1980s, but since have returned to, and even surpassed, the leverage ratios experienced in the early 1970s, despite the disflationary environment that has prevailed since 1980.\(^7\)

A somewhat different way of looking at this measure that is favored by financial theorists is to use market values of debt and equity. Also shown in chart 1, this series behaves quite differently than its book-value counterpart. For instance, the collapse of stock prices following the first major oil price shock (in late 1973) sent this ratio soaring. Investors systematically reduced their assessments of the value of the equity of American firms. In recent years, this ratio has stabilized somewhat, helped in part by rising equity prices, though it remains far above levels prevailing before 1972.

Do either of these measures cause us to infer that corporate capital structures have degenerated to the point that their liabilities should be considered "junk" (that is, degenerated to the point that their liabilities claim to consider many factors beyond their equity of American firms. In recent years, this ratio has stabilized somewhat, helping in part by rising equity prices, though it remains far above levels prevailing before 1972.

There may be, in fact, many factors that have led to the current appetite for debt financing, none of which strictly contra-dicts the principles set forth by the traditional prudent investor guidelines. As was discussed above, if it is considered perfectly acceptable for industries with stable earnings to employ a higher proportion of debt financing. The perception of increased stability of the overall economy, therefore, should lead to an increase in the percent-age of leverage that is considered safe for all firms. In chart 3, we present a time series representation of the percentage change in pre-tax corporate profits since 1910. Excluding the Great Depression and the Second World War, the volatility of the growth of corporate profits appears to have declined in recent years. Indeed, for the period covering 1910 to 1929, the variance of the percentage change in corporate profits is 71 percent. The same measure for the years 1945 through 1985 is 2.3 percent.\(^8\)

The rational response to such a reduction, once it is regarded as permanent, would be to reduce the cushion of equity by taking advantage of the gains from leverage. Among these gains is the tax shield afforded by the deductibility of interest payments by borrowing firms. Seen in this light, the trend toward higher debt levels and the emergence of markets for low or unrated debt securities may suggest that the perceived probability of failure and/or bankruptcy costs (and the associated stigma) have been reduced over the past few years.\(^9\)

If today's economic environment is in fact perceived to be less volatile, are rating agencies reacting justifiably when they downgrade the credits of firms that increase their leverage? The rating agencies claim that many factors beyond simple accounting ratios when assigning ratings to corporate debt. They try to take a broad view of the circumstances facing the industry in light of overall economic developments. By using criteria that seemed appropriate in decades past, but that no longer may be appropriate, rating agencies may have failed to take account of the possible reduction in certain business risks. Or, perhaps corporate debt ratings are intentionally biased downward simply because the agencies want to avoid the potentially high cost of a ratings mistake.

**Conclusion**

The effectiveness of various programs designed to protect against economic dis-ruptions (both real and financial) have yet to receive a serious challenge. Many respected analysts believe that the next recession will provide that challenge, with consequences potentially as severe as those experienced in the 1930s. If the public and private promoters of debt-based financing have miscalculated and overestimated the stability of the economy, then we may find ourselves being pushed by bankruptcies into Fisher's debt-expansion trap. Keeping us out of the trap, and protecting the economy from the debt-deflation syndrome, would require exten-sive governmental assistance that would come out of the pocket of every taxpayer. In any event, we appear to be dealing with new rules of prudent borrowing behavior that have been created and shaped by the belief that we have deve-loped a "stabilized" economy. Our nation's corporations, as well as its households and government, may be just beginning to test these new rules.

Over the past few years, the rapid growth in the level of public and private domestic debt, and growth in the level of foreign debt owed to American banks, has been a major concern for our legislators and financial regulators.

This concern centers on the possible negative effects that rising leverage might have on the economy as a whole and on industry in particular. In this Economic Commentary, we will first discuss the theoretical dangers faced by overleveraged companies, with special emphasis on the economy. Against this background, we will then consider the effect that expectations of economic stability may have on corporate financing decisions will be considered.

Next, the historical context. Probably the first serious consideration of the macroeconomic effects of excessive debt accumulation was that of the distinguished economist and author Irving Fisher, who died in 1947. In a 1903 paper, he notes that debt is a complex phenomenon. It is not a simple, one-dimensional factor. In addition to the total of dollars owed, one must also take into account the maturity structure of the debt—that is, the points in time at which various payments come due. Moreover, the concept of overindebtedness is a relative one, dependent upon such factors as total national wealth, national income, and the availability of liquid assets. Fisher thought that the increase in many historical business cycles could not be explained by the traditional theories used by classical economists. These theories tended to focus on things like the relative over- and under-production of various com-modities, their relative prices, and the effects of disturbances (fire, earthquakes, pestilence, etc.) from "outside" the econo-mic. Although certain forms of disturbance might succeed in explaining much of the cyclical expansion and contraction of business activity, we may find ourselves being pushed by bankruptcies into Fisher's debt-expansion trap. Keeping us out of the trap, and protecting the economy from the debt-deflation syndrome, would require extensive governmental assistance that would come out of the pocket of every taxpayer. In any event, we appear to be dealing with new rules of prudent borrowing behavior that have been created and shaped by the belief that we have developed a "stabilized" economy. Our nation's corporations, as well as its households and government, may be just beginning to test these new rules.

**ECONOMIC COMMENTARY**

Federal Reserve Bank of Cleveland

Address Correction Requested: Please send corrected mailing label to the Federal Reserve Bank of Cleveland, Research Department, P.O. Box 6379, Cleveland, OH 44101.


\(^1\) Jerome S. Fons is an economist at the Federal Reserve Bank of Cleveland. The author would like to thank Mark Sniderman and Walker Todd for their helpful comments.

\(^2\) The views expressed are those of the author and not necessarily those of the Federal Reserve Bank of Cleveland or of the Board of Governors of the Federal Reserve System.

\(^3\) 1983 was the chief factor in arresting the economic decline that would have otherwise continued unabated. If the decline had gone unchecked, in fact, the cure would have eventually spread to the government, Debt-Deflation and Corporate Finance

by Jerome S. Fons

This would result in real debts rising, rather than falling as intended. Only through some form of reflation could catastrophe be avoided. Moreover, he reasoned that deflation resulting from increased supply rather than other overindebtedness would not have the same devastating consequences. Among the causes of overindebtedness, envisioned by Fisher was the existence of new investments to offer at above-normal prospective profits. The development of new inventions and technologies provides incentives for such prospects. The lure of large dividends, as well as capital gains made possible by excessive borrowing, contributes to the bubble effect envisioned in his scenario. In addition, an "easy money" or low-interest-rate policy might have the same effect. Finally, the reckless promotion of investment opportu-nities (which unnecessarily raise expectations), in combination with fraud, also contributes to overindebtedness.

The failure of regulatory authorities to effect rapid deflationary forces by creating more liquidity through open-market opera-tions, currency issuance, or placement of Treasury funds in the banking system, may have been responsible for the severity of past depressions.\(^2\) Indeed, he felt that the Roosevelt administration's suc-cessful reflation in 1932 was the chief factor in arresting the economic decline that would have otherwise continued unabated. If the decline had gone unchecked, in fact, the cure would have eventually spread to the government,

Federal Reserve Bank of Cleveland Research Department

P.O. Box 6379

Federal Reserve Bank of Cleveland

March 15, 1987

ISSN 0428-1276

BULK RATE

U.S. Postage Paid

Cleveland, OH

Permit No. 385

Jerome S. Fons is an economist at the Federal Reserve Bank of Cleveland. The author would like to thank Mark Sniderman and Walker Todd for their helpful comments.

The views expressed are those of the author and not necessarily those of the Federal Reserve Bank of Cleveland or of the Board of Governors of the Federal Reserve System.
Lessons for the ’80s

The parallels between Fisher’s scenario and today’s economy, at least within certain farm sectors, are quite compelling. The decline in the prices of agricultural and mining commodities, in oil, and in some sense steel, has led to a dramatic rise in the bankruptcy rates of firms within these industries over the past few years. Commercial and residential real estate markets in portions of the country in which these industries have a significant presence also have experienced similar problems. Heavy indebted, developing countries face similar strains that, in turn, are transferred to the U.S. banks that have made loans to these countries.

Although Fisher’s scenario appears to be unfolding in certain areas of the economy, large portions of the economy, however, appear to be somehow insulated from this distress. In view of this, it is reasonable to ask whether the same types of events and other, or otherwise different, forms of risk away from the individual creditor. People are less inclined to hold claims to exposed firms. Other economic stabilizers that help maintain balance in the economy are unemployment insurance, social security, and a progressive tax system.

Effective monetary policy can counter cyclical forces and help stabilize the economy. In some respects, for example, the recent rapid increase in liquidity may be an important factor that has helped to protect the overall economy by isolating the distress of our troubled sectors. In the growth permitted in the narrow definition of the money stock, M1, for example, inflation, as measured by the Consumer Price Index, declined to around 1.9 percent in 1986. This disinflation probably was unanticipated, with consequences unlike those resulting from a deflationary environment.

In this disinflationary context, certain real interest rates probably have become almost as high as nominal interest rates, closely approaching the debt-expansion trap outlined by Fisher.

Risk-Taking and Corporate Debt Growth

The current tendency of society to accept higher debt levels may indicate an increased tolerance towards risk-taking. Institutional factors also may have emerged recently that serve to expand or otherwise shift certain forms of risk away from the individual creditor. People are less inclined to hold claims to exposed firms. Other economic stabilizers that help maintain balance in the economy are unemployment insurance, social security, and a progressive tax system.

Effective monetary policy can counter cyclical forces and help stabilize the economy. In some respects, for example, the recent rapid increase in liquidity may be an important factor that has helped to protect the overall economy by isolating the distress of our troubled sectors. In the growth permitted in the narrow definition of the money stock, M1, for example, inflation, as measured by the Consumer Price Index, declined to around 1.9 percent in 1986. This disinflation probably was unanticipated, with consequences unlike those resulting from a deflationary environment.

In this disinflationary context, certain real interest rates probably have become almost as high as nominal interest rates, closely approaching the debt-expansion trap outlined by Fisher.

Risk-Taking and Corporate Debt Growth

The current tendency of society to accept higher debt levels may indicate an increased tolerance towards risk-taking. Institutional factors also may have emerged recently that serve to expand or otherwise shift certain forms of risk away from the individual creditor. People are less inclined to hold claims to exposed firms. Other economic stabilizers that help maintain balance in the economy are unemployment insurance, social security, and a progressive tax system.

Effective monetary policy can counter cyclical forces and help stabilize the economy. In some respects, for example, the recent rapid increase in liquidity may be an important factor that has helped to protect the overall economy by isolating the distress of our troubled sectors. In the growth permitted in the narrow definition of the money stock, M1, for example, inflation, as measured by the Consumer Price Index, declined to around 1.9 percent in 1986. This disinflation probably was unanticipated, with consequences unlike those resulting from a deflationary environment.

In this disinflationary context, certain real interest rates probably have become almost as high as nominal interest rates, closely approaching the debt-expansion trap outlined by Fisher.

Risk-Taking and Corporate Debt Growth

The current tendency of society to accept higher debt levels may indicate an increased tolerance towards risk-taking. Institutional factors also may have emerged recently that serve to expand or otherwise shift certain forms of risk away from the individual creditor. People are less inclined to hold claims to exposed firms. Other economic stabilizers that help maintain balance in the economy are unemployment insurance, social security, and a progressive tax system.

Effective monetary policy can counter cyclical forces and help stabilize the economy. In some respects, for example, the recent rapid increase in liquidity may be an important factor that has helped to protect the overall economy by isolating the distress of our troubled sectors. In the growth permitted in the narrow definition of the money stock, M1, for example, inflation, as measured by the Consumer Price Index, declined to around 1.9 percent in 1986. This disinflation probably was unanticipated, with consequences unlike those resulting from a deflationary environment.

In this disinflationary context, certain real interest rates probably have become almost as high as nominal interest rates, closely approaching the debt-expansion trap outlined by Fisher.

Risk-Taking and Corporate Debt Growth

The current tendency of society to accept higher debt levels may indicate an increased tolerance towards risk-taking. Institutional factors also may have emerged recently that serve to expand or otherwise shift certain forms of risk away from the individual creditor. People are less inclined to hold claims to exposed firms. Other economic stabilizers that help maintain balance in the economy are unemployment insurance, social security, and a progressive tax system.

Effective monetary policy can counter cyclical forces and help stabilize the economy. In some respects, for example, the recent rapid increase in liquidity may be an important factor that has helped to protect the overall economy by isolating the distress of our troubled sectors. In the growth permitted in the narrow definition of the money stock, M1, for example, inflation, as measured by the Consumer Price Index, declined to around 1.9 percent in 1986. This disinflation probably was unanticipated, with consequences unlike those resulting from a deflationary environment.

In this disinflationary context, certain real interest rates probably have become almost as high as nominal interest rates, closely approaching the debt-expansion trap outlined by Fisher.

Risk-Taking and Corporate Debt Growth

The current tendency of society to accept higher debt levels may indicate an increased tolerance towards risk-taking. Institutional factors also may have emerged recently that serve to expand or otherwise shift certain forms of risk away from the individual creditor. People are less inclined to hold claims to exposed firms. Other economic stabilizers that help maintain balance in the economy are unemployment insurance, social security, and a progressive tax system.

Effective monetary policy can counter cyclical forces and help stabilize the economy. In some respects, for example, the recent rapid increase in liquidity may be an important factor that has helped to protect the overall economy by isolating the distress of our troubled sectors. In the growth permitted in the narrow definition of the money stock, M1, for example, inflation, as measured by the Consumer Price Index, declined to around 1.9 percent in 1986. This disinflation probably was unanticipated, with consequences unlike those resulting from a deflationary environment.

In this disinflationary context, certain real interest rates probably have become almost as high as nominal interest rates, closely approaching the debt-expansion trap outlined by Fisher.

Risk-Taking and Corporate Debt Growth

The current tendency of society to accept higher debt levels may indicate an increased tolerance towards risk-taking. Institutional factors also may have emerged recently that serve to expand or otherwise shift certain forms of risk away from the individual creditor. People are less inclined to hold claims to exposed firms. Other economic stabilizers that help maintain balance in the economy are unemployment insurance, social security, and a progressive tax system.

Effective monetary policy can counter cyclical forces and help stabilize the economy. In some respects, for example, the recent rapid increase in liquidity may be an important factor that has helped to protect the overall economy by isolating the distress of our troubled sectors. In the growth permitted in the narrow definition of the money stock, M1, for example, inflation, as measured by the Consumer Price Index, declined to around 1.9 percent in 1986. This disinflation probably was unanticipated, with consequences unlike those resulting from a deflationary environment.

In this disinflationary context, certain real interest rates probably have become almost as high as nominal interest rates, closely approaching the debt-expansion trap outlined by Fisher.

Risk-Taking and Corporate Debt Growth

The current tendency of society to accept higher debt levels may indicate an increased tolerance towards risk-taking. Institutional factors also may have emerged recently that serve to expand or otherwise shift certain forms of risk away from the individual creditor. People are less inclined to hold claims to exposed firms. Other economic stabilizers that help maintain balance in the economy are unemployment insurance, social security, and a progressive tax system.

Effective monetary policy can counter cyclical forces and help stabilize the economy. In some respects, for example, the recent rapid increase in liquidity may be an important factor that has helped to protect the overall economy by isolating the distress of our troubled sectors. In the growth permitted in the narrow definition of the money stock, M1, for example, inflation, as measured by the Consumer Price Index, declined to around 1.9 percent in 1986. This disinflation probably was unanticipated, with consequences unlike those resulting from a deflationary environment.

In this disinflationary context, certain real interest rates probably have become almost as high as nominal interest rates, closely approaching the debt-expansion trap outlined by Fisher.

Risk-Taking and Corporate Debt Growth

The current tendency of society to accept higher debt levels may indicate an increased tolerance towards risk-taking. Institutional factors also may have emerged recently that serve to expand or otherwise shift certain forms of risk away from the individual creditor. People are less inclined to hold claims to exposed firms. Other economic stabilizers that help maintain balance in the economy are unemployment insurance, social security, and a progressive tax system.

Effective monetary policy can counter cyclical forces and help stabilize the economy. In some respects, for example, the recent rapid increase in liquidity may be an important factor that has helped to protect the overall economy by isolating the distress of our troubled sectors. In the growth permitted in the narrow definition of the money stock, M1, for example, inflation, as measured by the Consumer Price Index, declined to around 1.9 percent in 1986. This disinflation probably was unanticipated, with consequences unlike those resulting from a deflationary environment.

In this disinflationary context, certain real interest rates probably have become almost as high as nominal interest rates, closely approaching the debt-expansion trap outlined by Fisher.