75 the Real Estate Investment Trusts were liquidated and a larger bank failed without causing widespread repercussions; and in 1981–82 and its aftermath a major bank failure was liquidated and the savings banks were restructured.

One facet of the institutional evolution of the last decade has been the skilled exercise of lender-of-last resort powers by the Federal Reserve.<sup>10</sup> This too has implications for desired liability structures. First of all, the evolution of beliefs about the ability of the Federal Reserve and other central bank institutions to contain the effects of local financial crises has diminished lenders' and borrowers' risks. A comprehensive decline in asset values—a domino effect—is apparently deemed “not likely” as a result of the demonstrated ability of the banking system to contain financial trauma. This ability to contain means that refinancing and new financing are not adversely affected by the disappearance of financial institutions. Even though the Bank of America has taken large losses, for most of its borrowing customers it remains “business as usual.”

Despite a series of recessions, the financial system has not had a cumulative decline. The combination of massive government deficits in recessions and prompt lender-of-last-resort interventions has led to an erosion of the size of the margins of safety that borrowers and lenders alike require for financing. As a result, much larger portions of the cash flows that business earns are committed to the payment of debts. The issuance of debts to finance the purchase of equity shares, so as to raise the market price of the corporate entity, results in a decrease in the internal funds available to finance expansion. The ability of existing firms to expand and to venture into new product lines and new techniques of production is reduced when indebtedness explodes.

A financial market that transforms the market power resulting from successful innovation into capital gains for the innovator and for the financier of innovations is a necessary ingredient for a successfully innovating capitalism. But the very institutions necessary for this realization of the capital value of market power also serve as vehicles for raising the debt level of mature firms whose expected cash flows



benefit from the observed ability of big government and the interventionist central bank to contain the downside movement of aggregate profits. Such mounting indebtedness undermines the ability of firms to finance investment internally. The cumulative effect of the changing debt equity ratio in financing means that a small decline in the aggregate of available cash flows can lead to a large percentage decline in the ability of firms to finance investment internally.

A small percentage decline in aggregate cash flows transformed into a large decline in internal financing will lead to a sharp rise in the required external financing of ongoing investment projects. The forced borrowing leads to a reluctance—or even an inability—of firms to start new investment projects. Built into the movement to debt of recent years is the possibility of a much greater decline in investment than has taken place in the recent recessions. This may very well mean that maintained aggregate business cash flows, which was so prominent a characteristic of recent recessions, will not take place so readily in future recessions: next time significantly greater deficits may be necessary.

The roots of the in-fact non-neutrality of money are not to be found in the artful constructs of Friedman and Lucas. Non-neutrality of money arises as a natural consequence of the fact that money is a debt of banks brought mainly into being as banks finance business. When the cash flows of business are heavily committed to the validation of debts, a slight decline in the aggregate of cash flows can lead to amplified declines in internal funds and in marginal leveraging ratios. A decline in investment not offset by a rise in government deficits will, in these circumstances, reduce business cash flows. The very response of business and bankers to success in sustaining profits over the recent recessions may lead to a structure of commitments in which profits are not sustained because the system that stabilized the economy is overloaded.

Financial structures necessary to make the lure of bonanza a realistic goad for investors can be used to create financial relations that make the containing of downside instability ever more difficult. Just as the era of tranquility from 1945 to 1966 gave way to a time of contained turbulence, so the further evolution of the financial structure and the relationships between finance, money, investment and employment are likely to diminish our ability to contain turbulence.

#### Notes

1. J. G. Gurley, "Review of M. Friedman, A Program for Monetary Stability," *Review of Economics and Statistics* 43 (August 1961): 307–308.

2. For the axiom of reals see F. H. Hahn, *Money and Inflation* (Cambridge, Mass.: MIT Press, 1983), p. 34.
3. Milton Friedman, "The Role of Monetary Policy," *American Economic Review*, 58 (March 1968): 1-17 and Robert E. Lucas, Jr., "Expectations and the Neutrality of Money" in R. E. Lucas, Jr. *Studies in Business-Cycle Theory*, (Cambridge, Mass.: MIT Press, 1983).
4. See Hyman P. Minsky, *John Maynard Keynes*, (New York: Columbia University Press, 1975).
5. Josef Schumpeter, *The Theory of Economic Development*, (Cambridge, Mass.: Harvard University Press, 1936).
6. John Maynard Keynes, *The General Theory of Employment, Interest and Money*, (New York: Harcourt Brace, 1936), p. 159.
7. Ibid.
8. Ibid., Chapter 12, "The State of Long Term Expectations."
9. Hyman P. Minsky, "Finance and Profits" in *Can "It" Happen Again* (Armonk, N.Y.: M. E. Sharpe, Inc., 1982).
10. *Wall Street Journal*, 10 December 1985 (Last Page Feature).