This conference on “Beyond Shocks: What Causes Business Cycles?” has opened up for discussion the very important subject of the linkages between behavior of the financial markets and developments in the economy. Because not enough focus has been cast on this subject, I especially welcome the opportunity to present to you my views on the changes in the financial markets, how they have affected financial and economic behavior, and the consequences of these new behavioral patterns for official policy.

**STRUCTURAL CHANGES IN FINANCE INFLUENCING THE BUSINESS CYCLE**

**Securitization**

The shift to marketable from nonmarketable assets brought about by securitization has stretched credit creation. It tends to sustain borrowers longer in economic expansion and probably to expose them more in contractions. It also has had the important side effect of removing the illusion of price stability for nonmarketable assets. Some of the new securitized instruments have therefore magnified the volatility of financial asset prices.

Consequently, the nature of financial assets has changed over the past two decades, in large part as a result of the growing process of securitization. Indeed, a good case can be made that securitization is the central feature of modern financial markets. It permits the transformation...
of credit from a set of loans lodged on the books of a traditional financial institution, such as a bank, a thrift, or an insurance company, into an obligation that can be sold in the open credit market, where in normal times it can be traded and priced continuously.

Globalization of Markets

The consequence of internationalization of the financial markets is that they are linked as never before, although admittedly not perfectly. Over the past 10 years or so, during which time globalization of finance has evolved rapidly, the bond markets of the main industrial countries have moved together well over 70 percent of the time, regardless of significant differences in economic fundamentals among them. Often, the case for the decoupling of individual markets may be strong, but decoupling is the exceptional event these days, occurring principally when one or another country is a victim of financial duress.

This internationalization of financial markets has broad significance. Foreign investors are opportunists. They plow funds into a country and, if risk perceptions change, they attempt to leave quickly, as we have seen recently in Asia and earlier in Latin America. More and more they represent large multinational institutions or immense pools of entrepreneurially managed money. They have a presence in all markets. They respond to the drumbeat of a more homogenized outpouring of financial analysis, views, and forecasts. They all have access to the same information technology, which lets decisionmakers be located virtually anywhere and still be up to the second on new developments.

Performance-Driven, Highly Leveraged Investing

Performance-driven investors often deploy considerable leverage in their activities. Leverage greatly magnifies the profitability of successful investments, but naturally also magnifies losses. Greater use of leverage usually has the side effect of generating a sharp increase in the volume of transactions in the marketplace. More often than not, a heavy volume of transactions is associated with greater volatility of financial asset prices.

The composition of financial institutions themselves is undergoing significant change. The relative weight of traditional commercial banks, savings and loans, and insurance companies has diminished. Instead a new breed of institutional participant has come to the fore. These institutions are distinguished by their emphasis on short-term investment performance, a heavy use of leverage, and an ability to move in and out of markets, whether equities, bonds, currencies, or commodities, wherever the operators believe the returns will be the highest. Included in their number are the often highly publicized hedge funds. But hedge funds are not the only or even the main practitioners of this approach. A similar
investment and trading approach is conducted within hedge-fund-like departments of the most prominent banks, securities firms, and a few insurance companies, as well. Even the corporate treasuries of a number of nonfinancial corporations are engaged in this activity.

**Derivatives**

Not long ago advocates of financial derivatives maintained that they were primarily “risk management” products. The usually unspoken assumption was that derivatives were essentially risk-reducing in their overall effect on the financial positions of end-users—in other words, tools for hedging risks that already existed. In the aftermath of a string of large and highly publicized losses incurred by a number of financial institutions and nonfinancial corporations, this rather simplistic view is no longer tenable.

However, all agree that financial derivatives—whether in the form of futures, forwards, swaps, options, or securities embodying derivatives—cannot be looked at in isolation. They are only one part of the far-reaching structural changes in our financial markets that I have been describing. It is the interaction of all of these component elements that tends to nurture the various financial risks that investors, companies, and financial institutions seek either to profit from or to hedge against. At the same time, derivatives are a catalyst and increasingly an instigator of further evolution of the financial markets.

**Indexation**

Indexation is the practice of passively seeking to replicate the behavior of a broad index of either the stock or the bond market, rather than actively manage portfolios to try to achieve superior returns. Ironically, the more that financial resources are invested passively, then the greater will be the impact on asset prices of the active portfolio managers who do seek superior returns. Thus, what may make a good deal of sense to an individual investor or a single institution—that is, to avoid the risk of underperformance by settling for the average return of a market index—collectively increases the probability that market values will lurch from one extreme to another.

**New Risk-Takers**

In America, many of the newcomers to investing in assets that carry with them the risk of capital loss have never experienced an extended bear market. How they will react when one inevitably unfolds is not quantifiable, but there is at least a reasonable likelihood that they will cut back their new investments and scale back their consumption of goods
and services. Thus, the “wealth effect” will be an increasingly important element in the business cycle.

These American households are taking more market risk in their investments than ever before. The portion of household financial assets held in the form of deposits and money funds that provide certainty of capital has dwindled to barely 15 percent. In the meantime, holdings of assets with capital values that vary from day to day and over the financial cycle have increased dramatically. Much of this surge is the result of the mutual fund phenomenon. As recently as the end of 1984, the combined total of equity and bond mutual funds in the United States amounted to only a little over $100 billion, less than 2 percent of total financial net worth of households. Since then, mutual funds have mushroomed and now amount to over $3 trillion, not counting the $1 trillion in money market funds that substitute for conventional bank deposits. Of that total of equity and bond mutual funds, some $2 trillion is owned directly by households, representing almost 10 percent of household financial net worth.

Illusion of Liquidity

In a world of securitized financial markets, market participants are often mesmerized by what I have referred to as the “illusion of liquidity”: the assumption that anything can be bought and sold at any moment and that open credit markets will always be open. But the functioning of secondary markets in existing debt and equity instruments and access to fresh amounts of credit have always been and always will be discontinuous. When the credit quality of companies or governments is strong, modern financial markets are ready, willing, and eager to provide financing. Secondary markets are prepared to handle even sizable trades with relatively modest impact on the going price of the security. But what is commonly overlooked is how precarious this blissful market state really is. When companies or even governments run into financial difficulty and their credit standing is open to question, a sharp discontinuity in the functioning of markets is likely to occur. Almost instantaneously, bid-offer spreads widen out, dealers cut back the amounts they are willing to buy or sell, and security prices undergo abrupt and sharp movements. Credit availability evaporates. Borrowers are flung back into an uncomfortably old-fashioned world in which they are totally dependent on their bankers for support—and may or may not get it.

Quantification of Risk

There is a belief, strongly held in some quarters, that financial risks are knowable, can be calculated with mathematical precision by massaging historical data, and can be diversified. These are fallacies. History is
a useful starting point for assessing risk, but only a starting point. Most instances of sudden deterioration in the credit standing of a corporate or government borrower are not predictable. They reflect submerged weaknesses in underlying economic or financial structures that are not captured by the available data. And the likelihood of contagion is high, as we have seen dramatically in the past year in Asia.

**Slowdown of Government Debt, and Commensurate Pickup of Private Debt**

One of the most notable changes in the financial markets has been the slowdown in the growth of U.S. government debt. The U.S. federal government budget has moved into surplus, and Canada’s will probably also register a surplus. The pursuit of the Maastricht criteria has meant that nearly all the Continental European governments have managed to bring down their deficits, although for how long we cannot say. Only Japan stands apart, as economic recession stunts revenue collection and fiscal stimulus programs swell government expenditures.

At the same time, however, business corporations are again putting a substantial volume of debt on their balance sheets, especially in the United States. Up to this point, the increases are not of the same relative magnitude as in the leveraging binge of the 1980s, when vast amounts were raised to finance mergers, acquisitions, leveraged buy-outs, and risky real estate ventures. In the aftermath of the collapse of a good number of these deals, many credits went sour, and lenders lost sizable sums as they discovered they had fewer protections than they had been led to believe. The consequence was a period of massive restructuring of corporate balance sheets and much more prudent lending and investing standards.

However, in the past three or four years, considerable backsliding has occurred. Short-term borrowings have increased at a rapid pace, long-term debt issuance has rebounded, while new equity issuance has fallen far short of the magnitude of issues that were retired or bought back by corporations. Since 1994, the rise in corporate liabilities has exceeded the total increase in equity, the sum of retained earnings and net new share issuance, by an incredible $850 billion. By comparison, in the 1991-93 period, the net increase in liabilities was $100 billion less than the total increase in equity.

The latest surge in corporate liabilities has partly been used to finance an impressive burst of capital expenditure, the most distinctive feature of the current business expansion. But increasingly, we find that large sums are being raised for some of the same purposes that caused trouble in the 1980s: financial engineering, mergers and acquisitions, and share buy-backs. Thus, while corporate profits were rising sharply, corporate credit quality was not improving commensurably.
Today, the marketplace treats worries such as these as remote. The general view is that plenty of time remains to sell off holdings of low-quality bonds before economic and financial circumstances deteriorate. The lesson I take from the experience of the 1980s, and from other troubled periods in the more distant past, is that such a belief commonly precedes the emergence of financial excesses.

PROBLEMS FOR MONETARY POLICY

These changes in the structure of the financial markets will continue to have profound influence on the way the economy interacts with the financial system, and therefore they pose some tricky problems for the conduct of monetary policy. The first problem is that a more open, deregulated, securitized, and global financial system will help keep debtors in the game longer than in times past. Securitization is a force for liberality in granting credit. Consider the recent case of South Korea. Here was a country that had made commendable progress toward transforming itself into a First World country. It was undeniably an export powerhouse. The government did not run a large budget deficit. Outstanding external debt of the government was moderate. Credit ratings were extremely high. (As late as October 1997, Korea had a higher credit rating than IBM!) So the bankers—Japanese, European, and American—were willing to lend large amounts for short-term maturities, assuming that they could securitize those credits at will. Never did they give much weight to the possibility that the borrowers might be confronted with a liquidity crisis that would slam the door shut on access to the purportedly “open” credit markets.

Moreover, the rapid development of financial derivatives also perpetuates a more relaxed attitude toward granting credit. Higher-rated corporations can arbitrage their credit standing to lower their cost of funds by issuing long-term, fixed-rate debt and then swapping the proceeds against the obligation to pay at a floating rate. Lower-rated corporations, which ordinarily would be squeezed out of the bond market as the credit cycle matures, are able to lock in long-term yields by borrowing short and swapping into the long-term maturity obligation. The bankers, who are in the middle, view their role as relatively risk-free.

The upshot is that it will tend to take relatively steep increases in the level of short-term interest rates for the central bank to engineer an end to a period of possibly excessive economic expansion that may put upward pressure on the rate of inflation. This is exactly the position in which the Bank of England now finds itself. It has imposed the highest short-term interest rates of any advanced industrial country; yet, the U.K. economy still manages to chug along at a brisk pace, further tightening already taut labor markets and imparting an upward tilt to wage and price inflation. At some point the Federal Reserve may face a similar
dilemma as the possibly transitory factors holding down the U.S. rate of inflation—namely, a high value of the U.S. dollar in the foreign currency markets, weak economic activity in Asia that keeps many product markets highly competitive, and low commodity prices—are reversed.

A second problem for monetary policy is that the structural changes in the financial markets make conventional methods for anchoring monetary policy obsolete. Monetary targeting has been the initial casualty. The Federal Reserve continues to set target ranges for the rate of growth of several definitions of the money supply, but it goes to great lengths to assert that it does not take the targets very seriously because old relationships between money and the rest of the economy have become entirely unreliable. That is true also for measures of credit. Securitization is associated with a diminished role of depository institutions in the intermediation of credit flows, and so debt aggregates are just as unreliable as monetary aggregates. Paradoxically, while private sector institutions are relying increasingly on mathematical models in the quantification of risk, the central bank is shying away from a quantitative approach to conducting monetary policy.

What are the choices? There are not many to choose from. A central bank can do as the Bank of England has done and condition policy on meeting an intermediate-term inflation target. Or a central bank can set an inflation target and try to attain it by pursuing a formal monetary conditions rule, along the lines of the way the Bank of Canada is operating. Or it can do as the Federal Reserve has been doing, setting a loose and unquantified objective of ‘reasonable price stability’ and using discretionary policy changes in pursuit of that goal.

But in each case the objective is cast solely in terms of the price indexes for goods and services. It explicitly leaves out any room for taking into account inflation (or deflation) of asset prices. But financial well-being depends on much more than merely attaining a low and stable rate of inflation. The proof of that is the case of the United States in the 1920s and that of Japan in the 1980s and 1990s. Both would meet any reasonable definition of price stability, but both suffered horrendous economic consequences from excessive asset price inflation followed by asset price collapses. Surely monetary policy should be not indifferent to such potentialities.

Wealth effects are now recognized to be powerful influences on the evolution of the economy. Not too many years ago, the Federal Reserve, along with most other central banks, was somewhat skeptical about the potency of wealth effects. But today it is conceded that more and more households recognize how their financial net worth is affected by movements in asset values and adjust their expenditures on goods, services, and housing accordingly. Business corporations modify their investment decisions in part in response to what is happening to their share prices. Business formation is subtly influenced by the level of the
stock market, too, because a strong market allows individuals to take risks that they would not be inclined to take if the level of equity prices were substantially lower. International capital flows, and thus the value of the dollar, are also affected by the value of financial assets—and expectations for future asset price movements. Thus, these effects have become an important transmission belt from the financial sector to the real economy and necessarily a valid consideration for monetary policy.

However, at present no central bank has a mandate to explicitly take financial asset prices into consideration in the formation of monetary policy. Nevertheless, the financial bubbling in the American financial market is an untenable situation. The way events are unfolding now, one of several events will topple the exuberance. One is a more noticeable profit squeeze than is now beginning to emerge. Another would be a further sharp deterioration in the Japanese economy, which would weaken Japanese financial institutions even further. With these institutions so closely linked globally, financial problems are bound to occur elsewhere. Still another problem will confront us if by an unlikely chance both Japan and Europe stage strong economic recoveries. This would end the surge of foreign funds to the United States and it would also increase inflationary pressures.

From my perspective, it is not a question of whether any one or more of these will happen, but rather when, and from what level of the market. In the immediate aftermath of such an event, the central bank will then try to counter the sharp declines in asset prices by easing monetary policy significantly. Thus today’s euphoria in the stock market will be followed by a sharp stock market setback, and in this carnage long government bonds may very well fall to a yield of 4 percent. After that, I suspect a more definitive monetary strategy incorporating financial behavior is likely to be formulated.

**The Reforms Needed Internationally**

While financial excesses and their hurtful economic consequences can never be fully eliminated, I do believe they can be limited by improved supervision and regulation of financial institutions and markets. The modern, globalized financial structure is based on innovation and risk-taking. Formal regulations and barriers to financial activities have been lowered, and over time they will come down further. Paradoxically, however, in a more deregulated, freewheeling financial environment, the need for better supervision of the financial institutions and markets is actually *increased*. Equally important, there has to be more intensive and more informed market discipline of risk exposures, and that requires more information about what those exposures are. Oversight, whether by official institutions or by the market itself, has been uneven at best and usually tardy, with far too little information-sharing
among official organizations and far too little dialogue with private lenders and investors. Furthermore, in many of the emerging markets, formal regulatory mechanisms have been weak, and informal supervision and oversight have been practically nonexistent.

The essential ingredient in an improved global financial architecture is the establishment of a new institution, alongside a reorganized International Monetary Fund (IMF) and World Bank, to overcome the inadequacies of current national and international structures for supervising and regulating financial institutions and markets. To deal with the growing potential for market excesses, I have recommended many times over the years establishment of a Board of Overseers of Major Institutions and Markets, to put teeth into the system. This Board would have the following mandate:

1. It would set forth a code of conduct for market participants, to encourage reasonable financial behavior.
2. It would supervise risk-taking, not only by banks and other financial institutions that have always been regulated and supervised, but also by new participants in the global markets.
3. It would be empowered by member governments to harmonize minimum capital requirements; to establish uniform trading, reporting, and disclosure standards; and to monitor the performance of institutions and markets under its purview.

Eventually, this new international regulatory body would rate the credit quality of market participants under its authority. Institutions that failed to abide by the standards would be sanctioned. Lending to banks in countries that chose to remain outside the new system would be subject to higher capital requirements and limitations on maturities. Also, nonmember countries would be limited in their ability to sell new securities in the equity, bond, and money markets of members. The new Board would not enact specific regulations to control flows of capital internationally but it would visibly raise the bar to take advantage of the benefits of open capital markets. That will dramatically reduce risks in the system, although it will not eliminate them entirely.

At the same time this new financial supervisory and regulatory entity is established, the IMF needs to be reorganized so as to perform competently a more targeted set of core functions. The new IMF, like today’s IMF, would be responsible for organizing and partially funding emergency lending operations to protect the safety and soundness of the global system when member governments face intense balance-of-payment problems and are shut off from normal sources of external financing. It would continue to have the responsibility for setting policy conditions that borrowers must follow to qualify for emergency loans.

In contrast to present IMF practices, however, it would have the responsibility of anticipating problems and pressing member governments to take timely preventative actions. It would be responsible for
rating the economic and financial strength of its members. It would evaluate their monetary and fiscal policies as well as the structures of their economies. Where it detected deficiencies that could lead to excessive dependence on inflows of short-term capital from abroad or compromise the health of the domestic banking system, it would demand early remedial actions. If the member governments refused to act, the reorganized IMF would make the reduced credit rating public. Since that would, of course, have the effect of dramatically shrinking the recalcitrant country's access to the open credit markets, it would represent a powerful incentive for the member to cooperate. Rating the creditworthiness of sovereigns is a tough job, but an appropriately staffed IMF would have a far better chance of doing the job effectively than the private credit rating agencies, which are handicapped by a lack of the kind of detailed and timely information that the IMF would be able to get.

Finally, the G-7 also needs to be restructured to take account of the coming European Monetary Union and its common currency, the euro. It is imperative for the new European Central Bank and those of the United States and Japan to begin a dialogue on how to better harmonize their monetary policies. Each has to be prepared to recognize and take into account the global dimensions of what they do. If their actions end up creating an overabundance of global liquidity, either global inflation or excessive growth of global credit becomes a threat. If they end up with an insufficiency of global liquidity, economic growth may be jeopardized. It is probably too much to ask that this effort at better harmonization explicitly incorporate the goal of minimizing the huge swings in currency rates that have plagued the international monetary system in recent years. But at least a systematic attempt ought to be made to discuss the implications of outsized currency movements for the global trading system. Existing forums, such as the Bank for International Settlements (BIS) in Basle, Switzerland, are fine but too informal to achieve that systematic approach.

**CONCLUSION**

Why is it that official policy responses seem to lag so much the structural changes in the financial markets? There are a number of reasons. One is that officials often underestimate the potency of a structural change. By the time it is obvious that something of importance has taken place, the development has triggered a series of market adjustments that are not readily brought under the official regulatory framework. A second is that structural changes do not always fall within the neat categories that delineate the various existing official institutions. For example, when financial derivatives emerged as a major element in modern financial markets, there was considerable uncertainty over where they would fit within the official regulatory apparatus. That uneasiness as
to who should oversee financial derivatives has persisted, even as the market has been buffeted by several mishaps in recent years. A third reason why official policy responses lag behind structural changes in the financial markets is that at the early stages of a development, the impact of the changes on financial and economic behavior is difficult to quantify. To illustrate, the rapid increase in the public’s investments in the equity market through the use of mutual funds was well-documented. But it took quite a long time before U.S. financial officials appreciated how this phenomenon might generate a significant wealth effect for many millions of households. Now that the wealth-effect addiction has spread widely, policymakers are beginning to understand that the level of consumer expenditures on goods, services, and housing is intimately related to the strength of the stock market—and that considerable withdrawal pains might be felt, were the stock market to set back dramatically.

Internationally, official policy responses to structural changes in the financial markets are handicapped by similar and other shortcomings. Vested interests in the official international financial institutions that may need to be reformed feel threatened by the unknown outcome of reform and tend to be vocal in their opposition. Moreover, the unwillingness to give up national sovereignty remains, even though financial markets and the economy are integrating globally. It seems, for instance, that the U.S. government is a reluctant proponent of a major overhaul of the current official international financial institutions. It may be that this is out of concern that any thoroughgoing reform might require the United States to yield some of its dominance over these institutions. If true, this would be short-sighted leadership, since no permanent benefit can be gained from being the dominant participant in an institution whose authority and credibility are being eroded by structural changes in the marketplace.

Finally, developing countries are said to be opposed to reform of official international financial institutions because they are afraid that improved scrutiny of financial institutions and markets would jeopardize their access to funds in the private markets. For instance, they may be concerned about the consequences of being impelled to improve transparency in their domestic banking system or otherwise bring to light financial problems that might otherwise have been kept out of sight. This is a terrible misconception. Retaining access to credit for less than creditworthy institutions will only exaggerate the financial and economic cycle, as Asian nations have painfully found out. What is in their interest is to reduce the extremes in financial cycles, because in so doing they would help produce a steadier and less interruptible flow of private funds. Financial excesses eventually impoverish the marginal borrower and, for a while at least, mainly go to strengthen the bargaining position of the strongest participants in the credit system—namely, the governments, financial institutions, and business corporations of the major industrial countries of North America and Europe. That is certainly the
clear message that comes out of the financial wreckage in Asia. Unfortunately, this narrow advantage is only of transitory benefit, since ultimately we all are losers as financial difficulties fan out from their origins. Thus, it is worth pondering whether the risks are already rising in our financial markets and whether we can avoid damage to our own economy in the absence of adequate official remedial actions to respond to the financial excesses that may now be percolating beneath the surface.