

Notes and Comments

HIGH INTEREST RATES AND INFLATION IN THE U.S.

COMMENT

The essence of Professor Fand's study of Inflation and Interest Rates in the United States appears to be the thesis that inflation was caused by excessive growth of the money supply and that inflationary expectations explain the escalation of interest rates in the period 1965-69.¹ He finds fault with the neo-Keynesian position which states that rising interest rates are the cause (not the result) of inflation.²

The role of expectations play a key part in explaining interest rate changes, according to Professor Fand. It is difficult however to accept his explanation especially in the light of price level changes in the years 1955-64. It would seem to be an accurate interpretation of Irving Fisher to say that price level changes over a period of time influence expectations which in turn influence interest rates.³ On the basis of relatively stable prices in the U.S. from the mid-1950's to 1964, it is difficult to say that interest rates from 1965 on were influenced by expectations of inflation. Whatever the merit of the theoretical framework, the facts just do not seem to support the theory. It is more logical to relate interest rates in the early 1970's to the inflation of the late 1960's than to relate interest rates in 1965-69 to previous relatively mild inflation.⁴

Together with the omission of the 1955-64 period as an explanation of escalating interest rates in the U.S., Professor Fand also hesitates to examine the historical data except to state that interest rates by 1967 had exceeded the peak reached in the Civil War. Relative to historical data we may raise several questions. On the basis of price level expectations formed during the Civil War inflation, how can we explain the decline of bond yields in the decade following the war? The same question may be asked with regard to American and British

¹ DAVID I. FAND, "High Interest Rates and Inflation in the U.S.: Cause or Effect?", this *Review*, March 1972.

² This interpretation is, of course, open to debate.

³ WILLIAM E. GIBSON, "Price Expectations Effects on Interest Rates", in *Monetary Economics* (ed. William E. Gibson and George G. Kaufman, McGraw-Hill, New York, 1971).

⁴ Even Friedman maintains that the "price expectation effect is slow to develop and also slow to disappear". MILTON FRIEDMAN, "The Role of Monetary Policy", *American Economic Review*, March 1968, p. 6.

experience following World War I. Unfortunately, Professor Fand offers little explanation. His emphasis on the sharp escalation of interest rates during the 1946-69 period fails to point out the bias inherent in selecting 1946 as the base period. The low levels of interest rates in the 1930's and 1940's were the result of both severe depression and government pegging operations.

If we assume instead that more recent changes in prices influence interest rates then we should be able to detect some statistical relationship between these two variables. With interest rate changes a function of price changes lagged over five quarters (for the period 1965-71 using quarterly data of long-term government bond yields and consumer prices) we have obtained the following equation. The relevant "t" values are below the coefficients.

$$i_t = 0.1223 - 0.0564 P_{t-1} + 0.0681 P_{t-2} \\ (.9575) \quad (.6844) \quad (.7053) \\ + 0.003 P_{t-3} + 0.0047 P_{t-4} - 0.0844 P_{t-5} \\ (.0037) \quad (.0421) \quad (.7513)$$

$$R^2 = .0697$$

$$DW = 1.886$$

With an R^2 of .0697 and with no one coefficient statistically significant it is difficult to explain changes in bond yields during this period by changes in prices. Thus a dilemma seems to exist since if we go back beyond this immediate period, the relative stability of prices during the 1955-64 period would not appear to be a good explanation of rising interest rates. If we come closer to the 1965-71 period there is little evidence of statistical relationships that explain much of the variation in interest rates via price changes.⁵

The constant reiteration of the fallacies inherent in what it referred to as the Neo-Keynesian theory of inflation is both perplexing and confusing. Professor Fand argues that the Neo-Keynesians would interpret the increase in economic activity as the result of a rise in the real rate of interest stimulating investment, which in turn causes inflation. In his opinion, no investment boom could have taken place because no rise in the real rate of interest occurred. This view of the inflationary process may be criticized on several counts. For one, he does acknowledge that it is very difficult to define what is meant by the real rate of interest and also to distinguish the impact of a rise of market rates on prices.⁶

⁵ If we take interest rates in terms of levels as a function of changes in prices we obtain an R^2 of .897 but a Durbin Watson statistic of 1.08 which indicates the possibility of autocorrelation.

⁶ FAND, *op. cit.*, p. 50.

Though the real rate cannot be defined accurately, Professor Fand still insists that it did not rise; therefore no investment boom could have occurred and inflation in this period cannot be explained via the Neo-Keynesian model.⁷ Again there appears to be a conflict between theory and empirical data. From *Table I* it can be seen that a rise in business profitability did occur. Using both net profits as a return on stockholders equity and as a return on sales, the profitability of investment appears to have risen from 1963 on then falling below the 1963 level by 1970, reflecting of course the recession in that year. These data together with the increasing volume of investment spending make this criticism of Neo-Keynesian doctrine spurious.⁸

Professor Fand seems so obsessed with identifying Neo-Keynesianism with the process whereby an investment boom triggers inflation that he focuses on investment spending and ignores the impact of government spending on the economy. As a loyal monetarist he refuses to see any relationship between government spending and inflation; no investment boom took place since the real rate of interest (which he cannot define accurately) did not rise. Therefore, we are thrown back on the famous "paradigma" of money causing inflation. By an ingenious mechanism of avoidance and faulty logic we arrive back at the Mecca of all true believers.

TABLE I

Net Profits (after taxes) to Stockholders Equity, All Corporations		Net Profits Per Dollar of Sales, All Corporations	
	%		%
1963	10.3	1963	4.7
1964	11.6	1964	5.2
1965	13.0	1965	5.6
1966	13.4	1966	5.6
1967	11.7	1967	5.0
1968	12.1	1968	5.1
1969	11.5	1969	4.8
1970	9.3	1970	4.0
1971	9.6	1971	4.2

Source: *Economic Report of the President*, 1972, p. 282. Figures for 1971 are averages for first three quarters.

Together with these two major criticisms other points of rejoinder may be made. For one, it is stated that Neo-Keynesians were surprised at the escalation of interest rates in this period since they expected the acceleration

⁷ *Ibid.*, p. 55.

⁸ If we refuse to accept the increased profitability of investment in this period, we would have to conclude that the volume of investment spending on the part of business was irrational.

of monetary growth to be accompanied by a decline in interest rates. Given the pace of increased government spending and rising income, a Neo-Keynesian model would most surely analyze the outcome in terms of rising levels of interest rates brought on by an increase in the transactions demand for money.⁹ Even if, however, the analysis is framed in terms of credit markets the consensus would most likely be that increased government demands to finance burgeoning budget deficits would put pressure on markets and security prices, hence rising interest rates. Thus it would appear that Neo-Keynesians (whoever they are) were not really surprised by the rise in interest rates. Professor Fand in this respect appears to emphasize the speculative demand for money while overlooking the transactions demand.¹⁰

The same view of the Keynesian model leads Professor Fand to concede, begrudgingly, that the 1969 rise in the level of interest rates could be associated with a deceleration in the rate of growth of the money supply.¹¹ This admission comes about with some sacrifice because it appears to conflict with the basic monetarist position that rising interest rates are related to a growing money supply; reducing the money supply's rate of growth should lead, therefore, to falling (not escalating) interest rates. A logical explanation for what happened in 1969 is that the transactions demand for money increased as both real and money income grew; thus the reduction in the rate of growth of the money supply was translated into a higher level of interest rates. To the extent that rising interest rates were eventually successful in discouraging investment demand, reducing the level of income, lower transactions demand for money did lead to lower interest rates. Thus, the monetarist position is in this sense not inconsistent with the Keynesian model in spite of the rather rigid, dogmatic position of the monetarists on this point.

One of the more interesting aspects of Professor Fand's study is the attempt to distinguish types of inflation, depending upon whether money is the cause or the result. Thus:

When inflation is the cause and high interest rates are the result, one should expect to find evidence of accelerated monetary growth as an independent, and causal, factor generating the inflationary process. On the other hand, when a rise in the natural rate is the cause and inflation is the result, monetary growth is either a by-product or a result of the inflation but certainly not a cause.¹²

⁹ Hicks would use the rising transactions demand for money as an explanation of rising interest rates. JOHN HICKS, "Inflation and Interest", this *Review*, Sept. 1970, p. 271.

¹⁰ The movement down the liquidity preference function would be associated with lower interest rates assuming a given level of income.

¹¹ Professor Fand would seem to hold to what Harry Johnson calls a "vulgar" version of post-Keynesian thinking. RONALD L. TEIGEN, "A Critical Look at Monetarist Economics", *Federal Reserve Bank of St. Louis, Review*, January 1972, p. 23.

¹² FAND, *op. cit.*, p. 50.

This raises several questions. If one accepts the expectational aspect of interest rates (that is, rising price levels influence interest rates), does it necessarily follow that the inflation was induced by the money supply. By this I mean, that if investors react to rising prices, is this synonymous with the relationship between money and prices. Professor Fand appears to make the Quantity of Money synonymous with the expectations effect. Secondly, the question of money being a by-product is very elusive. If government finances a deficit through the banking system, which in turn has a salutary effect on business spending how would this be classified in terms of his schema? Would the newly created money be the cause of, or the result of, the increase in business activity? Since the money supply has significant aspects of endogeneity, it is difficult to see important instances of independent changes in money. This would exclude, of course, the simplistic example of money being thrown out of an airplane.¹³

Without denying the significance of the contribution made by the Monetarists in stressing the real rate of interest, it is still difficult to see the operational aspects of this concept. How is the Federal Reserve supposed to react to a variable that, despite the overall instability of this period, showed little variability. Also, how is the real rate related to concepts such as the return on capital and the return on sales. Certainly there is the problem of being able to define the concept. Even if, however, we are able to define the real rate of interest accurately, it is still accurate to state that borrowers pay the going market (nominal) rate and not the real rate. For industries experiencing a rise in the prices of its output, the deflation of the nominal rate is relevant. What of those industries, the prices of whose final products do not rise proportionately with the average price level. What if they also experience rising wage demands? These appear to be a few of the questions that may be raised to the relevancy, and accuracy, of the oft-mentioned (but seldom thoroughly analyzed) real rate of interest in Professor Fand's paper.

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