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INVESTMENT INCOME DURING INFLATION

Remarks by

Henry C. Wallich
Member, Board of Governors of the Federal Reserve System

at the

Fall 1977 Seminar on "The Bond Investment Process"

sponsored by

The Institute for Quantitative Research in Finance

Hilton Head Island, South Carolina

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It is a pleasure to speak to the Institute for Quantitative Research in Finance on the topic "Investment Income during Inflation." I suggested this topic to your chairman in the hope that it would be of interest to this particular audience. It is a topic, however, that is also of concern to the Federal Reserve and, as will become apparent in the course of my remarks, to all Americans, whether they currently own significant amounts of capital or not.

Inflation drives a wedge between nominal and real values. This makes it difficult to measure accurately the value of assets and the return on them. Inflation tends to increase the nominal rate of return, but often it also reduces the real value of assets. Failure to see this, known among economists as money illusion, may leave the investor unaware of what is happening to him. But he sustains this illusion at his peril because the consequences may be very real.

This is equally true of the individual investors and of the nation as a whole. I shall begin by setting forth a few data at the national level.

Recent Changes in National Wealth

One way of avoiding money illusion is to compute wealth data not in dollar terms, but as a percentage of income. That takes account both of the rise in prices and rise in the real income of households. Presumably people's behavior and degree of satisfaction with their asset position depends, not on the level of wealth even when computed in constant dollars, but on wealth in relation to income and living standards. The financial assets of American households reached a high of over four times their disposable income in 1968. By 1976, they had fallen to a little over three times disposable income. This was the result, very predominantly, of the drop in corporate equity holdings of households, from 144.4 per cent of disposable income in 1968 to 59.0 per cent in 1976 (year-end figures). At present stock market prices, the ratios for total financial assets and for the equity component are bound to be substantially less. Since household total liabilities as a percentage of disposable income remained virtually unchanged over this period (73.4 per cent in 1968, 72.8 per cent in 1976), net financial assets after debt declined just as much as gross financial assets.

The experience of American households with real estate has undoubtedly been better than their experience with stocks. Unfortunately one cannot be precise because inflation-adjusted data for real estate

holdings of households leave something to be desired. According to these statistics, land and residential structures rose from 110.2 per cent of disposable personal income in 1968 to 113.4 per cent in 1976 (year-end data). Accordingly, when we observe that, during the period 1968 to 1976, the net worth of households declined from 505.3 per cent of disposable personal income to 419.1 per cent, we are probably painting too dark a picture of the degree of impoverishment of American households.

For many households, gains from real estate are bound to have exceeded losses on equities. Moreover, since there are many more families owning homes than there are families owning stocks, it seems probable that there has been some redistribution of wealth in the direction of greater equality as a result of these developments.

Bond Investment

The foregoing data illustrate eloquently the recent poor performance of equities as an inflation hedge. The result has been a shift in the preference of analysts and investors away from equities and toward bonds. Within the equity field, there has been a shift from growth stocks to dividend stocks. In the Financial Analysts Journal, an analyst writes "The great task of security analysis during the next decade will be to develop an acceptable rationale for equity investing in a period of high, riskless, fixed investment opportunities.

If you can get 8 to 10 per cent on high-grade bonds, why buy equities?"[1/] The same article states "Perhaps the high-bracket investor would be better off enhancing his capital at the rate of 5 to 6 per cent a year (which is a handsome accumulation rate) with tax-free bonds, and not bothering with equities at all."[2/] There is no way of disputing the failure of equities to protect the investor against inflation in recent years. Unfortunately this unquestioned fact does not lend any plausibility to the assumption that bonds are better, even if their current yield is twice that of stocks.

The economics of bonds during inflation rest on a theory developed over 80 years ago by Irving Fisher. Fisher found empirically that interest rates moved with inflation. He demonstrated theoretically that the expectation of future price increases should generate a premium over and above the real interest rate that investors would demand and borrowers would be willing to pay, equal to the expected rate of inflation. Fisher's view has been regarded as so axiomatic that the apparent inflation premium contained in today's bond yields is often regarded as a measure of expected inflation. Independent forecasts of the rate of inflation over the next five years, such as

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1/ Mendon W. Smith, "New Rationalizations," Financial Analysts Journal, July/August 1976, pp. 17-18.

2/ Ibid., p. 19.

the forecast of the members of the National Association of Business Economists, agree with the inflation forecast of 5-6 per cent implicit in the present 8-9 per cent bond rate, allowing for a real rate of 3 per cent and perhaps 1 per cent for risk.

It might be pointed out that there is no obvious mechanism enabling an investor to "demand" payment of an inflation premium, so long as there is no alternative investment that would better protect him and to which he could shift if he cannot obtain the desired premium. Furthermore, it should be noted that periods of high inflation, such as the late 1940's and again the early 1950's, did not generate premia remotely commensurate with the rates of inflation realized, perhaps because inflation then -- correctly -- was not expected to continue.

More significant for the individual investor is that the inflation premium is taxable. The implications for the real rate received by him after tax are obvious.

Today's high nominal bond yields, therefore, by no means solve the problem of conservation of capital during inflation. If an investor were to expect a 5 per cent rate of inflation to prevail indefinitely, he could conserve his principal only by adding to it 5 per cent per year. He may have to save out of other income enough to make up for any deficiency in the premium after tax. He could not consume any part of his interest unless his top tax bracket is very

modest. Pretty much the same applies if the investor owns tax exempts yielding 5-6 per cent. An investment adviser who provides his client with the standard rates of return available today on long-term investment has by no means solved the investor's inflation problem.

From the point of view of the borrower, the inflation premium is in effect a repayment of principal. The private borrower is favored by the tax system, since that premium, as well as the real interest rate, is tax deductible. Logically, the investor should treat it in the same way, i.e., as part of his capital. Inflation turns bonds, in effect, into annuities or serial bonds. By the time a 30-year bond matures, a 5 per cent rate of inflation will have reduced its purchasing power to about 25 cents on the dollar, a 6 per cent rate to less than 20 cents. My personal view is that we must and shall get inflation under control, so that these computations will remain academic. But I have found no strong evidence that investors and investment advisers universally share this belief. Neither, however, am I aware that investors and their advisers widely follow the practices described earlier that would be necessary if capital is to be conserved given their own expectations.

The problem becomes particularly acute in the case of a trust with a lifetime beneficiary and a remainder man. The law governing trusts lays down the rights of the respective parties. So deeply are its concepts ingrained in everyday speech that we have

derived the word "windfall" from the good fortune of the life tenant of an entailed estate whom the consequences of a heavy storm allow to sell off more timber than he would be allowed to cut. Inflation, in fact, is a continuing windfall that allows the life tenant to consume the estate to the detriment of his successor. This is true even of inflation correctly anticipated by the participants, so long as it is not anticipated by the law.

Inflation thus creates a serious problem for the trustee, who has a fiduciary responsibility toward both parties. He gets little help from the Uniform Principal and Income Act which my legal friends tell me is valid in 39 jurisdictions in the United States. Interest is therein defined as income and thus must be paid to the beneficiary. There seems to be no easy way to keep the corpus intact in real terms, if it is totally invested in fixed interest claims. Even if it is partly invested in equities, these equities would have to turn in a remarkable performance, far beyond maintaining their own value against inflation, in order to compensate for attrition of the bond component. I must confess that I have been surprised, in talking to investment advisers and trustees, to find no great attention apparently being given to this range of problems.

In addition, references to bonds as "riskless," such as that which I cited above, seem to indicate a serious misconception concerning the total nature of risk in bond investment during inflation.

Good bonds are riskless, or almost so, only with respect to default risk. They are exposed to market risk from changes in interest rates and to purchasing power risk from changes in the rate of inflation. Unfortunately, the probability distribution of both risks is skewed in a manner adverse to the investor.

If, as I expect, inflation is brought under control, interest rates will fall and bond prices will rise. Their rise, however, will be limited by the call feature or, in its absence, by approaching maturity. In addition, industrial corporation bonds also have sinking funds that reduce the average maturity of the issues. Moreover, if interest rates do fall, the investor's return on bonds is overstated by the yield to maturity concept because it assumes that all income payments from the obligation are reinvested at the rate of interest prevailing at the time of purchase. Meanwhile, individual company credit risk might mount as some firms find themselves caught with long-term high interest obligations while their competitors might be able to refinance more cheaply.

If inflation or expectations of inflation were to accelerate, on the other hand, the investors' losses could escalate. What market risk can do to a bond is epitomized by a quotation for British 2-1/2 per cent consols, whose market price at one point was lower than their yield. And what inflation can do to the purchasing power of bonds is illustrated, however remotely, by the fate of German bonds

following two world wars. After World War I bonds were practically wiped out and were then revalued by law to at best 25 per cent. After World War II German bonds were devalued to 6-1/2 per cent. Investment advisers who speak of bonds as being riskless ought to take note of history.

Nothing can make me believe that this could happen in the United States. But what is happening right now is a gradual attrition of the purchasing power of bonds. Except in the not very likely event that the price level might fall, these losses can never be retrieved.

This brings me back to a contemplation of common stocks. I would like to examine the reasons why they have been such a poor inflation hedge and why they might or might not continue in that fashion hereafter.

Equities

About the poor performance of equities there can be no doubt. The real value of the Standard & Poor 500 Index, i.e. its value adjusted for inflation, today stands at about the level of 1956. Twenty years' worth of profits plowed back, for many companies surely adding up to more than the 1956 value of the stock, have contributed nothing to market value. Household holdings of equities, in constant dollars, likewise are worth little more today than in 1956.

Why have stocks behaved so poorly? The answer may be in the minds of men, hence unobservable. But two very visiable observations stand out. Profits, correctly computed, are low compared to the past, and price/earnings ratios, which capitalize these profits, have shrunk severely. The low level of profits is reflected in the diminished share of corporate profits in the GNP, after proper correction for inventory valuation and underdepreciation, both due to inflation. It can likewise be seen in the historically low rate of return on the net worth of corporations, computing this return, as it should be, at replacement cost rather than book value.

Whether declining multiples reflect lower expectations of future growth, or simply a higher risk factor, could perhaps be established by examining the work of security analysts. I would be inclined to fault analysts more severely for errors in evaluating

future growth of enterprises than for being wrong about price/earnings ratios. The latter, after all, are determined by the stock market and not by the underlying business facts.

What has been the role of inflation in this debacle? Is it responsible for the course that profits have taken? Or are there more fundamental reasons for the behavior of profits, such as a lasting decline in the productivity of capital? I shall comment briefly only on the first of these two possibilities.

Inflation apparently has deceived many businessmen about the true level of their operating profits. Only perhaps one half of large firms, and probably a lesser share of small firms, use LIFO for inventory accounting. Few, if any, seem to take into account replacement costs. That is reflected in the difficulty firms have in generating new investment projects with an adequate return, where current prices of plant and equipment must be taken into account. The market, however, seems not to have been deceived by the often seemingly good but actually illusory profits reported to stockholders. That appears to be indicated both by research done on the effect of particular accounting methods upon stock prices and by the low level of stock prices actually prevailing. There may be some question whether the market has given adequate weight to the reduction in the real value of corporate debt which in the long run should enhance debt capacity and benefit equity prices, even though it creates no immediate cash flow.

We have no means of knowing whether the downtrend in profits, which has been going on with interruptions since the mid-60's, will continue or not. At present we are enjoying a recovery, but one far from complete. We can diagnose, however, the consequences for our economy, for growth and for employment, of a failure of profits to retain some semblance of their past share in the GNP. Low profits and low stock prices generally mean that investment does not pay. They mean that the return on capital is low relative to its cost. Low profits, especially when combined with low price/earnings ratios, cause the market's valuation of a company to fall below the replacement cost of its assets. Thus it becomes less profitable for a firm to invest in new plant and equipment than to buy another firm whose stock likewise is selling below replacement cost, or even to buy back its own shares.

It would be wrong to say that an economy in that condition cannot continue because it cannot finance investment by traditional methods. Other forms of financing could be developed. In countries where conditions of this sort have prevailed, government has found itself driven to subsidize investment that was not justified by profits. But I doubt that this is a route that our country will want to go.

A more likely sequence seems to me the re-establishment of equilibrium between return and cost of capital through market forces. Inadequate investment, which we are already experiencing,

will bring pressure upon capacity. Over time, that should lead to more adequate profit margins, even though in the short run such pressures could have adverse consequences that might endanger the continued expansion of the economy.

In a very real sense, adequate equity prices are an essential condition of continued investment and growth. Failure to achieve such prices will be damaging not only to investors. It would slow down economic growth, raise unemployment, and so frustrate our major national economic objectives. It would, in the end, lead to fundamental changes in our economy. Such broad changes do not seem likely to me, and I doubt that the American people want to see them.

If these considerations have validity, there is a need to reevaluate the current view that equities cannot keep up with inflation. In the euphoric phase that preceded the present gloom of security analysts, it seemed to be the view that the stock market would forever outperform the economy. The market was discounting not only the future, but the hereafter. Today the opposite view seems to have taken hold -- that the market will always underperform the economy. That view, as I have tried to show, has implications that go far beyond the humble question of investment performance.

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