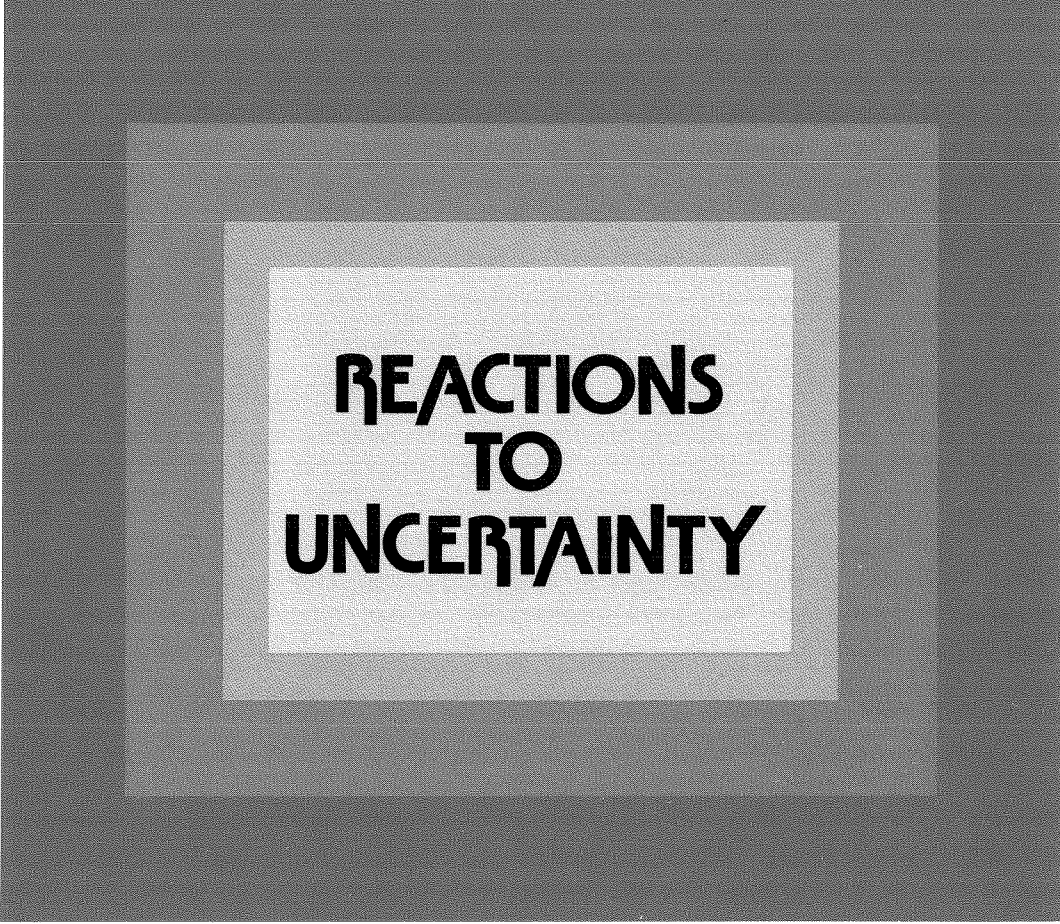


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**REACTIONS
TO
UNCERTAINTY**

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Reactions to Uncertainty

No one has a crystal ball to read the future, and not surprisingly, we wake up each day to learn that our expectations had not been quite accurate. Uncertainty thus is an all-pervading fact in our economic as in our personal lives. (Frank Knight, for instance, defined profit and loss in terms of the unforeseeable discrepancies created by uncertainty.) Examples abound of the economy's response to unforeseen events, and this issue of the *Economic Review* presents two such studies, based upon our experiences in a decade dominated by increasing risk and uncertainty. The first article analyzes the perverse effect of an unanticipated rise in inflation upon general economic activity. The second article then analyzes the effect of unanticipated risks in international securities markets.

Joseph Bisignano, in a contribution to the growing literature on "rational expectations," considers the role that unexpected price changes play in determining the behavior of the economy in an environment of rapid inflation. He compares the differing impact of *anticipated* and *unanticipated* inflation on various economic variables, with the objective of providing a better understanding of the trade-off between unemployment and inflation.

Considering the supply side of the economy, Bisignano refers to the studies which show that suppliers have more accurate price information available for their own products (output and labor) than they do for all products in the aggregate. Suppliers interpret a rise in the price of their output as an increase in their "relative prices," so that they tend to increase both output and labor supply in the short-run. This supply-side response is consistent with the standard Phillips-curve relationship of increased inflation leading to a short-run decline in unemployment. But this argument is incomplete, in Bisignano's view, because it ignores the fact that economic agents have a demand response as well as a

supply response to unanticipated inflation. By considering the demand side, we will see that the increased saving response to surprise inflation may offset any positive supply response to these same inflation surprises.

In demand theory, an absolute price change—for example, a proportionate rise in the prices of all goods and incomes—should in principle leave the demand for any particular good unchanged. However, unexpected changes in inflation increase the difficulties of households in making decisions about changes in relative prices. An unexpected inflation leads consumers to perceive higher relative prices for the goods they buy, increasing the variability in the absolute price level. As a result, households would tend to reduce their consumption by choosing to save more. Increased variability in the absolute price level leads consumers to perceive increased variability in their real income, which uncertainty in turn leads them to increase their saving rate.

Bisignano next points out that unanticipated inflation also affects the money market. For a given nominal money stock, a rise in prices decreases the real (supply) stock of money balances. However, the surprise tax on real money balances induces an *ex post* decline in the real demand for money, which partially offsets the contractionary effect of the decline in the real money stock. The resultant of the two conflicting effects of unanticipated inflation should be a decrease in the demand for real money balances.

The empirical evidence analyzed by Bisignano—with supply effects positive and demand effects negative—suggests that a rise in unanticipated inflation could lower the rate of growth of economic activity and raise the unemployment rate. "In other words, the private sector's response to an increase in unanticipated inflation in many cases involves an actual worsening of the unemployment situation." Meanwhile, he notes, *anticipated* inflation tends to

have no long-run impact on savings behavior or the unemployment rate.

Some important policy implications follow from this apparent lack of any beneficial trade-off. "The evidence appears to support the argument that monetary policy can best stabilize the economy by stabilizing or reducing the rate of inflation. Greater instability in the rate of inflation creates the conditions for greater instability in aggregate demand and employment."

In a second article, Kenneth Froewiss considers the reactions to uncertainty of investors who purchase foreign securities. Specifically, he analyzes the role played by two types of risk—unanticipated movements in exchange rates and in interest rates—in determining yield spreads between countries. Comparing yield spreads between Canadian and U.S. long-term bonds, Froewiss notes the traditional view—that spreads merely reflect expected exchange-rate movements—assumes that investors ignore risk. But in those cases when investors are averse to risk, the yield spreads also reflect adjustments for the combined effects of interest-rate risk and exchange-rate risk.

Froewiss asks: "Why would an investor simultaneously hold both domestic and foreign long bonds when their expected yields (adjusted for anticipated exchange-rate changes) are not equal?" An explanation lies in the concept of "portfolio balance." By holding a diversified portfolio which includes both domestic and foreign bonds, an investor is generally able to reduce the fluctuations in his total earnings. A risk-averse investor will therefore find it worthwhile to hold some portion of his wealth in the form of the bond with the lower expected yield, in order to reap the gains from diversification.

Empirical evidence based on the behavior of Canadian-U.S. interest-rate differentials supports the hypothesis that investors are risk-averse. Froewiss thus questions the traditional view that yield spreads between countries provide a good measure of the market's expectations about future exchange-rate movements. "At the very least, these yield spreads may give a false impression about the *size* of expected movements. At worst, if the risk premium is large enough, they may even give a wrong signal regarding the *sign* of such movements."