Successful implementation of monetary policy requires an understanding of how financial markets operate and how they are linked, both to each other and to the economy. Such an understanding is a dynamic process of learning about, and adjusting to, capital market innovations. Over the last generation, deregulation, vastly improved information and communications technology, and advances in our understanding of finance have combined to accelerate the pace of financial innovation. In some cases, such as the market for swaps, new instruments have emerged. In other cases, markets have grown and changed in a dramatic fashion. The rapid expansion of the medium-term note market over the past decade is one example. One of the most important features of financial innovation has been the reduction in constraints on international capital flows and the internationalization of finance. Not too long ago, exchange rates were mostly fixed, and many countries had capital controls in place; private cross-border investment flows were relatively small. Over the last twenty years, however, the easing of restrictions on capital flows has boosted cross-border investment, and floating exchange rates have led to flourishing markets in currency derivatives.

The declines in financial market frictions prompted by deregulation, technology, and ingenuity are having far-reaching consequences. New instruments and markets reduce the costs of bringing borrowers and savers together and increase their opportunities to manage risk. At the same time, these new markets have presented central bankers with many challenges. Capital market innovations have altered both the
relationships among financial variables and their links to the economy. In addition, changes in financial markets expose national economies to shocks from new and unexpected sources, and with little if any lag. For example, disruptions in foreign capital markets—from which the United States was once fairly well insulated—can now have important effects on U.S. financial markets. As we saw in October 1987, these effects can also run from the United States to foreign markets.

As must be evident by now, I believe that this conference is both timely and important. I would like to highlight three questions that will be interesting to discuss over the next two days. First, how have the changes in financial markets affected the way in which monetary policy feeds through to the economy? Thirty years ago banks provided three-fourths of short- and medium-term business credit, and banks and thrifts originated—and held—more than two-thirds of residential mortgages. Moreover, legal ceilings on the interest rates offered by depositories interacted with Federal Reserve policy in ways that resulted in sharp movements in the supply of funds to these sectors at key rate levels, thereby affecting the economy.

In contrast, banks and thrifts are now far less "special" than they once were. Deposit rates are unregulated, and banks and thrifts compete for funds with money market funds and, more recently, stock and bond mutual funds. On the asset side, rapid growth in the commercial paper and medium-term note markets and increased competition from finance companies have cut banks' share of short- and intermediate-term credit to businesses to little more than one-half. The advent of securitization means that banks and thrifts can continue to make consumer loans and home mortgages without increasing the size of their balance sheets because other investors are willing to hold the resulting securities. Of course, commercial banks continue to have a dominant role in the provision of "information intensive" credit, especially to small businesses, and we have experienced the consequences for businesses of problems in the bank lending process in recent years. Even this special role for banks may decline in importance, however, if current efforts to securitize small and medium-sized business loans are successful. I suspect that commercial banks will continue to play a major role in the channeling of credit to these
businesses, but the precise nature of that role, and its relationship to policy actions, could change.

As a result of these developments, the fairly direct effect that open market operations once had on the credit flows provided for businesses and home construction is largely dissipated. Nonetheless, the Federal Reserve can still affect short-term interest rates, and thus have an impact on the cost of borrowing from banks, from other intermediaries, and directly in the capital markets. While this effect may be more indirect, take longer, and require larger movements in rates for a given effect on output, the Federal Reserve and other central banks still have the tools required to implement monetary policy.

The first question raises a second: how have the changes in financial markets affected the process of formulating and implementing monetary policy? The basic answer is that this process has become more complex. The relationships between interest rates and spending are evolving in response to financial innovations. Moreover, as banks and other intermediaries have become less special, many of the targets and indicators traditionally used by policymakers have become less useful. A dramatic example is the recent anomalous behavior of M2. This behavior has, at least for the time being, greatly undermined the use of M2 either as a guide to policy or as a way to communicate the stance of Federal Reserve policy to others. M2 may well become more useful again over time as the economy completes adjustments to the availability of new assets and the demand for credit recovers from current efforts to bolster balance sheets. Meanwhile, the Federal Reserve must rely relatively more on the wide variety of macroeconomic and financial variables it has always used to assess the current condition of financial markets and the trend of the economy.

My final question is not explicitly addressed in the conference program, but it is important, and I'm sure it will be addressed in our discussion. That is, have capital market innovations increased or decreased the inherent stability of the financial system? The answer to this question is by no means clear. The increased number of financial markets, the rapid changes in them, and the increased pace of market responses to shocks made possible by improved computer and communications technologies, challenge the ability of central
bankers to monitor closely developments in the financial system and react in a timely manner when necessary. These challenges arise particularly in markets for complex new instruments such as derivatives. Some have expressed the fear that these markets have not been fully tested under stress, and argue that all of their risks are not evident. That may be true, and is the nature of the challenge we face. In the past couple of years, however, market participants themselves, and the regulatory community around the world, have made considerable progress in increasing our understanding of derivatives markets and the risks that they involve.

Moreover, there are reasons to believe that capital market innovations have, in some important respects, increased structural stability. Derivatives should, after all, allow banks to better manage risk and so should help to insulate the payments system from financial and real shocks. Similarly, the increased substitutability among instruments and intermediaries should buffer the economy from disruptions affecting specific markets or classes of intermediaries. We have seen this effect already in the United States. Over the past five years the size of the thrift industry has declined by more than one-third. A generation ago such a collapse arguably could have had catastrophic effects, but with the securitization of home mortgages, the supply of home mortgages—as gauged by their relative cost—appears to have been little affected.

Clearly, finding ways to assess and limit systemic risk without losing the benefits of these new markets is an important issue currently facing central banks. Capital market changes are likely to continue because the changes in technology and knowledge driving the recent innovations will continue. This conference should help us to understand the changes that have occurred and to anticipate the challenges that new innovations will provide.