increased total risk in the overall financial system. The rapidly changing financial system has generated new complexities and interdependencies. This has created additional uncertainty about the ways in which default risk can lead to systemic breakdown. The threat of a crisis in Ohio and in Maryland provides recent examples of concern. They serve to illustrate the need to understand fully the changing network through which default can disrupt the financial system. With this full understanding, we might expect to adapt our supervisory and regulatory structure in ways that reduce systemic risk, possibly through initiatives such as risk-based capital adequacy requirements and risk-based insurance premiums.

### Policy Issues

The recent extraordinary increase in debt has called attention to the need to understand better the changing nature of risk exposures, the growing interdependencies among formerly isolated risks, and the potential for systemic failures. Without a better understanding, we might expect that the Federal Reserve will increasingly face situations in which it must act as a lender of last resort. In the postwar period, the Federal Reserve, together with the FDIC and the Office of the Comptroller of the Currency, have demonstrated an ability to deal with and contain isolated instances of financial distress. There is a reasonable fear, however, that lenders might begin to expect that government intervention will be so freely available that they will increase patterns of behavior that are unnecessarily risky.

The textbook solution to this “moral hazard” problem is coinsurance. One form of coinsurance in banking regulation is to establish capital requirements for banks. Capital essentially is a cushion that allows a firm to absorb temporary losses, yet remain viable. The greater the capital, the more able banks will be to withstand losses without government help. By having to absorb more of their own losses, banks are likely to apply more prudent standards to asset and liability management. While banks have strengthened their capital positions in recent years, the question of whether current capital requirements are sufficient remains, especially with accounting for bank exposures to off-balance-sheet liabilities.

Financial guarantees issued by banks are, in principle, similar to the obligation of a lender of last resort; that is, banks act as back-up lenders for the benefit of third parties. Such activities have their own potential to create a moral hazard. To deal with the problem, banks “regulate” their customers. Banks have contractually established standards that bottom out customer access to credit and internal controls provide for some degree of supervision of risk. Thus, banks will have seen a move toward deregulation of private financial markets, market forces themselves can also generate private regulatory practices. The issues raised here concern the appropriate structures of regulatory regimes and their relative importance. One of the legal definitions of a bank, which determines the scope of government regulation that is applied. Financial change has worked to enhance the traditional distinctions. It seems certain that financial change will continue to generate new fault lines, making the design of the official regulatory regime an ongoing issue.

The final issue considered here concerns monetary policy. The view that the rise in private indebtedness represents an increase in the economic exposure to debt default, and further, that this increased exposure to debt default magnifies the cyclical dynamics of the business cycle, suggests that the choices for monetary policy could become more difficult with continued increases in the private debt ratio. Some economists have argued that the increased potential for financial instability could lead to a greater reluctance to tolerate recessions. An implication of this, in their view, would be that monetary policy would become more expansionary than it would otherwise, raising the potential for inflationary bias to policy.

### Concluding Comments

It is obvious that the Federal Reserve has legitimate reasons to be concerned about the stability of the financial system and, consequently, about the level of debt. There are some concerns about the national debt growing in proportion to nominal GNP. Although debt increased sharply during World War II, it has been continuing in direct proportion to nominal GNP. While developments in risk management techniques have reduced risks for some creditors, the greater diversity of financial institutions and the growth of capital market activities have increased risks for more of the public. But, even more, there remains an open issue of whether risks have been reduced on balance for the financial system as a whole. If there is a consensus about rapid debt growth, it is that we should be more aware of the potential risks that attend excessive and imprudent debt issuance. Although the Federal Reserve certainly has the ability to provide massive liquidity to our financial system in a time of extraordinary distress, we can all agree that an ounce of prevention would be worth a pound of cure.

The recent surge in debt has raised some concerns among economists, particularly about its implications for the vulnerability of the financial system and the economy. A viable market-oriented financial system depends on a heavy preponderance of prudent decisions. Private financial markets by their nature create incentives for increasing their use in transactions. Neither of these factors suggests cause for alarm. Deductibility of mortgage and consumer interest payments for tax purposes also helps explain the increasing attractiveness of household debt in the post-war period. Developments in corporate finance that increased access to credit markets by previously excluded businesses formed one important element explaining the increased use in business borrowing. Innovations in securitization and the pooling of financial resources formed another. These factors, taken by themselves, suggest a rational basis for the increasing private debt ratio.

However, some market observers do not find it comforting that there are many reasonable explanations for the seemingly speculative increase in debt, especially as interest rates and income in recent years are relatively lower than historical experience. The Federal Reserve, while running budget deficits, was nevertheless borrowing a declining share of national income. Private borrowing, on the other hand, trended upward relative to national income over most of the period. Only after 1982, when federal borrowing needs sharply declined, did total domestic nonfinancial debt (DNFD) rise sharply, with a corresponding increase in its share of GDP.

Many factors can account for the increasing private demands for debt after World War II. Two economists argue that the Federal Reserve explains part of the pattern of household debt. One of these experts is a market stabilizer, specifically whether they encourage excessive risk-taking. We also consider the possibility that the increasing complexity and interdependencies arising from the evolution of the financial system. The concerns arise because recent changes in financial markets may have generated new ways in which debt defaults can spill over into the banking system. Finally, we address some of the policy issues related to these concerns.

### Debt and Income

Debt cannot rise without limit in relation to the income needed to cover payments of interest and principal. For this reason, debt is commonly measured in relation to nominal GNP. Therefore, the incentives to leverage up to a limit based on standard economic theory for arguing that the nation’s welfare is best served at any particular value of this ratio, nor is the recent increase in this ratio alarming in itself. The overall solvency of debt to income between 1961 and 1982 seems in retrospect, to reflect largely a coincidence of diminishing federal needs in the face of increasing private needs.

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### Concluding Observations

Since 1982, the indebtedness of domestic nonfinancial sectors has increased from around 140 percent of nominal gross national product (GNP) to 170 percent. This extraordinary growth contrasts sharply with the pattern of debt growth over most of the post World War II period. Between 1951 and 1982, for example, debt grew at an annual rate of 5 percent. Between 1929 and 1933, this increase largely reflected a 46 percent decline in GNP over the same period. Meanwhile, some measures of debt were declining in absolute terms. In fact, domestic nonfinancial debt (the measure used in this article) actually declined 14 percent from 1939 to 1933.

The recent surge in debt has raised some concerns among economists, particularly about its implications for the vulnerability of the financial system and the economy. A viable market-oriented financial system depends on a heavy preponderance of prudent decisions. While recent efforts to reduce risk and to establish precise rules for managing it, prudent management of financial risk remains a matter of judgment. Moreover, recent increases in financial innovations and regulatory changes have altered the financial landscape and have, speculatively, difficult to assess the implications of accelerated debt growth. This Economic Commentary provides a perspective for understanding policymakers’ concerns about the increasing debt burden, particularly for the implications of such a debt burden for the integrity of the financial system. We examine how this integrity is essential to the well-being of the economy and analyze the important stabilizing role played by deposit insurance and the lender of last resort function of the central bank. We discuss the nature of the incentives created by the financial stabilizers, specifically whether they encourage excessive risk-taking. We also consider the possible adverse implications of the increasing complexity and interdependencies arising from the evolution of the financial system. This concern arises because recent changes in financial markets may have generated new ways in which debt defaults can spill over into the banking system. Finally, we address some of the policy issues related to these concerns.

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For example, since the beginning of the current business expansion in 1982, more corporate bonds have been downgraded than upgraded by major rating agencies. In addition, there has been an upward trend in delinquency rates on consumer and mortgage debt. This is unsettling, as economic expansions and suggests additional exposure of households to the risk of default.

A chief concern is that continued increases in the debt ratio ultimately increase the chances that debt service will become unsustainable in the aggregate. A fundamental risk in debt accumulation is that borrowers may fail to take into account the potential for sustained periods of general economic stagnation. Moreover, we have seen firm financial strains in several sectors of the economy—agriculture, energy, foreign transactions, and real estate—in which many borrowers were too optimistic about the growth potential for aggregate income. It is feared that they may be unable to take into account the potential for sustained periods of economic stagnation. Moreover, we have seen firm financial strains in sectors of the economy—agriculture, energy, foreign transactions, and real estate—in which many borrowers were too optimistic about the growth potential for aggregate income.

In addition, some analysts argue that the upward trend in private debt partly reflects a number of institutional changes that enable households to take on more risk-taking than borrowers would have accepted in the past. It is feared that these may be of long-term magnitude.

Debt and Stability of the Financial System

Some economists have argued that the potential for increased financial distress to structure risk to lead may larg- er swings in the business cycle. This view is based on the idea that changes in the availability of debt capital in a period of general economic good times may lead to greater swings in the business cycle.

A key catalyst in the process of systemic failure—the bank-run—has been contained by federal deposit insurance (FDIC) since the establishment of the Federal Deposit Insurance Corporation (FDIC) in 1933. Since the end of the Great Depression, federal deposit insurance has helped maintain confidence in the safety and soundness of the banking system by shielding insured depositors from the distress and contractions in nonfinancial economic activity. Such a process may encourage debt growth beyond the upward trend in private debt partly propelled by expansionary monetary and fiscal policies.

Incentive Problems

The increasing use of open-market instruments is only one of many developments in the financial system that have affected the exposure of the financial system to debt default. Other developments and technological advances, including new techniques in risk management, have reduced the need for further exploration of the difficult and complex issues raised by rapid debt growth.

Some observers have noted that since the end of World War II the Federal Reserve has intervened increasingly as the lender of last resort. Some of these interventions were necessary to prevent the instability that could have led to the financial crisis which arose after the bankruptcy of Penn Central Corporation in 1970.

While new techniques in risk management may reduce risks for one or more banks, they do not necessarily create new forms of risk exposure for the banking system as a whole. For example, several of these techniques involved greater use of standby letters of credit (SLCs) and other financial guarantors. These arrangements in which a bank issues, for a fee, a guarantee of the bank's customary financial obligations to a third party. The bank suffers a loss only if its customer fails to perform. Such risk exposure gener- ally is thought to be positively corre- lated with other bank assets and SLCs. Nevertheless, increased competition from foreign banks and other financial intermediaries—such as money market mutual funds and "monobanks"—has made it more costly for banks to obtain funds. Deregulation of bank and nonbank financial activities increases the competitive pressures on banks. Over all deregulation has led to greater uncertainty and, therefore, may have