

**A Symposium Sponsored By  
The Federal Reserve Bank of Kansas City**

**DEBT, FINANCIAL STABILITY,  
AND PUBLIC POLICY**





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AND PUBLIC POLICY**

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**Jackson Hole, Wyoming  
August 27-29, 1986**



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## Foreword

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Most major types of debt in the United States have grown rapidly in recent years. To improve public understanding of the effects of the rapid growth of debt, the Federal Reserve Bank of Kansas City hosted a symposium, the tenth in a series sponsored by the Bank, on August 27-29, 1986, at Jackson Hole, Wyoming.

The symposium, "Debt, Financial Stability, and Public Policy," brought together leading economists, Federal Reserve officials, and executives from government, financial institutions, and businesses to discuss the implications of rapid debt growth on the nation's financial stability and to consider appropriate public policy responses.

This volume contains the papers and critical commentary presented at the symposium. We gratefully acknowledge the contributions of all those who participated in the symposium and especially recognize Craig Hakkio, research officer and economist in the Bank's Research Department, who helped develop the program.

We hope these proceedings will be a useful resource to all those wishing to learn more about the growth of debt and financial stability.

ROGER GUFFEY

A handwritten signature in black ink that reads "Roger Guffey". The signature is written in a cursive style with a large, looping initial "R".

President

Federal Reserve Bank of Kansas City



## The Contributors

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**Stephen H. Axilrod**, Vice Chairman, Nikko Securities Company International. Mr. Axilrod is currently vice chairman of Nikko Securities Company International, headquartered in New York, and adviser to Nikko Securities Ltd in Tokyo. Prior to joining Nikko Securities, Mr. Axilrod was with the Federal Reserve Board for 34 years. Most recently, he was staff director for monetary and fiscal policy. He also served as staff director and secretary of the Federal Open Market Committee.

**George J. Benston**, Professor, University of Rochester. Dr. Benston is professor of accounting, economics, and finance at the Graduate School of Management, University of Rochester, and honorary visiting professor at City University, London, England. Dr. Benston was the director of the Sixty-Fourth American Assembly on "The Future of American Financial Services Institutions." He has consulted for all of the federal banking regulatory agencies, The World Bank, numerous trade associations, and private banks and other corporations, and has been invited to testify before the U.S. House of Representatives and Senate banking and judiciary committees and the Canadian Parliament banking committee. He has published over 80 academic journal articles and several books in the fields of accounting, economics, and banking and finance.

**Alan S. Blinder**, Professor, Princeton University. Dr. Blinder has been on the economics faculty at Princeton University since 1971 and currently serves as the Gordon S. Rentschler Memorial Professor of Economics. He recently served as a visiting fellow at The Brookings

Institution. His areas of specialization include stabilization policy, macroeconomics, and income distribution. He has authored or co-authored five books and written over 50 academic journal articles. He also serves as an economics columnist for several national magazines and newspapers.

**Phillip Cagan**, Professor, Columbia University. Before joining the faculty of Columbia University in 1965, Dr. Cagan taught at the University of Chicago and Brown University. He has been a visiting professor at the Carnegie Institute of Technology. Dr. Cagan is also a research associate with the National Bureau of Economic Research. He has written a number of articles on the monetary aspects of economic policy. He is the editor of *Contemporary Economic Issues*, an annual volume published by the American Enterprise Institute.

**A.W. Clausen**, Former President, The World Bank. A.W. Clausen served as president of The World Bank from July 1981 through June 1986. He previously served 32 years with Bank of America and BankAmerica Corporation, the last 11 years as president and chief executive officer of both institutions. Mr. Clausen is a member of the Business Council and a trustee of The Brookings Institution and of Carthage College; a director of the Associates of the Harvard Business School; and a member of the SRI International Advisory Council.

**William Peter Cooke**, Associate Director, Bank of England. Mr. Cooke joined the Bank of England in 1955 and was appointed associate director of the bank in 1982. In 1958-59 he was seconded to the Bank for International Settlements in Basle, Switzerland and from 1961 to 1965 he worked in the International Monetary Fund in Washington, D.C., as personal assistant to two successive managing directors. Subsequently, he was an assistant chief of the Overseas Department, first deputy chief cashier and adviser to the governors before becoming head of banking supervision in 1976. He has been chairman of the Basle Committee on Banking Regulations and Supervisory Practices of the G10 Major Industrialized Countries since 1977.

**Rimmer de Vries**, Senior Vice President, Morgan Guaranty Trust Company. As a senior vice president of Morgan Guaranty, Dr. de Vries serves as the bank's chief international economist and the editor

of the bank's publication, *World Financial Markets*. Dr. de Vries joined Morgan Guaranty in 1961, following five years with the Federal Reserve Bank of New York.

**Rudiger Dornbusch**, Professor, Massachusetts Institute of Technology. Dr. Dornbusch presently serves as the Ford International Professor of Economics at Massachusetts Institute of Technology. He has been on the faculty at MIT since 1975. He was previously on the faculties at the Universities of Chicago and Rochester. Presently, he is a co-editor of the *Quarterly Journal of Economics*. He has authored over 100 professional journal articles and is co-author of six books.

**Robert A. Eisenbeis**, Professor, University of North Carolina. Dr. Eisenbeis is presently the Wachovia Professor of Banking in the School of Business Administration at the University of North Carolina and a consulting associate with Furash and Company in Washington, D.C. He is also a member of the recently formed Shadow Financial Regulatory Committee. Dr. Eisenbeis previously served as senior deputy associate director in the Division of Research and Statistics at the Federal Reserve Board, where he served as the senior officer in charge of basic research and policy analysis of micro banking issues. He also has held positions at the Federal Deposit Insurance Corporation where he was assistant director of research and chief, Financial and Economic Research Section. He has authored more than 40 articles in professional journals and is co-author of five books.

**Benjamin M. Friedman**, Professor, Harvard University. Dr. Friedman is a professor of economics at Harvard University, where he teaches macroeconomics and monetary economics and conducts a seminar on monetary and fiscal policy. Dr. Friedman joined the Harvard faculty in 1972. He previously worked with Morgan Stanley & Company in New York. He also has worked in consulting or other capacities with the Federal Reserve Board, the Federal Reserve Bank of New York, and the Federal Reserve Bank of Boston. He is the author or co-author of six books and numerous academic journal articles on monetary economics, macroeconomics, and monetary and fiscal policy.

**John G. Heimann**, Vice Chairman, Merrill Lynch Capital Markets. Previous to his current position at Merrill Lynch, Dr. Heimann

was deputy chairman of Becker Paribas Incorporated. From 1977 to 1981 he was U.S. Comptroller of the Currency and a member of the board of directors of the Federal Deposit Insurance Corporation. He was also chairman of the Federal Financial Institutions Examination Council. Dr. Heimann served as superintendent of banks in New York State during 1975-1976. He currently serves as a member of the board and treasurer of the Group of 30.

**Henry Kaufman**, Managing Director, Salomon Brothers. Dr. Kaufman is vice chairman of Phibro-Salomon, Inc. and managing director and member of the executive committee of Salomon Brothers, where he is chief economist. Before joining the firm in 1962, Dr. Kaufman was in commercial banking and served as an economist at the Federal Reserve Bank of New York. He was admitted as a general partner of Salomon Brothers in 1967 and was appointed to the Executive Committee in 1972. He is a member of the Council on Foreign Relations, Conference of Business Economists, and he is a past president of the Money Marketeters of New York University.

**Allan H. Meltzer**, Professor, Carnegie-Mellon University. Dr. Meltzer is currently serving as the John M. Olin Professor of Political Economy and Public Policy at Carnegie-Mellon University. He has had frequent assignments with Congressional committees, as a consultant to the President's Council of Economic Advisers, the U.S. Treasury Department, the Federal Reserve Board, and to foreign banks. Currently, he is honorary adviser to the Institute for Monetary and Economic Studies of the Bank of Japan. Dr. Meltzer is a founder and co-chairman of the Shadow Open Market Committee. His writings have appeared in numerous journals, and he is the author of several books and more than 150 papers on economic theory and policy.

**L. William Seidman**, Chairman, Federal Deposit Insurance Corporation. L. William Seidman became the chairman of the FDIC in 1985. At the time of his presidential appointment, he was dean of the College of Business at Arizona State University, where he founded the Institute of Business Leadership. Mr. Seidman was vice-chairman of the Phelps Dodge Corporation from 1977 to 1982. He was President Ford's assistant for economic affairs from 1974 to 1977. He was managing partner of Seidman & Seidman, Certified Public Account-

ants from 1968 to 1974. He was special assistant for financial affairs to the Governor of Michigan from 1963 to 1966. At Arizona State he was responsible for the operation of the University's Economic Outlook Center and its widely-acclaimed statistical report. In Arizona, he was also chairman of the Governor's Commission on Interstate Banking.

**Lawrence H. Summers**, Professor, Harvard University. Dr. Summers has been on the economics faculty at Harvard University since 1983, where he specializes in macroeconomics and public finance. He served as domestic policy economist with the President's Council of Economic Advisers during 1982 and 1983. Between 1979 and 1982, he was on the faculty at the Massachusetts Institute of Technology. Professor Summers is a member of the Brookings Panel on Economic Activity and is a research associate at the National Bureau of Economic Research. He has served as a consultant to the Departments of Labor and the Treasury in the United States, to the governments of Jamaica and Indonesia, and to The World Bank and a number of prominent U.S. corporations.

## The Moderators

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**Bruce MacLaury**, President, The Brookings Institution. Dr. MacLaury has served as president of The Brookings Institution since 1977. He was appointed president of the Federal Reserve Bank of Minneapolis in 1971 and continued in that position until he assumed the presidency at The Brookings Institution. He previously worked in the Federal Reserve Bank of New York's Research Department, and served as deputy undersecretary of the U.S. Treasury for monetary areas, with special responsibilities in the areas of debt management and international financial markets. Dr. MacLaury is a member of the board of trustees of the Joint Council on Economic Education and the Committee for Economic Development. He is a member of the Council on Foreign Relations and the Trilateral Commission.

**Preston Martin**, Former Vice Chairman, Federal Reserve Board. Preston Martin is the former vice chairman of the Federal Reserve's Board of Governors. He has served as chairman of the Federal Home Loan Bank Board and the Federal Savings and Loan Insurance Corporation. In the private sector, he served as chairman and chief executive officer of Seraco Enterprises, Incorporated. He formed the Economic Research Group, and was professor of finance and director of executive programs at the University of Southern California. Mr. Martin has represented the United States at the Bank for International Settlements and served on The Group of Experts on Payment Systems.

# 1

## Symposium Overview: Debt, Financial Stability, and Public Policy

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*Bryon Higgins*

Most major types of debt have grown rapidly in recent years. The most publicized aspect of the overall growth in debt has been the unprecedented size of federal government budget deficits. But debt of households and businesses has also grown rapidly, and the debt of developing countries has risen so much that exceptional efforts by international lending agencies, creditors in developed countries, and the developing countries themselves have been required to prevent widespread defaults.

The buildup in debt could imperil the stability of the financial system, according to some analysts. They argue that the heavy debt burdens have reduced the ability of financial institutions, borrowers, and the economy at large to withstand recessions and other types of adversity. The resulting increase in financial fragility could force the Federal Reserve to choose between financial stability and price stability as the primary goal of monetary policy.

Several changes in public policy have been recommended to alleviate the effects of the high level of debt. Reform of tax laws, regulatory policies, and financial disclosure requirements—as well as changes in the government’s fiscal policy—have been advocated as ways of reversing what has been called “the leveraging of America.”

To gain a better understanding of the possible threats to financial stability from the buildup in debt, the Federal Reserve Bank of Kan-

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Bryon Higgins is a vice president and economist at the Federal Reserve Bank of Kansas City. Thomas J. Merfeld, a senior analyst at the Bank, assisted in the preparation of this Overview.

sas City sponsored a symposium on "Debt, Financial Stability, and Public Policy" on August 27-29, 1986. Symposium participants agreed that U.S. government budget deficits and the heavy debt burden of less developed countries threaten financial stability, but they disagreed on whether the debt of businesses and households was also worrisome. Except for a consensus that government budget deficits should be reduced, there was no clear agreement on what public policy actions are needed to protect the stability of the financial system.

This article highlights the issues raised by speakers at the symposium. The first section provides an overview of the growth in domestic debt and of the issues raised by that growth. The second section focuses on the consequences of the LDC debt problem and on policies for dealing with that problem. The third section presents possible regulatory and macroeconomic policy responses to the overall increase in debt. The final section provides the comments of three current or former policymakers on issues raised at the symposium.

### **Domestic debt and financial stability**

Presentations by Henry Kaufman and Benjamin M. Friedman documented the acceleration in growth of domestic debt and assessed its consequences. Both Kaufman and Friedman felt that rapid debt growth has imperiled financial stability. They also expressed concern that the Federal Reserve might thus become less aggressive in pursuing anti-inflationary policies.

#### *Debt and financial stability: an overview*

In "Debt: The Threat to Economic and Financial Stability," Henry Kaufman developed his thesis that the high level of debt will result in major economic and financial disruptions unless structural changes are made.

The rapid growth in domestic debt has been accompanied by a deterioration in the quality of credit, according to Kaufman. Growth in total debt has increased both absolutely and relative to GNP. After increasing at an average rate of 7.3 percent in the 1960s, total debt in the U.S. grew at a rate of 11.1 percent in the 1970s and has grown at a rate of 11.8 percent so far in the 1980s. As a result, the ratio of debt to GNP has risen from about 1.5 in the 1960s and early 1970s to about 2.0 by the mid-1980s. While this rapid growth was occurring, the agencies that rate creditworthiness of debtors have lowered credit ratings for the business sector. For example, over the

last decade, the number of AAA-rated industrial and utility corporations has been cut by more than half, and the number of bank holding companies with the highest credit rating has declined from 14 to only one. Kaufman attributed the overall deterioration of credit quality to an “audacious leveraging strategy” that has resulted in many corporations substituting debt for equity.

Recent trends in the financial markets have contributed to the increase in debt. Financial markets have become more integrated both domestically and internationally, and depository institutions are not as “compartmentalized” as they were before deregulation. Moreover, such financial innovations as floating-rate financing, securitization of debt, and financial futures have reduced the cost of credit by reducing the risk incurred by borrowers. And the tax structure has encouraged the use of debt rather than equity because dividend payments and capital gains are subject to full taxation, while interest payments are tax deductible. Finally, deposit insurance and market perceptions that the federal government will not allow a large financial institution to fail have further reduced the perceived risk of borrowing. These developments, according to Kaufman, raise the vexing question, “Who is the real guardian of credit?”

Increased debt could also intensify the effect of a recession. Higher debt requires greater cash flows to make interest payments, but a recession would curtail cash flows. In the best case, debt servicing would preempt existing income, leaving less for investment and profits. In the worst case, the existing income would be insufficient to meet debt servicing obligations. In either case, Kaufman said, the high level of debt financing would make any recession worse.

Kaufman concluded that the Federal Reserve will be forced to follow an accommodative monetary policy to avoid the severe recession that the high level of debt could cause. It must be recognized that such a policy could reignite inflation. Yet moving away from the large budget deficits that have contributed to the financial strains could lead to a recession requiring such monetary accommodation.

The inflationary consequences of the necessarily accommodative monetary policy can be avoided, Kaufman said, by making structural changes to strengthen the financial system. He advocated that the regulation of financial institutions be centralized in a National Board of Overseers to standardize and improve regulatory oversight. Moreover, financial disclosure should be increased and aimed toward revealing the overall financial health of the institution. If these steps are

not effective, financial regulatory agencies should make public the creditworthiness of the institutions they regulate. Tax policies should also be changed to discourage excessive borrowing. A major improvement in this regard would be eliminating double taxation of dividends and the capital gains tax on equities. Finally, international cooperation among regulatory agencies should be strengthened. Punctuating the importance he attaches to the problem, Kaufman urged that such policy changes be adopted before “the debt problem has completely overwhelmed us.”

### *Dimensions of growth in domestic debt*

In “Increasing Indebtedness and Financial Stability in the United States,” Benjamin Friedman developed in more detail many of the themes touched on by Kaufman. Friedman concluded that higher debt has increased the vulnerability of the U.S. economy to financial instability and has thus made the Federal Reserve more likely to err on the side of expansionary policy, risking higher inflation.

Friedman documented in detail the increased indebtedness in the U.S. economy. The ratio of debt to GNP has remained basically constant throughout much of U.S. history, but has risen rapidly in the 1980s. All major sectors of the economy have increased their indebtedness relative to income. As a result, the share of income going to service debt has risen for households, businesses, and the government.

The primary danger for financial stability is that a recession will interrupt the cash flows of households and businesses, making it difficult to meet debt-servicing obligations. Default by some borrowers would reduce cash flows to their creditors, which would then be unable to meet debt payments and would be forced to reduce demand for goods and for workers. In this way, inability to service the high level of debt could lead to a cumulative crisis in the financial system and to a progressive decline in output and employment.

The concentration of debt in low to middle income households increases the likelihood of personal defaults in times of financial stress. Friedman’s research reveals that the household sector as a whole maintained a fairly constant ratio of assets to debt in the recent debt surge. Therefore, in the aggregate, households have not increased their exposure to debt. However, consumer credit, often held by lower income households, has accounted for much of the household debt increase. Because low to middle income families have taken on such

heavy debt obligations, a recession that disrupts the cash flow that these households depend on to service their debt could lead to a surge in defaults on household debt.

By substituting debt for equity financing, the corporate business sector has made itself heavily dependent on current cash flows. According to Friedman, the recent wave of leveraged buyouts is responsible for much of this substitution because corporations borrow funds to buy shares in their own firm or in other firms. While this increase in business's debt-asset ratio does not directly threaten financial stability, any disruption of cash flows could prevent firms from meeting their debt obligations.

Higher inflation could thus be the ultimate consequence of increased indebtedness. The increased likelihood of debtor distress during a recession could reduce the Federal Reserve's tolerance for allowing a business downturn, Friedman said. As a result, U.S. monetary policy is likely to be more expansionary during a period of high debt, leading to higher inflation on average.

In discussing Friedman's paper, Allan Meltzer argued that Friedman had overstated the danger of higher debt. According to Meltzer, the growth of business debt has been moderate. Whereas Friedman studied debt to income ratios, Meltzer proposed focusing on business debt relative to assets and net worth. By these criteria, debt is lower now than in the past. Those expressing concern over rising debt have ignored the parallel increase in asset values.

Meltzer also argued that the level of debt is not a good indicator for monetary policy. Debt gives ambiguous signals about the economy. For example, a high ratio of debt to income may indicate either high current consumption or increased business investment. According to Meltzer, the Federal Reserve will realize that debt is not a good policy tool and thus refrain from an overly stimulative policy response to it.

### **International debt and financial stability**

The sharpest disagreement at the symposium regarded the best approach to the debt problems of less developed countries (LDC's). Rudiger Dornbusch advocated a fundamental change in U.S. policies toward heavily indebted LDC's and their creditors. In contrast, Rimmer de Vries and A. W. Clausen urged that the current framework for resolving the LDC debt problem be retained, with only minor adjustments as needed to adapt to changing conditions.

### *The case for fundamental change*

In his paper, "International Debt and Economic Instability," Rudiger Dornbusch argued that the current approach to the problem of heavily indebted developing countries is a failure. He advocated more U.S. government involvement and reduced debt servicing burdens for LDC debtors as the most realistic alternative to the current policies, which he considers to be failures.

Dornbusch traced the origin of the LDC debt problem to both domestic mismanagement and deterioration in the world economy. Many LDC's held their exchange rates at unrealistically high levels in the 1970s while they removed constraints on international trade and capital flows. A resulting speculative flight into foreign assets caused capital flight of \$70 billion or more from LDC's in the early 1980s. At the same time, world economic growth slowed and real interest rates soared, reducing export earnings and increasing the interest cost of foreign debt. As a result, Latin American and other LDC debtors could not service their external debt.

The LDC debt problem has not improved since 1982, when it became apparent that Mexico could no longer meet its foreign debt payments. Whereas the problem was initially viewed as merely one of liquidity that would be solved as the terms of trade and the world economy improved, it has become apparent, according to Dornbusch, that the problem is one of insolvency, rather than illiquidity. Moreover, the world economy has not picked up enough to raise commodity prices. Yet higher commodity prices will be necessary for most Latin American debtors to improve their export earnings enough to service their external debt. As a result, most LDC debtors have continued to borrow, increasing their debt with no realistic expectation of being able to pay the interest, let alone the principal. Despite government spending cuts and other austerity measures by LDC debtors, the international debt problem has continued to worsen because large American banks, the U.S. government, and international lending agencies have followed a policy of "involuntary debt service." Dornbusch said this policy has led to "extraordinary costs to debtors and to the trading interest of the creditor countries."

Dornbusch concluded that a new approach is necessary to solve the LDC debt problem and reviewed several of the recent proposals. He characterized as naive proposals that contemplate a reversal of capital flight because the conditions that led to the capital flight from

LDC's are still present. Moreover, swaps of debt for equity, in which a bank or an investor who has acquired LDC debt in the secondary market exchanges the debt for an equity position in a company sold by the LDC government, cannot be counted on for more than a small part of an overall solution. The LDC debt problem must be viewed not just as a banking problem but also as a problem for U.S. industry, since the improvement in the trade balances of LDC debtors necessary to service their external debt has been associated with a major reduction in U.S. exports to those countries. The "Bradley Plan," for example, would be a major improvement over the current approach toward LDC debt, Dornbusch said. Senator Bradley has proposed targeting limited debt relief for LDC debtors in exchange for trade and other concessions in the overall interest of the United States. Under this plan, qualifying LDC debtors would be eligible for a three percentage point reduction in the interest rate on the debt and a three percent writedown of the principal. In addition, a pool of an extra \$3 billion in funds from international lending agencies would be made available to LDC debtors. In Dornbusch's view, the Bradley Plan recognizes the LDC debt problem as a broad political issue in which the Congress should become involved to further the interest of the U.S. economy as a whole rather than "the narrow and shortsighted interest of banking only."

### *The case for modest adaptation*

Rimmer de Vries gave a spirited rebuttal to Dornbusch's analysis. He emphasized that progress has been made through the current case-by-case approach to LDC debt, offering Brazil as one outstanding example. The Brazilian economy is growing rapidly without inflation, and its interest payments as a percentage of export earnings have dropped to half of the 1983 level. Moreover, U.S. banks have reduced their exposure to LDC's and have thus improved the stability of the U.S. financial system. And the debtor nations continue to work constructively with commercial banks in developing solutions to their mutual problems.

The remaining problems should be resolved on a case-by-case approach with an assortment of tools, de Vries said. Some policy recommendations may apply to some countries but not to others. For example, countries with weak internal economies should make structural reforms, while the most pressing need for others is to increase

the private sector's ownership and control of businesses. The International Monetary Fund should be accommodative where the conditions warrant. In addition, debt for equity swaps could benefit all parties involved. Finally, de Vries argued that capital flight could be reversed, thereby reducing external debt without serious damage to the LDC economies or to the international financial system.

de Vries argued that neither banks nor creditor nations should pursue policies for the outright debt relief proposed by Dornbusch. Instead, facilitating LDC access to international capital markets should be the primary goal of all parties. Merely forgiving principal would dissuade new lending to LDC's for years. Proposals such as the Bradley Plan would politicize the issues and set the interests of U.S. banks against those of U.S. manufacturing and trade. Nor would these plans achieve the goal of increasing debtor countries' access to capital markets.

In his luncheon speech, A. W. Clausen urged a multifaceted approach to the solution of the LDC debt problem. He argued that sustained economic growth in the developing countries was necessary not only to restore their creditworthiness in international markets but also to alleviate the poverty that threatens political and social stability.

Developed countries have a key role in providing an environment for sustained growth in developing countries, according to Clausen. Sustained growth in developing countries is essential if LDC debtors are to expand their exports enough to service debt while making progress in alleviating domestic poverty. High government budget deficits in industrial countries impede sustained growth in the world economy and keep real interest rates high, forcing debtor nations to devote more of their incomes to interest payments on their debts. To Clausen, the implication is clear: economies with persistently high budget deficits must reduce them, preferably through cuts in public spending—especially spending for commodity subsidies that undercut efforts by LDC's to increase their commodity exports to industrial countries.

But controlling budget deficits will be inadequate unless developed countries make additional capital available to LDC debtors and maintain an open trading system that allows LDC's to expand their exports. According to Clausen, protectionism is one of the primary threats to the prosperity of developing countries and thus to their ability to service debt. Developing countries must also maintain adequate capital flows to the indebted countries, including support for the international lending institutions that play the central role in restoring growth and

equilibrium to heavily indebted LDC's. Japan, in particular, could find it beneficial to increase its capital flows to developing countries.

None of the efforts of developed countries will succeed, however, without policy reforms in the LDC's themselves. A key to providing adequate economic growth in many developing countries is the revitalization of their agricultural sectors. Agriculture is typically the largest sector in the economy and, therefore, the one that promises the best hope for broadbased economic growth and rising incomes.

### **Public policies for financial stability**

Participants on the second day of the symposium addressed issues regarding policy measures to enhance financial stability. The role of regulatory policy in preventing debt growth from leading to a financial crisis was addressed first, and the possible role of monetary and fiscal policy in enhancing financial stability was then evaluated.

#### *Regulatory policies and financial stability*

Robert A. Eisenbeis, in his paper "Regulatory Policies and Financial Stability," argued that many of the problems attributed to deregulation of the financial system are actually legacies of flaws in financial regulation and the deposit insurance system. He offered several suggestions for revising those policies to ensure that the financial system is less vulnerable to crisis.

According to Eisenbeis, ill-conceived regulations are the root causes of many of the problems in the financial system. Although financial innovations are often blamed for increasing financial fragility, these innovations are typically designed to circumvent financial regulations. While the regulations are well intentioned, they disrupt market efficiency and give rise to practices that weaken the financial system. Deposit interest rate ceilings and reserve requirements, for example, led depository institutions to rely increasingly on short-term funds, widening the maturity gap between assets and liabilities and increasing interest rate risk. Similarly, regulatory limitations on geographic and product expansion have prevented the asset diversification needed for limiting risk of depository institutions. As a result of these and other regulatory constraints, an increasing amount of credit is "securitized" or otherwise diverted to less regulated markets, including off balance sheet activities of commercial banks and the corresponding practices of brokerage firms. In short, Eisenbeis viewed many of the financial innovations that threaten the safety of the

financial system as practices that “have been pursued and have prospered, not because they necessarily improved efficiency . . . but rather because of their productivity in regulatory avoidance.”

The current deposit insurance system is particularly damaging because it encourages excessive risk taking. Because the cost of deposit insurance to an institution is based on the size of its deposit base rather than on the riskiness of its assets, the deposit insurance system allows institutions to acquire risky assets without incurring a commensurate increase in costs. The resulting subsidy to risk taking is a particularly acute problem in the case of weak institutions that can hope to survive only by investing in high yield, high risk assets.

On the basis of his analysis, Eisenbeis proposed several policy changes to enhance the safety and soundness of the financial system. First, deposit insurance should be priced so that institutions bear the cost of risk taking. Second, regulatory agencies should close financial institutions when their net worth reaches zero. Any plan to prop up failing institutions not only subsidizes their subsequent losses but also establishes a precedent that encourages other institutions to invest in risky assets. Third, the Federal Reserve should provide discount window loans only at rates above market rates to discourage institutions in financial difficulty from taking risks. More generally, Eisenbeis argued that financial deregulation should continue because only in this way can market forces exert the necessary discipline to discourage the type of risk taking that has endangered the stability of the financial system.

Discussant George J. Benston basically agreed with Eisenbeis, but added that the Federal Reserve should concentrate on preventing systemic financial crises by proper regulation of the money supply and interest rates. According to Benston, the Federal Reserve should not be concerned with the failure of a single financial institution, because a single failure would not induce systemic financial distress. On the other hand, an inappropriate monetary policy can cause a general economic depression or aggregate price inflation. Therefore, the Federal Reserve should concentrate on avoiding systemic instability through proper use of monetary policy.

In discussing the paper by Eisenbeis, William Peter Cooke agreed that deregulation did not cause the current stress in the U.S. financial system, but he disagreed with many of Eisenbeis’s policy recommendations. First, the risk based deposit insurance system proposed by Eisenbeis is unnecessary, Cooke believed. If regulatory authorities

want to impose costs on deposits commensurate with the risks that institutions assume, they should discontinue the deposit insurance system altogether. The market would then conduct its own risk assessment and charge more for deposits backed by risky assets. Second, banks should not be closed when their net worth becomes zero, according to Cooke, because of the difficulty in valuing a bank. A zero net worth might be only temporary, and the valuation under an assumption of closure would be different from the valuation under an assumption of ongoing business. Third, the Federal Reserve should not charge penalty rates for discount window borrowing. The market itself could theoretically lend money at a penalty rate. But the function of the lender of last resort is to provide access to funds for a troubled but solvent bank. Lending at penalty rates would defeat the purpose of having the central bank as a lender of last resort and could thus force premature insolvency.

#### *Macroeconomic policies and financial stability*

In "Debt Problems and Macroeconomic Policies," Lawrence H. Summers concluded that macroeconomic policies can best contribute to financial stability by keeping the real economy on an even keel. Reducing government budget deficits is particularly important for alleviating financial stress.

High growth in private sector debt is less of a threat to financial stability than is often thought, according to Summers. Financial stress depends on changes in net worth rather than on growth in debt. The ratio of farm sector debt to GNP has declined in recent years, for example, despite the evident agricultural financial distress, which has been caused by a shrinkage in the value of assets rather than growth in debt liabilities. While adverse shocks have led to financial distress in the agricultural, energy, and some manufacturing sectors, Summers argued that there is "little basis for generalized concerns about the excessive growth of private sector debt."

Nor is the ratio of total debt to GNP a good indicator for guiding monetary policy, Summers argued. Policy guides should give unambiguous signals of future movements in GNP. But broad debt measures do not give such signals. So, while broad debt aggregates can provide some useful information for monetary policy, they should not be the sole target variable.

In contrast, fiscal policy should be concerned with excessive debt growth because much of it has resulted from the unprecedented size

of government budget deficits. Theoretical arguments that budget deficits could be offset by additional private saving are not borne out by experience, according to Summers. As a result, budget deficits increase the financial stress of private sector debtors by raising real interest rates. Moreover, budget deficits have particularly adverse effects on some sectors of the economy by creating disruptive shifts in the composition of output. For example, the strong dollar associated with high budget deficits has made U.S. agricultural exports less competitive on world markets. The most direct way of enhancing profitability and reducing financial stress of the agricultural and other depressed sectors would be to lower federal budget deficits. Overall, quick reduction in budget deficits would "enhance both financial stability and economic growth."

Summers proposed reforming the current tax law as another way fiscal policy could reduce debt growth. The tax system subsidizes use of debt finance by corporations by allowing tax deductions for business interest costs but not for dividend payments. Summers argued that without such tax distortions, "corporations would find it profitable to issue less debt and take on fewer risks." To remedy this type of distortion, Summers advocated a consumption tax and elimination of all interest deductions. Both changes would reduce the tax incentives favoring debt finance.

Alan Blinder agreed with Summers's conclusions that rising interest obligations increase financial stress and that budget deficits exacerbate the problem. But he added some additional qualifications. He pointed out that, contrary to claims by Summers, higher private debt need not be offset entirely by higher assets. In recent years, for example, an increasing fraction of private borrowing has been from foreign lenders. Moreover, the high real interest rates of recent years pose a greater risk of default and economic instability than Summers implies, especially during a period of disinflation. The effect of high real interest rates are no longer predominantly the crowding out of such interest-sensitive sectors as business investment. Budget deficits have increasingly crowded out export and import-competing sectors by forcing up the exchange value of the dollar. Finally, Blinder felt that most of the tax distortions favoring debt could be remedied by indexing the current tax system, a change that would weaken the case for a consumption tax.

Phillip Cagan also agreed with the major conclusions Summers reached. He added that more emphasis should be given to growth

of short-term debt, which he believes poses the greatest problems for monetary policy. A financial system characterized predominantly by long-term debt and money would reduce shifts between money and debt, thereby limiting the unpredictable changes in money demand that frustrate monetary targeting. When the effect of financial deregulation and innovation have abated, monetary targets will again become useful for implementing monetary targets, but debt targets will not, according to Cagan.

### **Overview and conclusions**

Three participants provided an overview of the issues raised at the symposium. The overview panelists were current or former members of government agencies charged with maintaining financial stability. For that reason, their comments focused on the policy aspects of the relationship of debt to financial and economic stability. Stephen H. Axilrod concentrated on macroeconomic policies, while John G. Heimann and L. William Seidman focused on regulatory policies.

A major point of Axilrod's comments was that there are many subtle linkages among macroeconomic policy, debt, and financial stability. He rejected debt as a monetary policy target, but argued that macroeconomic policy has contributed to the buildup of debt and that the buildup has constrained macroeconomic policy. Some of the rapid growth in debt has resulted, he said, from inflationary monetary policy in the 1970s. More recently, high budget deficits have exacerbated the inflation mentality because "people may tend to think the government will reduce its debt burden...through inflation, which, to my mind, is a form of default." Thus, in Axilrod's view, financial instability has resulted partly from past inflationary monetary policy and the high budget deficits, which have raised real interest rates.

Heimann's comments focused on ways to enforce discipline in a changing financial system. He argued that banks have a special role in our financial system but that private market forces may be inadequate to enforce prudential standards for banks. Bank regulators are thus necessary and, in Heimann's view, have been doing the best job possible in a changing financial environment. One aspect of this "revolution in the financial services industry" is the securitization of credit, in which funds are ultimately raised in credit markets through sale of securities rather than through loans from financial intermediaries. Another is interest rate swaps, which Heimann characterizes

as a form of "credit bootstrapping." It is too soon to foresee the ultimate effects of these financial practices on financial stability, he said, because the practices have arisen only recently, during a period of relatively good economic and financial conditions. How the novel financial markets will function during periods of severe stress is, to Heimann, one of the major uncertainties about the final effect of rapid debt growth on stability in the financial system.

As chairman of the FDIC, Seidman focused on the vulnerability of the banking system during this period of higher debt. Although banks have increased capital as a buffer stock against shocks and developed new ways of diversifying risks, he said, they "have been failing at rates not seen since the advent of federal deposit insurance." Far more banks have failed so far in the 1980s than in the preceding four decades combined. Seidman predicted that about 150 banks could fail in 1986 and that even more could fail in 1987. He pointed out that bank failures have been concentrated in certain economic and geographic sectors. Almost 90 percent of the bank failures in the past two years were in states west of the Mississippi River, an area heavily dependent on agriculture and energy. Increased competition, interest rate deregulation, and disinflation have also taken a toll on many banks. In Seidman's view, the vulnerability of the banking sector to these developments has been accentuated by increased private sector debt.

Seidman offered several policy prescriptions to help ease strains on the banking system. Relaxation of restrictions on geographic and product expansion would help, he said. But moving toward risk-based deposit insurance to enforce market discipline is fraught with complications, including sensitivity to problems of innocent victims. Furthermore enforcing discipline by forcing losses on depositors of failed banks could lead to loss of confidence in the entire banking system. In evaluating the effect of rapid debt growth on the FDIC's ability to protect depositors, Seidman warned that "the current trend line in bank failures cannot be extended for many more years without trouble; the climb it evidences is too steep."

## Debt: The Threat to Economic and Financial Stability

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*Henry Kaufman*

I was pleased to have received an invitation to be the leadoff speaker at this conference to present an overview of the current debt situation in the United States and of financial stability. It was in the late 1960s when I first detected that developments in debt creation might be taking an ominous turn. Since then, I have spoken about the subject a number of times. While many debt problems have surfaced in recent years, the issue of debt and financial stability does not yet have the national attention it so crucially deserves. Now, the problems associated with debt are well past their infancy and, indeed, are dangerously full grown. Even so, there is still only some awareness today that debt has both a sunny and a dark side to it. Historically, the act of creating debt contributed to economic and financial exhilaration. But in the past several years we have realized that the obligations inherent in debt may impose hardships on lenders and borrowers and, indeed, on the economy and the financial markets as a whole.

The reality is that our debt problem is not going to go away. It is complex; there are no easy solutions. To cope successfully with this problem and stave off an economic disruption of major proportions, the role of our financial system will need to be redefined and structural changes and disciplines that are lacking today will have to be imposed. Unfortunately, there is as yet no evidence that adequate measures will be undertaken soon to ameliorate this situation.

### **The many dimensions of the debt problem**

The debt problem has many dimensions. Most noticeable—and most talked about—is the rapid growth of debt. At the end of 1985, total credit market debt—mainly households, businesses, and governments,

but also the financial sector—totaled \$8.2 trillion, compared with \$4.6 trillion at the start of the decade and \$1.6 trillion in 1970. As shown in Table 1, total debt rose annually by 7.25 percent in the 1960s, by 11 percent in the 1970s, and by almost 12 percent so far in the 1980s.

**TABLE 1**  
**Growth of Nominal GNP versus Credit**  
**(Average Annual Percentage Change)**

	<u>1960s</u>	<u>1970s</u>	<u>1980-85</u>	<u>1985</u>	<u>Billions of Dollars<sup>1</sup></u>
Nominal GNP	6.89	10.06	8.07	5.67	3,998.10
Domestic nonfinancial debt	6.83	10.40	11.58	15.00	7,131.90
Corporate	9.40	11.22	10.39	12.40	1,505.10
Household <sup>2</sup>	8.55	11.40	10.30	12.85	3,224.60
U.S. government	1.96	8.83	15.84	16.24	1,660.40
State and local government	7.55	7.39	12.47	34.18	553.10
Foreign debt in the U.S.	8.57	14.42	5.54	0.61	1,115.60
Financial debt	14.94	16.78	15.69	21.03	248.90
<b>Total Debt</b>	<b>7.25</b>	<b>11.06</b>	<b>11.75</b>	<b>15.23</b>	<b>8,247.50</b>

<sup>1</sup> As of December 31, 1985.

<sup>2</sup> Household sector includes farm and nonfarm corporate business.

Debt expansion is also outrunning gross national product (GNP) growth. Credit market debt outstanding at the end of last year exceeded nominal GNP by a ratio of 2 to 1. In 1980, debt was 70 percent higher than GNP, and in both 1960 and 1970, it was roughly 50 percent higher than GNP.

All major sectors of the economy have accelerated their use of credit. Corporate debt, for example, increased by 12.4 percent in 1985, compared with 9.4 percent annually in the 1960s. Household debt rose by 12.8 percent in 1985, up from an annual average increase of 8.6 percent in the 1960s. But the most dramatic stepup in borrowings by far has been incurred by governments: U.S. government debt rose at an annual rate of 2 percent in the 1960s, by 9 percent in the 1970s, and almost 16 percent annually thus far in the 1980s. Concurrently,

state and local governments debt expanded by around 7.5 percent annually in the 1960s and 1970s and then jumped to 12.5 percent per year thus far in the 1980s. Debt has also burgeoned internationally. At the end of 1985, the medium and long-term external debt of less developed countries totaled \$781 billion, or 159 percent of their gross merchandise exports, compared with \$173 billion, or 73 percent of their merchandise exports, in 1975.

A significant deterioration in the quality of credit has accompanied this swift debt growth. In the United States, this has been most noticeable in the business sector, where more credit ratings have been downgraded than upgraded since the start of the current business expansion in 1982 (Table 2). Today, the universe of AAA-rated industrial and utility corporations has been cut to 26 from 56 a decade ago, when the economy was smaller. Concurrently, the size of the high-yield bond market (with credit ratings below BBB) is about \$100 billion, or roughly 21 percent of outstanding corporate bonds. In 1976, the size of this market was nearly \$19 billion, or 9 percent of outstandings. At present, only the paper of one large bank holding company is rated AAA; ten years ago, there were 14.

**TABLE 2**  
**Changes in Credit Ratings of Nonfinancial Corporate**  
**and State and Local Government Bonds Number of Upgradings**  
**(+) Less Downgradings (-)**

	<u>Nonfinancial Corporate Including International<sup>1</sup></u>	<u>State and Local Government<sup>2</sup></u>
First Half 1986	-97	+47
First Half 1985	-135	-66
1984	+1	-116
1983	-98	-157
1982	-154	-127
1981	-31	-81
1980	+13	-9
1979	+28	-95
1978	+22	+158

<sup>1</sup> Standard & Poor's

<sup>2</sup> Moody's

A glaring contribution to this erosion in quality has been the simultaneous increase in debt and the actual decline in the equity positions of business corporations. Over the two years 1984 and 1985, the debt of nonfinancial corporations rose by \$384 billion, while equity contracted by \$99 billion. This contraction comprises the total of retained earnings, which were a positive \$53 billion, and net new equity issuance, which was a negative \$152 billion. This disturbing pattern, persisting so far in 1986, reflects an audacious leveraging strategy that has gone unchallenged by a smaller or larger degree of economic adversity.

Nevertheless, it is beginning to take its toll. The once smoothly functioning corporate bond market is showing signs of weakness. No longer is it the market leader, a role that has been usurped by U.S. government securities. More importantly, investing in and trading corporate bonds on relative value merits has become increasingly hazardous. "Event risks," such as takeovers, have often resulted in a sudden collapse in credit quality, producing large losses for bond investors. As a result, relative value analysis has been rendered a less useful tool for bond investing.

This credit quality deterioration is also evident in other sectors. In the state and local government market, overall credit quality growth eroded for the seventh consecutive year in 1985, the latest year for which we have complete data. In the agricultural sector, the value of farmland, after peaking in 1981, has fallen by 25 percent, while farm debt has continued to mount. As a result, over the past five years, farmers' net worth has fallen by 30 percent, and many farms are in financial disrepair. Even households do not show the financial strength they enjoyed a decade ago.

Both the ratios of household debt to disposable personal income and to net worth are at record highs—they were 25 percent and 15 percent lower, respectively, ten years ago. In the current business expansion, the consumer's appetite for credit has been voracious. In the past four years, for example, while disposable income has risen by 32 percent, households have taken on 42 percent more in mortgage debt and an extraordinary 73 percent more in installment debt.

In addition to the ongoing deterioration in these sectors of the economy, there is a relatively new area of weakness—commercial real estate construction. We are just beginning to realize the extent of this problem. Significant real estate loan losses have been reported at a

number of large banking and thrift institutions, not only in the Southwest, but nationwide, reflecting the fact that rental income is insufficient to support the debt service of many office projects.

An additional facet of the debt problem concerns the data. Now all of us who have worked with debt data should readily concede to the shortcomings of these statistics. The Federal Reserve's flow-of-funds data, a prime source for many of us, have many flaws. For example, information on state and local government borrowing is provided with a long lag by the Census Bureau. The U.S. Treasury, for cost-cutting reasons, has moved to voluntary reporting on many of the capital flows between residents of the United States and foreigners. The data on borrowing and investing abroad by domestic corporations are inadequate in terms of accuracy, completeness, and timeliness. The statistics on corporate pension funds and public retirement funds are incomplete and, like many other data, are available only with a considerable delay.

Nevertheless, imperfections in the data do not invalidate the conclusion that the nation faces a very serious debt problem. If anything, the available data probably understate the magnitude of the problem. For example, the Federal Reserve's flow-of-funds data tend to be revised sharply upward from the preliminary report. As shown in Table 3, two years after the release of the preliminary fourth-quarter 1983 flow-of-funds statistics, the upward revision for nonfinancial debt was nearly 7 percent. It ranged as high as 40 percent for some subsectors.

In addition, we should all understand that the enormity of the debt situation is being masked by accounting conventions and liberal official regulatory standards. Financial statements often tend to show a netting out of assets and liabilities. Given current balance sheet conventions, many business and financial entities probably employ greater leverage of debt to capital than is readily discernible.

### **The underlying causes of debt growth**

How did this enormous growth of debt come about and what is sustaining it? Merely to blame the incorrect policies that fueled inflation is too easy. There is much more to the debt explosion. I have written at length about the underlying causes of the surge in debt. For this discussion, let me summarize with the following seven points: the attitude toward debt, financial deregulation, financial innovation, securitization, financial internationalization, the tax structure, and practicing debt prudence.

**TABLE 3**  
**Revisions in Fourth Quarter 1983 Flow-of-Funds**  
**(Billions of Dollars)**

Category	Preliminary	Revisions					
	1983:Q4	1984:2Q		1984:4Q		1985:4Q	
	Billions	Billions	Percent Change	Billions	Percent Change	Billions	Percent Change
Total nonfinancial debt	509.5	526.4	3.3	526.4	3.3	542.9	6.6
Government	186.6	186.6	0.0	186.6	0.0	186.6	0.0
Tax exempt	44.3	56.3	27.1	56.3	27.1	57.3	29.3
Corporate and foreign bonds	15.0	15.7	4.7	15.7	4.7	16.0	6.7
Mortgages	168.6	167.3	-0.8	167.3	-0.8	180.3	6.9
Business loans	19.1	27.3	42.9	27.3	42.9	26.8	40.3
Consumer credit	54.2	51.3	-5.4	51.3	-5.4	56.7	4.6
Open-Market paper	-1.2	-1.2	0.0	-1.2	0.0	-1.6	-33.3
Other	23.0	23.1	0.4	23.1	0.4	20.7	-10.0

The attitude toward debt has been a transformation from a hesitancy to borrow in the early post World War II period to an intense use of credit in recent years. This attitudinal change reflects the declining influence of those who experienced the Great Depression of the 1930s. Indeed, despite a series of greater or less serious financial crises during the past 20 years, only relatively few institutions failed. Today, no one celebrates paying off the home mortgage. Now, corporate financing strategies do not differentiate between money and credit or between liabilities and liquidity.

Financial deregulation, regardless of its merits, still facilitates the creation of debt, because it spurs competition, and reinforces the drive for new markets and enlarged market standing. Credit growth was more inhibited when markets were more compartmentalized and institutions were more restricted in their activities.

Financial innovation, by its very nature, either facilitates a credit that could not have been financed at all using earlier techniques or is utilized to reduce financing costs. Perhaps the most far-reaching of the many changes that have been introduced in the past few decades has been floating-rate financing. This technique enables financial institutions to try to insulate themselves from the interest rate risk

by quickly passing on increases in the cost of their sources of funds to their borrowers. In the past, a move toward higher interest rates curbed debt growth because financial institutions could not easily pass on the higher costs to their customers. But with the advent of the pass-through device of the floating-rate note, financial institutions have become aggressively more entrepreneurial and growth oriented than in the past.

Securitization, which transforms obligations from nonmarketable to marketable, has encouraged debt growth in several ways. First, it tends to create the illusion that credit risk can be reduced if the credit instruments become marketable. Holders of the marketable obligation frequently believe that they have the foresight to sell before the decrease in creditworthiness is perceived by the market. Second, the enhancement techniques employed in securitization, such as credit guarantees and insurance, blur the credit risk and raise the vexing question, "Who is the real guardian of credit?"

Internationalization of finance has also enhanced debt creation. Today, major corporations and official and private institutions seek the best terms by borrowing in Europe, the United States, and Japan. Rapid advances in communications and technology, together with financial deregulation abroad, have intensified competition among key financial centers. In view of the differences in the degrees of deregulation, regulatory requirements, and accounting standards, the opportunity to generate debt is very great indeed.

Our tax structure is another factor that encourages the use of debt over equity. Interest payments are generally tax deductible. Although this preferential treatment may be curtailed somewhat by the proposed tax reform, dividend payments are still subject to double taxation and the levy on capital gains may be raised.

Practicing financial prudence is virtually impossible for major participants in our financial system. Even the best compromise. For business corporations, this may happen through the use of greater leveraging to avoid a takeover. As I have noted in my book, "If (financial) participants fail to adapt to the new world of securitized debt, proxy debt instruments, and floating-rate financing, then they lose market share, make only limited profits and do not attract the most skilled people. The driving force behind profit generation is credit growth."<sup>1</sup>

<sup>1</sup> Henry Kaufman, "Interest Rates, the Markets, and the New Financial World," Times Books, New York, 1986.

## **The risks and policy challenges of financial stability**

What risks do the mounting debt pose for financial stability? Here no simple formula will reveal to us the flashpoints of economic and financial trouble. The fact is that the debt buildup in the past two decades has been greater than most would have thought tolerable. Several credit crises have been surmounted, and both the economy and financial markets have survived. Interest rates rose to levels that were unimaginable in earlier years. But while the financial system remained intact, its structure and financial practices were altered dramatically. Nevertheless, it cannot be denied that our system is now more marginal and more highly leveraged than at any time in the past 40 years. This might be less disturbing if business cycle volatility had been sharply curtailed, but this has not been the case. Another matter of concern is that debt can severely restrict freedom of action when income slows and debt servicing needs preempt much of the income that is left. In contrast, of course, large equity positions relative to debt provide society with enhanced freedom and maximum economic flexibility. Given these observations, huge debt will add a very troubling dimension to the next business recession. If a major economic and financial upheaval is to be avoided, official policymakers must act with alacrity. There will be less leeway for errors in policy decisions and implementation.

The greatest need is to harness effectively the growth of debt. How can this be accomplished in our new financial world of deregulation, securitization, globalization, and innovation? We cannot and should not attempt to return to the financial markets of yesteryear. Too much has changed. We need a framework that will get the best out of the current financial system and ward off the worst. The resolution to the debt problem has at least two dimensions. One is immediate. How do we defuse the debt explosion without risking a major economic calamity? The other is closely related. It involves the kind of disciplines and practices that should be implemented to foster reasonable, but not excessive, debt growth.

Unfortunately, history offers little encouragement in this regard. In the period before World War II, excessive debt was generally eliminated through bankruptcies and failures that, if large enough, brought about precipitous economic contractions. Today, this form of discipline has become unacceptable, although during each economic contraction in the postwar years, debt growth slowed but did not shrink. Actually, we are moving in a new direction in this new financial world

of ours in which aggressive financial practices are proliferating. An official safety net is being spread under many financial activities. No longer are market forces allowed to exercise their full discipline over large financial institutions. Depositors of smaller institutions enjoy the protection of that safety net. It is also my belief that obligations covered by credit insurance and by the implied guarantee of the federal government—as is the case with many credit agencies—benefit from an implied official safety net.

With this in mind, how do we steer the economy toward moderate debt growth and at the same time avoid deflation? The magnitude of the debt problem itself suggests that it would seriously undermine the ability of the economy to revive quickly from the next business recession. Consequently, until there is solid evidence of a significant economic rebound, monetary policy must take the risk and err even further on the side of accommodation. Lower interest rates will ease the debt burden in the United States and, particularly, in the developing countries. Further monetary ease will give many marginal borrowers the opportunity to survive. We must stretch out the period in which debts can be written off by creditors and in which debtors, therefore, can recoup earning power. To be sure, this monetary policy approach runs the risk of rekindling inflation, but the alternative is also punishing. Deflation is the more immediate threat to our economic and financial stability. On the one hand, the monetary throttle can always be pulled back if need be, but on the other hand, once a deflation is under way, even large reserve injections may not immediately halt the decline in economic activity and the contraction in income flows.

Monetary policymakers today face the dilemma that the new financial world has rendered obsolete the once simple rules for conducting policy. In this new setting, the Federal Reserve is encumbered by a poorly defined monetary approach; therefore, it must be more highly judgmental than in the past. The Federal Reserve must have insights into the rapidly changing financial developments and their policy implications. Even if these insights are timely, they may not be sufficient in formulating an effective policy, because many of the new financial practices are beyond the immediate control of the Federal Reserve.

In addition to the immediate monetary policy quandary in dealing with the debt explosion, there is the serious question of appropriate fiscal policy. Since the U.S. government has accelerated the rate of its borrowings more than any other sector, it would seem at first blush

that a sharp reduction in the budget deficit would seem appropriate. Here, we face a serious judgment problem in policy, because a drastic pullback in the deficit would contribute to fiscal drag just when the economic growth is seriously lacking in vigor. This, in turn, will add to the Federal Reserve's difficulty in deciding how much more accommodating monetary policy should be to offset the fiscal drag. Some studies have claimed that fiscal policy initially can have a more powerful influence than monetary policy. A study by the Organization for Economic Cooperation and Development, for example, reveals that a two-percentage-point cut in short-term interest rates raises real GNP growth in the United States by  $\frac{1}{2}$  percent over three years, while a rise in government spending by 1 percent of gross domestic product (GDP) increases the level of real GDP by  $2\frac{1}{2}$  percent during this period. While this example may overstate the problem, if there is a fiscal pullback, then the pressure is on monetary policy to be very accommodating.

The fiscal quandary and its implications for debt growth and economic and financial stability are deeper still. A huge reduction in the deficit over a short time span weakens economic activity even further, while small reductions would do little to solve the "deficit problem." If another recession should take place with a large deficit at the outset, it will be extremely difficult for our legislators to opt quickly for an even higher deficit. Thus, the legacy of the debt explosion that we have experienced may well be that the next recession will have to be overcome mainly through monetary ease with little help from fiscal policy. The University of St. Louis economist Hyman Minsky has often pointed out that fiscal and monetary stimulus has rescued the financial system from the crises since World War II. The question for the future is, "Can monetary policy do it alone the next time around?"

### **Some specific recommendations**

Much of the feared deflation that might result from substantial monetary stimulation over the near term would most likely be contained if we initiate structures and disciplines that are rooted in the realities of the new financial world. Procedures and a governing process should be set up that fully recognize that markets and institutions are no longer neatly compartmentalized. I continue to believe that the following suggestions, if adopted, would go a long way toward stabilizing the debt situation.

(1) Many of the current regulatory bodies should be eliminated. In our rapidly changing financial system, in which institutions perform a multiplicity of services, is it efficient to have so many regulators on both the state and federal levels? These regulators are largely vestiges of our past financial development. At times, they compete with each other and they do not have an integrated view of today's financial world.

(2) Centralized monitoring and regulation of our financial system should be established. I continue to urge, as I did in congressional testimony more than a year ago, that the prudential responsibilities of the Federal Reserve should be enlarged to encompass institutions other than banks, or that a National Board of Overseers should be established to monitor and promulgate codes of minimum behavior for all major financial institutions.

(3) Financial institutions should be required to report their assets at the lower of cost or market value. Losses would then be quickly recorded, inducing managements of financial institutions to turn toward more conservative practices.

(4) There should be much greater disclosure by financial market participants—including institutions and corporations—in their financial statements. Assets and liabilities should not be netted out. Contingent liabilities should be reported in detail, thus providing creditors with the opportunity to improve their ability to access the credit standing of debtors.

(5) If this type of disclosure continues to be inadequate, then the official regulatory agencies should be required to rate the credit-worthiness of the financial institutions under their jurisdiction. These ratings should be made public after a delay, thereby allowing the institutions time to remedy any problems before the public is apprised.

(6) We should adopt tax policies that foster the enlargement of equity capital, rather than the excessive use of debt. In this regard, the double taxation of dividends and the capital gains tax on equity shares should be eliminated.

(7) The official regulatory agencies should issue regulations that require the gradual enlargement of the capital base of the institutions under their supervision.

(8) To contain the debt problem, international cooperation and coordination must be strengthened. A new official international organization, consisting of key central bank and other officials, should be established. This organization should work toward achieving uniform

accounting, capital, and reporting standards of major financial institutions. It should monitor international capital flows more closely by promulgating better reporting standards. In a world with a rapidly growing web of financial linkages, such improvements are essential not only to rein in debt growth, but also to achieve effective monetary policies.

These recommendations are designed not so that we return to the structural world of finance of a few decades ago, but rather to remedy the problems that have been created in this new environment. If failures and bankruptcies are unacceptable, then institutions and markets must be required to adhere to standards that prevent many of them from moving to the brink of failure. A strong financial system should encourage equity instead of debt and should insist on understated asset values, rather than liberal accounting standards and hidden liabilities. The changes that need to be made to prevent a debt crisis from causing major damage are difficult to engineer, because the many vested interests involved will attempt to limit the necessary legislative initiatives. The urgent need is far-reaching decisions now—not when the debt problem has completely overwhelmed us.

## Increasing Indebtedness and Financial Stability in the United States

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*Benjamin M. Friedman\**

The American economy during the 1980s has relied on debt financing to a degree that is unprecedented within the nation's prior experience — certainly within this century, and apparently earlier on as well. The combined indebtedness of both government and private-sector borrowers, which earlier had shown considerable stability in relation to the economy's overall growth, and especially so since World War II, has since 1980 jumped far out of proportion with nonfinancial economic activity. Moreover, almost all major sectors of the U.S. economy have participated in this pattern of accelerating borrowing, including individuals, businesses, and government at all levels.

This sharp break with prior U.S. economic behavior raises several important issues. For example, at the most fundamental level it casts in a new light the underlying puzzle of why the relationship between outstanding debt and economic activity was so stable for so long in the first place. Major changes in such key factors as interest rate levels, inflation rates, tax rates, and bankruptcy rules could plausibly have changed the U.S. economy's proclivity toward indebtedness at many points during the course of the twentieth century, but in fact—at least until the 1980s—they did not. Now careful analysis of the most recent experience may resolve such as yet unanswered questions as whether this prior stability chiefly reflected the behavior of borrowers or lenders.

The object of this paper is to consider two issues of a more prospective nature raised by the rise in the U.S. debt totals since 1980.

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\*I am grateful to David Laibson for research assistance; to him, Thomas Simpson, and Stephen Taylor for helpful discussions; and to the National Science Foundation and the Alfred P. Sloan Foundation for research support.

First, has this increase eroded the ability of the United States to withstand economic shocks? More specifically, has it raised the threat of financial instability in the sense of disruptions in the orderly functioning of payment flows that would, in turn, either magnify a disturbance to the economy originating from some nonfinancial source or impose on the nonfinancial economy contractionary effects due initially to some purely financial cause? Second, if the increase in indebtedness has eroded U.S. financial stability, will the awareness of this deterioration constrain the future conduct of U.S. monetary policy? In particular, will fear of the consequences of financial instability render Federal Reserve System policymakers reluctant to impose a restrictive monetary policy in the event of a threatened re-acceleration of price inflation, and therefore impart an inflationary bias to U.S. monetary policy on average over the ups and downs of future business cycles?

The paper's first section highlights the extent to which U.S. borrowing behavior in the 1980s has departed from prior relationships, including both the rise in the overall debt-income ratio and the absence of negative correlation between public and private-sector debt ratios, by contrasting this most recent period with the earlier experience since the Korean War. The second section focuses on the corresponding experience of the assets held by the economy's private sector, broken down separately between individuals and businesses, to learn whether what stands behind this increased private-sector indebtedness can plausibly provide some assurance of borrowers' ability to service it. The third section examines the experience of debt delinquency and default in previous episodes of tight monetary policy and offers some speculations about the implications of recent developments in individual and business balance sheets for the conduct of monetary policy. The final section briefly summarizes the paper's principal findings and concludes with a note of caution about the implications of the steady rise since 1980 in the federal government's indebtedness.

### **Debt and income, before and after 1980**

One of the most striking features of the U.S. financial system during the post-World War II era — but not since 1980 — has been the stable relationship between debt and economic activity. The outstanding debt of all U.S. obligors other than financial intermediaries, expressed as a percentage of gross national product, fluctuated (mostly cyclically) within a narrow range throughout this period, with no evi-

dent time trend.<sup>1</sup> The debt ratio measured in this way has been especially stable since the Korean War, with a 1953-80 mean of 137.1 percent and corresponding standard deviation of 2.9 percent.<sup>2</sup> Moreover, except for the depression of the 1930s, the debt ratio was also fairly stable and trendless during the pre-war period extending as far back into the nineteenth century as available data permit.<sup>3</sup>

What makes the pre-1980s steadiness of the U.S. economy's overall debt-income relationship especially striking is that it did not represent merely the sum of individually stable elements. At least throughout this century there have been wide swings, relative to gross national product, in the indebtedness of individuals, businesses, and government considered separately. As Chart 1 shows for the post-Korean War period, however, until 1980 these sector-specific debt levels exhibited sufficient negative covariation—especially between private-sector debt and federal government debt—to render the economywide overall debt ratio essentially trendless.<sup>4</sup> The federal government component of the debt ratio exhibited strong negative correlation with the private-sector components, either individually or taken together, not just during 1953-80 (when the significant negative correlation could have reflected opposing time trends), but also over much longer periods dating back as far as World War I.

The experience of the 1980s stands in sharp contrast to this prior pattern of a stable total consisting of negatively covarying components. At the end of 1980, the total debt ratio stood at 137.7 percent, well within one standard deviation of the 1953-80 mean. By the end of

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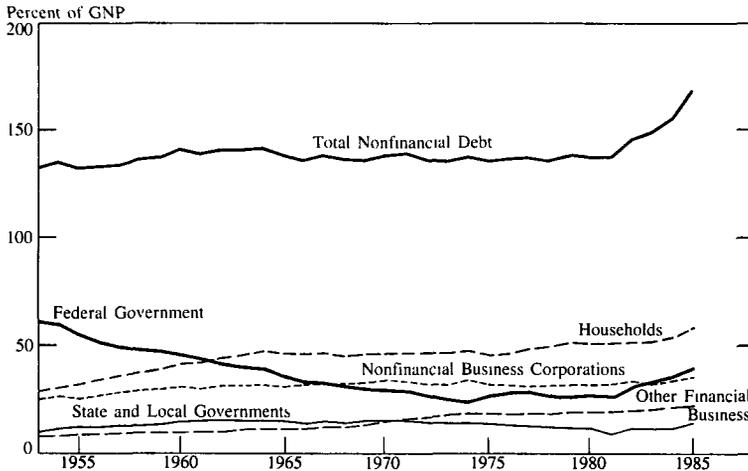
<sup>1</sup> The debt total excluding financial intermediaries roughly corresponds to Gurley and Shaw's (1960) concept of "primary debt." By contrast, Minsky's analysis of financial instability (e.g., Minsky 1977) has emphasized "gross debt," including financial intermediation. Credit market indebtedness (that is, market liabilities other than deposits and deposit equivalents) of U.S. financial intermediaries, relative to GNP, rose slowly but steadily throughout this period.

<sup>2</sup> These values, like all those reported below, are based on annual yearend par-value debt figures scaled by the corresponding fourth-quarter GNP (seasonally adjusted, at annual rates). They differ modestly from those reported in Friedman (1979, 1982, 1983, etc.) because of the Commerce Department's 1985 benchmark revision of the GNP data; on average, the revision raised GNP values during 1953-80 by 2.3 percent. Adjusting to a market-value basis would alter the year-to-year pattern somewhat, but would not affect such long-run properties as the absence of time trend. See, for example, the market-value correction factors calculated by Strong (1986).

<sup>3</sup> See Friedman (1980, 1982) and Goldsmith (1985).

<sup>4</sup> Ordinary least squares regression of the total nonfinancial debt ratio on a constant and a linear time trend, using annual data for 1953-80, results in a coefficient on the trend variable of 0.08 with t-statistic 1.3.

**CHART 1**  
**Outstanding Debt of U.S. Nonfinancial Borrowers**



1985, the debt ratio was 169.2 percent, more than 11 standard deviations higher, and above any prior U.S. debt level recorded in this century except for 1931-35, when many recorded debts had defaulted de facto anyway. Further, as Table 1 shows, all major classes of U.S. nonfinancial borrowers except farmers have participated in this increased indebtedness since 1980. The long-standing significant negative correlation between the federal government and the private-sector components of the debt ratio has, accordingly, turned positive.

Not surprisingly, most of the familiar measures of financial asset holding in the United States have also shown major increases during the 1980s, at least in relation to previously established time trends. This parallel behavior of asset holding behavior, at least at the aggregate level, is potentially of major importance in the context of concerns about threats to financial stability posed by rapid accumulation of debt, in that no cogent economic theory suggests gauging risks by looking at liabilities without attention to assets. Both sides of the balance sheet matter.

If the United States were a closed economy, any increase in debt liabilities outstanding would necessarily involve an equal increase in debt assets held. The same would be true for an open economy if the current account were always just in balance, so that foreign capital

**TABLE 1**  
**Increase in the U.S. Debt Ratio, 1980-85**

<b>Borrower</b>	<b>Debt Ratio</b>		<b>Change</b>
	<b>1980</b>	<b>1985</b>	
	<b>%</b>	<b>%</b>	<b>%</b>
Households	50.9	58.5	+7.6
Businesses	50.3	57.9	+7.6
Corporations	32.1	36.8	+4.8
Farms	5.6	4.4	-1.2
Other	12.6	16.6	+4.0
State-local governments	10.4	13.3	+2.9
Federal government	26.1	39.4	+13.4
All nonfinancial borrowers	137.7	169.2	+31.5

Notes: Figures for 1980 and 1985 are yearend totals of credit market liabilities, expressed as percentages of corresponding fourth-quarter gross national product (seasonally adjusted at annual rates).

Detail may not add to totals because of rounding.

Source: Board of Governors of the Federal Reserve System

inflows or outflows always netted to zero, and if there were no net debt-equity asset swaps with foreigners. In fact, the U.S. current account has moved into record deficit range in the 1980s, presumably as a consequence of the combination of loose fiscal and tight monetary policies pursued throughout this period. Even so, the cumulative sum of the U.S. current account deficits sustained during 1981-85 was only \$231 billion, and the sum of recorded foreign net financial investment in the United States during this five-year period was just \$139 billion. In addition, the net exchange of equity with foreign issuers and investors, including both portfolio and direct investment, was close to zero through this period. Hence the increase in the total nonfinancial debt ratio by as much as 31.5 percent between the end of 1980 and the end of 1985 necessarily increased the total of debt assets held domestically, however measured, by a huge amount.

Table 2 places the rise of the total nonfinancial debt ratio in the context of the increase in analogous ratios to gross national product for major U.S. asset aggregates. As of the end of 1985, the ratios for total net assets, the monetary base, and the narrow M1 money stock

**TABLE 2**  
**Aberrations of U.S. Financial Ratios, 1980-85**

<u>Aggregate</u>	<u>1980</u>	<u>1985</u>	<u>1985</u>	<u>Difference</u>	<u>Difference</u>	<u>Difference</u>
	<u>Actual</u>	<u>"Norm"</u>	<u>Actual</u>		<u>as Multiple</u>	<u>as Multiple</u>
	%	%	%	%	<u>of 1980</u>	<u>of Standard</u>
					<u>Actual</u>	<u>Deviation</u>
Total nonfinancial debt	137.7	137.1	169.2	32.1	.23	11.3
Total net assets	92.9	93.0	114.2	21.2	.23	14.5
Monetary base	5.7	4.4	5.8	1.3	.23	3.6
Money: M1	14.5	10.0	15.4	5.5	.38	6.1
Money: M2	57.2	61.2	63.2	2.0	.03	1.0
Money: M3	69.8	74.1	78.8	4.7	.07	2.8

Notes: Data for nonfinancial debt and total net assets are yearend values, and data for all other aggregates are December values, scaled by corresponding fourth-quarter gross national product (seasonally adjusted at annual rates).

1985 "norm" is the 1953-80 mean (1959-80 for M2 and M3), plus adjustment for linear time trend in all cases except total nonfinancial debt and M2.

Standard deviations used for computing final column are calculated from 1953-80 data (1959-80 for M2 and M3), with allowance for linear time trend in all cases except total nonfinancial debt and M2.

Detail may not add to total due to rounding.

Source: Board of Governors of the Federal Reserve System, and author's calculations.

all stood at levels that, on a proportional basis, deviated from their respective prior trends by as much as, or more than, the total nonfinancial debt ratio.<sup>5</sup> Because the previous relationships for the monetary base and M1 were less stable, however, these deviations were less dramatic when expressed as multiples of their respective standard deviations. By contrast, the broader money stock measures, M2 and M3, deviated far less from their historical relationships, in comparison to either prior levels or prior volatility.

From the standpoint of potential threats to financial stability, however, what has attracted concern has been increasing indebtedness, and in particular the increasing indebtedness of borrowers in the economy's private sector. In this context, the parallel behavior of some aggregate-level asset holding relationships (but not all) can be reassur-

<sup>5</sup> Total net assets, the measure often emphasized by Kaufman (e.g., Kaufman 1979), is the sum of deposits and credit market instruments held by all nonfinancial sectors, including foreign holders.

ing only to a limited degree. It is crucial also that both the composition and the distribution of the assets held enhance borrowers' ability to service their obligations. Drawing such judgments is simply not possible on the basis of economywide aggregate data alone.

### **Assets and liabilities in the private sector**

Debt liabilities are obligations to pay interest and repay principal at specified times in the future. Even under circumstances in which there is every expectation of refinancing the principal when it is due, by issuing debt borrowers assume the obligation to meet future interest payments. Their ability to do so depends on the incomes they will receive and on the assets they will have available to liquidate if doing so becomes necessary.

In aggregate, the U.S. economy has become more heavily indebted during the 1980s, in relation to both income and assets. The outstanding credit market debt obligations of all nonfinancial borrowers rose from a 1953-80 mean of 1.37 times gross national product as of the end of 1980 to a post-depression record 1.69 times gross national product at the end of 1985 — an increase in indebtedness equal to nearly one-third of a year's income. Gross national product is not necessarily the most precise measure of the aggregate of income flows available to service this debt, of course, but more specifically refined measures of debt service capacity tend to move sufficiently in step with gross national product over time that an increase of this magnitude in the simple debt ratio is surely indicative.

It is always possible, of course, that an economy—or an individual borrower—may incur more debt in relation to income because net worth has also risen in relation to income. In such circumstances incurring additional debt liabilities, even relative to income, merely preserves previously existing balance sheet relationships. In the United States, however, there has been no significant change in the economy's aggregate net worth in relation to income during this period. At the end of 1985, the U.S. economy's consolidated net worth, with reproducible tangible assets measured on a current cost basis and land measured at market value, was \$12.6 trillion, or 3.09 times fourth-quarter gross national product — roughly in line with the approximately 3 to 1 ratio that has prevailed for decades.<sup>6</sup> Hence the extra-

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<sup>6</sup> The standard reference is Goldsmith and Lipsey (1963). The wealth-to-income ratio calculated in this way was 3.09 in 1960, 2.72 in 1965, 2.82 in 1970, 3.03 in 1975 and 3.41 in 1980.

ordinary increase in the nonfinancial debt ratio since 1980 has, in the aggregate, simply represented a higher leveraging of existing economic activity, with greater debt levels in relation to net worth as well as income.

Because the cumulative U.S. current account deficit during 1981-85 was small compared with this increase in indebtedness (and because net debt-equity asset exchanges with foreigners were even smaller) more debt liabilities owed by U.S. borrowers mean more debt assets held by U.S. investors. Hence the economy's aggregate 1985 balance sheet does include more nominally denominated assets to accompany the higher levels of nominally denominated liabilities. Whether or not the resulting higher debt ratio poses the threat of financial instability depends, however, not just on economywide asset and liability aggregates but on the distribution of those assets and liabilities—that is, whether the borrowers who owe the liabilities also hold enough assets, and the right kind of assets, to ensure their ability to service their obligations in the event of an inadequacy in their incomes.

### *Households*

Of the 31.5 percent increase in the U.S. economy's total nonfinancial debt ratio between 1980 and 1985, 7.6 percent consisted of increased indebtedness of households (mostly individuals but also personal trusts and non-profit organizations). Table 3 shows the aggregate U.S. household sector balance sheet broken down into broad categories of assets and liabilities, with holdings of tangible reproducible assets (mostly houses and consumer durables) measured on a current cost basis and both land and corporate equities measured at market value, all scaled in relation to gross national product. Because it is helpful to place the changes that have taken place so far in the 1980s in the context of at least a somewhat longer time span, the table presents comparable data by five-year intervals over the last quarter-century.

The recent growth in household sector liabilities stands out clearly in these data. After only modest variation in their indebtedness relative to gross national product between 1960 and 1975, households sharply increased their debt position in the late 1970s and again in the early 1980s.<sup>7</sup> During the late 1970s, home mortgage borrowing accounted

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<sup>7</sup> The total household sector liability figures shown in Table 3 differ slightly from those shown in Table 1 because of the inclusion of liabilities other than credit market instruments (including security credit, trade credit, and deferred or unpaid life insurance premiums).

**TABLE 3**  
**Balance Sheet of U.S. Household Sector, 1960-85**

	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>	<u>1985</u>
	%	%	%	%	%	%
<b>Total assets</b>	384.6	367.6	356.1	330.3	367.6	374.5
Tangible	119.3	104.7	113.3	119.2	136.0	125.6
Financial	265.4	263.0	242.8	211.1	231.6	248.8
Deposits	46.3	51.5	52.8	56.0	56.9	65.9
Debt market instruments	29.3	23.7	24.4	20.1	18.5	25.0
Equities	77.1	86.8	70.7	38.6	41.7	45.4
Other	112.8	100.9	94.9	96.5	114.5	112.5
<b>Total liabilities</b>	44.5	49.0	48.6	47.4	52.9	60.6
Home mortgages	26.8	29.3	28.1	28.0	33.2	35.8
Consumer credit	12.7	14.1	13.9	13.3	13.2	16.6
Other	5.0	5.6	6.6	6.1	6.6	8.2
<b>Net worth</b>	340.1	318.6	307.5	282.9	314.7	313.9

Notes: Data are yearend values, scaled by corresponding fourth-quarter gross national product (seasonally adjusted at annual rates).

Detail may not add to totals due to rounding.

Source: Board of Governors of the Federal Reserve System

for substantially all of the increased household indebtedness. By contrast, during the early 1980s all forms of household indebtedness rose, including home mortgages and especially consumer credit.

Because households' net worth recovered between 1975 and 1980 and then remained roughly constant between 1980 and 1985, by 1985 households held additional assets at least in pace with their increased liabilities. Indeed, during this ten-year period in which households' liabilities increased in relation to a year's gross national product by one-eighth, households' total assets increased by nearly one-half of a year's gross national product.

The greater part of this increase in asset holdings took highly illiquid forms, however. Rising real estate prices during the late 1970s resulted in major increases in holdings of tangible assets (dominated by houses and land) as well as in equity positions in nonincorporated farms and other businesses (which dominate the "other" financial asset category, along with pension and life insurance reserves). Only under conditions of severe distress are such assets available for sale to service debt. The ten-year combined increase in holdings of deposits, debt market instruments, and corporate equities amounted to only one-fifth of a year's gross national product, more nearly in line with the increase in liabilities.

Moreover, the available evidence suggests that the distribution of these more liquid assets within the household sector hardly matches the distribution of the additional household indebtedness. For example, Table 4 summarizes the respective distributions of consumer credit owed and of liquid and nonliquid financial assets held across various income classes of U.S. households, based on the 1983 Federal Reserve Survey of Consumer Finances. Not surprisingly, the debt distribution does not match the asset distribution. Families with less than \$10,000 in annual income constituted 25 percent of U.S. households in 1983. Among such families, 39 percent owed at least some consumer debt, with mean indebtedness per family (whether borrowing or not) of \$1,178. Of such families, 66 percent owned financial assets, with mean value per family (whether owning or not) of \$2,988. By

**TABLE 4**  
**Distribution of Household Liabilities and Assets, 1983**

<u>Annual Family Income</u>	<u>Consumer Credit</u>	<u>Financial Assets</u>		
		<u>Total</u>	<u>Liquid</u>	<u>Nonliquid</u>
	%	%	%	%
Below \$10,000	8.6	3.1	4.7	1.2
\$10,000 - 19,999	18.4	11.8	17.3	5.4
\$20,000 - 29,999	18.4	12.7	17.4	7.2
\$30,000 - 49,999	26.6	21.3	26.1	15.7
\$50,000 and over	28.0	51.1	34.5	70.5

Source: Author's calculations, based on data in Avery et al. (1984a,b)

contrast, families with \$30,000 or more in annual income constituted 30 percent of U.S. households in 1983. Among these families, 77 percent owed at least some consumer debt, with mean indebtedness per family of \$6,229. Of such families, 99 percent owned financial assets, with mean value per family of \$58,525. Hence, the ratio of mean family financial asset holdings to mean family consumer indebtedness varied from 2.5 to 1 for the lower income group to 9.4 to 1 for the upper income group.<sup>8</sup>

Further, to the extent that much of the limited 1975-85 increase in household ownership of readily marketable financial assets took the form of debt market instruments and corporate equities, rather than deposits, there are yet further reasons for doubt that the household sector's higher aggregate asset-income ratio provides fully satisfactory stability behind its higher debt-income ratio. One reason is simply that asset prices may go down as well as up. For example, more than all of the entire rise in household ownership of corporate equities between 1975 and 1985—not just in relation to income but absolutely—reflected increased equity prices. Throughout the past quarter-century, U.S. households considered directly have, in fact, been net sellers of equity securities. A significant reversal of equity prices would erode household assets, just as the recent market rally has enhanced them.

The other major reason for concern in this regard is that, as the distribution of nonliquid asset holdings reported in Table 4 suggests, ownership of corporate equities and of negotiable debt market instruments is even more skewed toward the upper income groups than is ownership of financial assets in general. For the United States as a whole, only 19 percent of all families owned directly any equities at all as of 1983, and among the one-quarter of families with less than \$10,000 in annual income only 5 percent did so. Further, the top 2 percent of all families (ranked by income) owned 50 percent of all equities, while the top 10 percent of all families owned 72 percent of all equities.<sup>9</sup> Clearly, these assets are not generally available for liquidation, if necessary, to facilitate servicing the liabilities of the typical U.S. household.

Finally, balance sheet relationships like those summarized in Table 3 fully describe debt burdens only if both real and nominal interest

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<sup>8</sup> These figures are computed from data presented in Avery et al. (1984a,b).

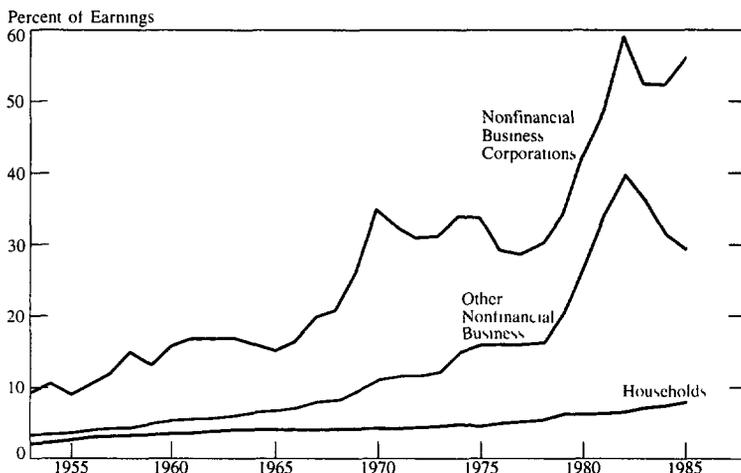
<sup>9</sup> See again Avery et al. (1984a).

rates remain constant over time. When real interest rates rise, the share of income required for pure debt service, in an economic sense, rises even if indebtedness as measured by outstanding debt-income ratios is unchanged. Even when nominal interest rates rise solely because of more rapid expected and realized price inflation, stated interest payments also rise in relation to income, with the increment representing a faster required repayment of principal. As Chart 2 shows, personal interest payments as a share of personal disposable income have risen steadily since the Korean War, from a low of 2.5 percent in 1953 to a high of 8.0 percent in 1985. In light of the sharp rise both in household indebtedness and market interest rates during the 1980s, it is surprising that this increase has been so smooth. The reason presumably lies in the long maturity of home mortgages, which account for the majority of household debt, together with the inflexibility of interest rates on most consumer credit transactions. From the perspective of financial stability, however, the point remains that the share of household income required to avoid debt default has risen substantially.

### *Businesses*

As Table 1 shows, households and businesses have been equally responsible for the post-1980 increase in the U.S. economy's nonfinan-

**CHART 2**  
**Interest Payments as Share of Available Earnings**



cial debt ratio. Especially for corporate businesses, however, the issues involved in the increased indebtedness of the past decade are more straightforward than in the case of households. Unlike households, U.S. business corporations on average have not taken on additional debt to hold greater amounts of liquid or other readily marketable financial assets. Hence questions about whether the distribution of the additional debt matches the distribution of the additional assets do not arise in the case of the corporate sector, because (in comparison to income levels) there are no additional corporate assets. Instead, the U.S. corporate business sector has simply substituted debt for equity financing behind a largely unchanged asset position.

Table 5 presents balance sheet data for the U.S. nonfinancial cor-

**TABLE 5**  
**Balance Sheet of U.S. Nonfarm Corporate Business Sector**  
**1960-85**

	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>	<u>1985</u>
	%	%	%	%	%	%
<b>Total assets</b>	131.6	119.7	126.6	131.6	139.8	132.6
Tangible	96.1	84.3	90.7	98.4	104.9	99.1
Financial	35.4	35.4	35.9	33.2	34.9	33.4
Liquid	10.0	8.6	6.7	7.5	6.9	8.0
Other	25.4	26.7	29.1	25.8	28.0	25.4
<b>Total liabilities</b>	46.6	47.6	52.5	45.9	48.5	53.3
Market debt	30.1	30.3	34.4	32.7	32.1	36.8
Trade debt	12.5	13.4	15.7	10.8	12.6	12.0
Other	4.0	4.0	2.4	2.5	3.8	4.5
<b>Net worth</b>	85.0	72.1	74.0	85.7	91.4	79.2

Notes: Data are yearend values, scaled by corresponding fourth-quarter gross national product (seasonally adjusted at annual rates).

Detail may not add to totals due to rounding.

Data for trade debt reflect a series break in 1974.

Source: Board of Governors of the Federal Reserve System

porate business sector in a form comparable to the household data shown in Table 3. The increase in the corporate sector's credit market debt, from 32.1 percent of gross national product at the end of 1980 to 36.8 percent at the end of 1985, marked the first major departure from the pattern of approximately steady indebtedness in relation to income that had prevailed for the previous two decades.<sup>10</sup>

In sharp contrast to the household sector's accumulation of both financial and tangible assets in pace with its accumulation of debt during the late 1970s and early 1980s, as of the end of 1985 the corporate sector's financial and tangible assets both stood at almost exactly the same point in relation to gross national product as in 1975. Moreover, even within the overall financial asset category, corporate businesses' mix of liquid and nonliquid assets showed essentially no change. Hence there are no additional assets behind the new accumulation of corporate debt, which has resulted simply from debt-for-equity exchanges on the other side of the corporate sector's balance sheet.

These exchanges have largely emerged in the course of a wave of corporate reorganizations that constitutes a major phenomenon worthy of study in its own right. American business corporations have traditionally issued only minimal amounts of new equity securities, relying mostly on internally generated funds to maintain desired debt-equity ratios. During 1960-83, for example, the average net new funding in the equity market (that is, gross new issues less retirements) by nonfinancial business corporations was only \$4 billion per year. By contrast, the series of mergers, acquisitions, leveraged buyouts, and other reorganizations that took place during 1984 and 1985 alone resulted in a two-year net retirement of \$156 billion of equities—an amount equal to approximately 4 percent of a year's gross national product—as firms used borrowed funds to buy their own and other firms' equities.<sup>11</sup>

Hence almost all of the increase in the corporate sector's indebtedness shown in Table 1 can be attributed to the corporate

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<sup>10</sup> The sharp decline shown in trade debt between 1970 and 1975 reflects a 1974 change in data gathering procedures. These liabilities are mostly held within the corporate sector. As of the end of 1985, nonfinancial business corporations' holdings of trade credit amounted to 15.1 percent of gross national product. "Other" corporate sector liabilities include mostly the foreign direct investment position of foreign-owned U.S. firms; the increase during 1980-85 reflects the swollen net foreign capital inflow.

<sup>11</sup> Gross new issues totaled \$43 billion and gross retirements \$199 billion during these two years.

reorganization wave of just the past two years. Whether or not this increase in corporate indebtedness relative to both income and assets will ultimately threaten the financial stability of U.S. business remains to be seen, of course. Rising equity prices approximately neutralized the balance sheet impact of the aggregate debt-for-equity exchange during this period, so that the corporate sector's aggregate debt-equity ratio (with equity measured at market value) rose from 69 percent at the end of 1983 to only 76 percent at the end of 1985—roughly in line with the average 75 percent that prevailed through the 1970s, though well above the corresponding 49 percent in the 1950s and 43 percent in the 1960s. As data presented in the third section of this paper make clear, however, the experience of business debt default during the first half of the 1980s was distinctly more severe than anything that had occurred earlier on since the 1930s.

Whether the level of corporate debt prevailing today raises the prospect of future instability will ultimately depend not on current balance sheet relationships but on whether the cash flows realized by business corporations are sufficiently in line with the expectations underlying this recent borrowing and lending activity. The strong performance of equity prices during 1984-85, despite continuing high real interest rates, suggests that equity market investors also share corporate borrowers' and lenders' favorable expectations of future business cash flows, at least to some degree. Still, as Chart 2 shows, the share of corporate earnings before interest and taxes required to meet corporate interest payments has jumped during the 1980s far beyond even the historically high level of the 1970s, as a result of greater indebtedness at a time of unusually high interest rates.

Among noncorporate businesses, the relationship between changing debt levels and potential financial instability is less straightforward. As Table 1 shows, between 1980 and 1985 the U.S. farm sector actually reduced its indebtedness relative to gross national product. This modestly lower debt level hardly implies a sounder financial basis for U.S. farms, however. Because of declining market prices for agricultural land, the farm sector's aggregate net worth relative to gross national product fell by more than half during the early 1980s—from 30.6 percent of gross national product at the end of 1980 to 14.9 percent at the end of 1985. The current crisis in U.S. agriculture is a striking demonstration of the importance of cash flows and of balance sheet positions in full, rather than just debt levels, in determining borrowers' financial health or problems.

By contrast, borrowing by noncorporate businesses other than farms raised the total U.S. nonfinancial debt ratio almost as much as corporate borrowing during 1980-85, despite a far smaller initial noncorporate debt level. This rise in nonfarm noncorporate business indebtedness, however, was not all that out of line with a general increase in the debt levels of such borrowers that began many years earlier. Moreover, almost all of these businesses' increased debt has been in the form of mortgage financing, and it has taken place against even more substantially enlarged holdings of tangible assets, including mostly land and residential real estate but also some business plant and equipment. As a result, the aggregate net worth of the nonfarm noncorporate business sector, which had risen from 34.3 percent of gross national product in 1975 to 45.2 percent in 1980, increased further to 47.2 percent in 1985 despite the higher 1985 debt level. Much of this activity has reflected efforts, carried out either individually or via partnerships, to exploit various "shelter" provisions of the tax code (including some provisions that will no longer apply under the 1986 tax restructuring legislation).

The chief threat to the financial soundness of noncorporate business borrowers is therefore the possibility of a reversal in the real estate market, such that future rental incomes realized are not consistent with current values, and cash flows become insufficient to service outstanding debts. One potentially significant factor in this context, shown in Chart 2, is that noncorporate business borrowers' interest payments have jumped sharply since 1980 as a share of proprietors' pretax income. Another is that nonfarm noncorporate business holdings of liquid assets have declined steadily during most of the post-World War II period. In 1955, these borrowers' liquid assets modestly exceeded their mortgage debt outstanding (2.7 percent of gross national product versus 2.5 percent), and their financial assets in total exceeded their total outstanding debt (5.3 percent of gross national product versus 4.9 percent). By 1985, while their total indebtedness had risen to 16.8 percent of gross national product (13.9 percent in mortgage form), their holdings of all financial assets had fallen to 2.5 percent of gross national product, and their holdings of liquid assets had fallen to only 0.3 percent. Hence these borrowers' available financial cushion, which could enable timely debt service to continue in the context of reduced or interrupted cash flows, has steadily shrunk.

*State and local governments*

Finally, as Table 1 shows, the remaining 2.9 percent of the 1980-85 increase in the U.S. nonfinancial debt ratio not due to the federal government reflects increased indebtedness of state and local governments. As is clear from Chart 1, this development has represented a sharp reversal of a general pattern of declining relative indebtedness of state and local governments that had prevailed ever since the late 1960s. With changing demographic trends eliminating pressures to expand public school facilities, and more and more localities having completed the major hospital, sewer system, and road projects that were characteristic of the earlier postwar years, the outstanding state-local government debt declined from nearly 15 percent of gross national product in 1970 to less than 11 percent in the early 1980s.

It is readily apparent that more than all of the subsequent increase has reflected a form of financial intermediation by state and local governments. Frequently during the 1980s, state and local governments have issued securities, either to refund in advance their outstanding but as yet non-callable long-term debt or to fund a variety of other programs, and have had funds to invest for the interim. These investments have typically gone into U.S. Government securities.<sup>12</sup> For decades state-local government holdings of U.S. Government securities fluctuated narrowly within a range of 2 to 3 percent of gross national product, and as recently as the end of 1982 their holdings of these securities were still within the historical range. By the end of 1985, however, these holdings had risen to 7.1 percent of gross national product, with much of the increase occurring just within the last few months of 1985—presumably in anticipation of a change in the relevant tax code provisions governing the ability to issue tax-exempt debt. Had state and local governments during 1980-85 merely maintained their holdings of U.S. Government securities unchanged at the yearend 1980 level of 2.6 percent of gross national product, and done nothing else differently, their outstanding indebtedness relative to gross national product would have declined by 1.6 percent instead of rising by 2.9 percent as shown in Table 1.

Because these borrowers have matching portfolios of U.S. Govern-

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<sup>12</sup> The U.S. Treasury issues special non-marketable debt instruments especially for this purpose, with interest rates set so as to minimize arbitrage between the taxable and tax-exempt market rates.

ment securities behind their increased indebtedness, there is presumably no reason why the state-local government contribution to the higher overall U.S. debt ratio carries any negative implications for financial stability.

### *Overview*

In sum, the different categories of private-sector borrowers who collectively issued enough liabilities to add 18.1 percent to the U.S. nonfinancial debt ratio between 1980 and 1985 did so under widely disparate circumstances, with correspondingly differing implications for the U.S. economy's financial stability. Households in aggregate took on more debt but also more assets, including liquid and other readily marketable financial assets. Business corporations in aggregate merely substituted debt for equity, without taking on additional assets of any kind. Noncorporate businesses issued more debt to match their higher values of real estate assets, but further reduced their already thin holdings of liquid assets. State and local governments simply engaged in arbitrage between the taxable and tax-exempt bond markets.

Clearly, whatever threat to financial stability may exist as a result of this mixed experience lies primarily with the prospect that household and business cash flows may fall short of the expectations on which both borrowers and lenders proceeded during this period. Such a shortfall, for the economy in general rather than just in isolated regions or sectors, is most likely in the context of a business recession.

### **Debt defaults, recessions, and monetary policy**

Much of the potential importance of financial instability as a matter of public policy concern stems from the fundamental two-way interrelationship between the financial phenomenon of debtors' distress and contractions in nonfinancial economic activity. On one side, the chief economic danger posed by an overextended debt structure is that the failure of some borrowers to meet their obligations will lead to cash flow inadequacies for their creditors—who may, in turn, also be borrowers, and so on—and that both borrowers and creditors facing insufficient cash flows will then be forced to curtail their demands in the economy's product and factor markets. Similarly, forced disposal of assets by debtors and others facing insufficient cash flows will lead to declines in asset prices that erode the ability of other asset owners to realize the expected value of their assets if sale becomes necessary and will therefore threaten the solvency (in a balance sheet sense)

of still others. This causal process, running from financial constraint to nonfinancial contraction, has long been familiar in the analysis of business downturns.<sup>13</sup> Indeed, it is implicit in essentially all models of quantity-constrained effective aggregate demand, even those that exclude an explicit representation of the credit market.<sup>14</sup>

At the same time, the likelihood that an aggregate-level problem of debtors' distress will arise in the first place is clearly not independent of what is happening in the nonfinancial economy. Apart from occasional instances of recklessness, incompetence, or fraud, most borrowers typically expect to be able to service their debts in a timely fashion. In other words, they expect that their available cash flows—and, if necessary, the value of their salable assets—will be sufficient to meet the requisite sequence of payments due. For most borrowers, however, including individuals as well as businesses, both the size of cash flows and the value of marketable assets depend to a great extent on prosperity or recession in the economy at large. In particular, business downturns typically shrink the cash flows of many borrowers, slow cash flow growth for most others, and in many cases also reduce the market values of equities, houses, and other assets.

Hence problems of financial instability are most likely to erupt in the context of just the kind of nonfinancial economic difficulty that they tend to aggravate. Limitations on individuals' and businesses' activities arising from widespread financial distress restrict economywide demands for goods and services and for labor and capital inputs, and thereby depress overall economic activity. At the same time, a contraction of economic activity is the most likely initial cause of widespread debtors' distress in the first place.

Table 6 presents data illustrating this cyclical feature of the emergence of financial distress among both individual and business borrowers in the United States. The percentage of consumer debt in delinquency is typically greater at or near the trough of business reces-

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<sup>13</sup> The basic idea has long been emphasized by Minsky. See, for example, Minsky (1964, 1972, 1977). The classic applications to a specific historical event are Fisher's (1933) and Hart's (1938) analyses of the depression of the 1930s; Bernanke's (1983) analysis is more recent but in the same vein. For roughly analogous applications of the same idea to describe postwar recessions, see Wojnilower (1980) and Eckstein and Sinai (1986).

<sup>14</sup> For example, Clower's (1965) model of income-constrained households reducing their effective demand for consumer goods would make little sense if households were able to borrow without restriction to make up for income shortfalls. The same is true for Patinkin's (1949) model of sales-constrained firms reducing their effective demand for labor.

**TABLE 6**  
**Debt Default in Post-War Business Recessions**

	<u>Delinquent Consumer Installment Loans (percent of outstandings)</u>	<u>Number of Business Failures (per 10,000 concerns)</u>	<u>Liabilities in Business Failures (percent of GNP)</u>
Mean for 1953-80	1.91	44	.16
Recessions during 1953-80			
1954	1.89	42	.12
1958	1.67	56	.16
1961	1.78	64	.20
1970	1.84	44	.19
1975	2.61	43	.27
1980	2.61	42	.17
Experience since 1980			
1981	2.38	61	.23
1982	2.24	88	.49
1983	2.01	110	.47
1984	1.96	116	.46
1985	2.31	123	.54

Notes: Delinquent consumer loans are loans in arrears more than 30 days.

Business failures comprise concerns involved in court proceedings or voluntary actions involving loss to creditors.

Liabilities in business failures exclude long-term, publicly-held securities.

Data for number of business failures and liabilities in business failures are adjusted for series breaks after 1983.

Sources: American Bankers Association, Dun & Bradstreet, U.S. Department of Commerce

sions than at other times. Similarly, both the business failure rate and the total amount of defaulted liabilities in business failures (scaled in relation to gross national product) bulge during and just after business cycle troughs. Especially for business debt problems, the data shown in Table 6 make clear the extraordinary character of the economy's experience in this regard during the first half of the 1980s. In 1981-83, both the business failure rate and the failed business

liability rate rose to levels far beyond those seen in any other recession since World War II, and both indicators of business financial distress continued to rise in 1984-1985 despite the economy's renewed expansion.<sup>15</sup>

Whatever threat to financial stability the post-1980 rise in the U.S. economy's debt ratio presents, for any period into the future, is therefore fundamentally dependent on the nonfinancial performance of the economy during that period. For example, if the economy were henceforth to achieve a decade of sustained rapid growth, with only minimal interruptions, then it is plausible that whatever debt service problems emerged would be localized within specific industries, like energy and agriculture in the mid-1980s, or within specific geographical regions especially dependent on those industries. In that case, there would be little reason to expect the kind of widespread borrowers' distress that would be likely to exert substantial contractionary pressures on nonfinancial economic activity. With sustained rapid growth of incomes and profits, most borrowers would realize cash flows (and market values of assets) adequate to meet their obligations. Indeed, a sufficient period of sustained rapid economic growth could readily shrink the economy's overall debt ratio back to its historical range, not by reducing the numerator but by enlarging the denominator.

By contrast, given the strongly cyclical pattern of debtors' distress in the past, the historically high levels of individual and business indebtedness outstanding as of the midpoint of the 1980s suggest that the onset of a major new business recession under these circumstances could easily lead to debt service problems of a kind that would, in turn, further magnify the initial contractionary movement in nonfinancial economic activity. As of the end of 1985, both individuals and businesses were more highly leveraged, relative to income levels, than at any time since World War II. Moreover, as the data shown in Table 5 make clear, the corporate business sector in particular had no greater asset position, in either liquid or any other form, to support its greater debt-to-income position. In the event of a recession causing reduced incomes and depressed asset values generally—that is, a recession typical of those that the United States has experienced during the

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<sup>15</sup> The experience of the early 1980s did not match that of the early 1930s, however. In 1932 there were 154 business failures per 10,000 listed concerns, and total liabilities in business failures equaled 1.59 percent of gross national product. The business failure data for 1984 and 1985, including both the failure rate and the failed liabilities rate, are adjusted to reflect breaks in the relevant series after 1983.

postwar period—the possibility of financial instability that would compound an already deteriorating economic situation is entirely plausible.

Two principal implications follow from this conclusion. First, in the event of a business contraction initiated by some entirely external factor—for example, an international cartel action comparable to the oil price increases imposed by OPEC in 1973 and again in 1979—the U.S. economy would exhibit less resilience, and correspondingly more proclivity to contractionary dynamics, because of the greater potential for financial instability. Second, to the extent that U.S. policymakers are aware of this potential instability, and that they can and do exert influence over the path of aggregate economic activity, the onset of a major business recession is itself less likely. Given the important role of monetary policy in bringing about (or at least not resisting) each of the most significant postwar U.S. recessions, this implication for the likely future behavior of monetary policymakers is probably the more important of the two.

Hence the main point is that, because of the increased likelihood of debtors' distress in the event of an economic downturn, the Federal Reserve System is likely to be less willing either to seek or to permit a business recession in the United States. At the relevant margin of policy choice, U.S. monetary policymakers are likely to perceive the real costs of a business recession—in terms of foregone output, incomes, jobs, capital formation, and so on—as greater than would be the case without the higher levels of individual and business indebtedness. On average over an extended period, therefore, U.S. monetary policy is likely to be more expansionary than it would be in the absence of a higher debt ratio.

In light of the key role historically played by periodic episodes of tight monetary policy in either arresting or reducing price inflation, both in the United States and elsewhere, this likelihood of a bias toward more expansionary monetary policy on average, due to a greater reluctance to tolerate business contractions, raises the prospect of inflation as the ultimate chief consequence of the higher U.S. debt ratio. In the United States, for example, the historical record makes clear that the restrictive monetary policy that figured so importantly in the major recessions of 1957-58, 1973-75, and 1981-82 (the three largest recessions of the postwar period) in each case arose largely out of Federal Reserve policymakers' desire to slow the then prevailing rate of price inflation. In each case, the recession did accomplish just that end. Although it is theoretically possible to achieve both price stability

and steady economic growth, without the occasional punctuation of business contractions, nothing in the postwar U.S. experience suggests that doing so is practically feasible. Instead, this experience suggests that if a higher debt ratio raises the cost of business contractions, and hence makes policymakers less likely to accept them, it therefore also imparts an inflationary bias.<sup>16</sup>

In time, of course, a sufficient amount of price inflation can also restore the debt ratio to its historical range, just as could sustained real growth. These two outcomes are analytically parallel, and hardly incompatible. Since almost all debts outstanding in the United States are nominally denominated, what matters for borrowers' ability to meet their obligations is nominal cash flows, and nominal values of marketable assets. These nominal values may rise because of increases in either their real or their price component, or both. Either, in sufficient magnitude, would preclude the kind of widespread debt service problems that can threaten financial stability. Which is more likely is a question of achievable economic performance, presumably to be judged on the basis of both past experience and future economic policies.

### **Concluding comments**

The U.S. economy's nonfinancial debt ratio has risen since 1980 to a level that is extraordinary in comparison with prior historical experience. Approximately one-half of this rise has consisted of increased indebtedness (relative to income) of borrowers in the economy's private sector, including both individuals and businesses. It therefore at least potentially represents an increase in the economywide exposure to debt default. The U.S. household sector as a whole has increased its holdings of liquid and other readily marketable assets, so that in the aggregate its balance sheet is no less sound than before, but available data make it doubtful that the distribution of the additional assets matches the distribution of the additional debt close enough to avoid debt service problems in the event of a general economic contraction. By contrast, in the case of businesses, including especially the corporate sector, there are no additional assets to match the additional liabilities, so that balance sheets as well as incomes have become more leveraged.

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<sup>16</sup> This conclusion is also consistent with the implication of formal models of monetary policy based on reputational equilibrium, like that of Barro and Gordon (1983).

The chief implication of this increased exposure to the threat of financial instability is not only that the U.S. economy is likely to be more prone to financial instability in the event of a major business contraction, but also—and perhaps more important—that, as a result, U.S. economic policymakers are likely to be more reluctant either to seek or to tolerate a business recession in the first place. Experience suggests that it will be difficult to balance the desire to avoid economic downturns with the ability to avoid occasional periods of aggregate excess demand, so that this increased reluctance to tolerate recessions probably implies a more expansionary monetary policy on average than would otherwise be the case. Experience also suggests that a plausible result of such a no-recession monetary policy, sustained over time, is price inflation. This process is self-limiting, however, in that over time inflation reduces the real value of the private sector's outstanding nominal indebtedness, hence reducing the risk of financial instability and thereby removing the source of policymakers' increased reluctance to tolerate recessions.

Finally, what about the nearly one-half of the post-1980 rise in the U.S. economy's nonfinancial debt ratio that has consisted of increased indebtedness of the federal government? The steady, unbroken growth of the U.S. Government's outstanding debt from 26.1 percent of gross national product at the end of 1980 to 39.4 percent at the end of 1985—despite a major business expansion during 1983-85—is clearly the element of the overall debt ratio rise that is most out of character with prior U.S. historical experience, not just since World War II but throughout the nation's existence. Until the 1980s, significant sustained increases in federal government debt relative to gross national product took place only during wartime. The contrary pattern during this decade stands as the hallmark of post-1980 fiscal policy.

What are the implications of this extraordinary surge of government indebtedness for the economy's financial stability? Despite fears now expressed more frequently than in earlier years, there remains little prospect of a government debt default. To be sure, any fiscal policy involving so large a government deficit as to cause the outstanding government debt to rise faster than the economy grows, even under conditions of full employment, cannot be sustained indefinitely.<sup>17</sup> Nevertheless, with the federal debt ratio still fairly low compared

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<sup>17</sup> See Tobin (1986) for an analysis of this kind of long-run instability in the context of U.S. fiscal policy since 1980.

with 117.9 percent at the end of World War II, or even 46.1 percent in 1960, there is as yet no reason to anticipate instability involving government debt default.

Instead, the chief threat to financial stability implied by the sharp post-1980 rise in the government debt ratio comes from the need to raise taxes—and hence to reduce the incomes that individuals and businesses have available to meet their own debt service obligations—in order to service the government's debt. Net interest payments by the federal government, which averaged 1.4 percent of gross national product during the 1970s, rose to 3.2 percent in 1985. Moreover, there is little reason to believe that the distribution of these interest payments among individual and business recipients in any way matches either the reduction of incomes by tax collections or the distribution of private-sector debt service payments owed. Continuing increases in government interest payments relative to aggregate income are not likely to lead to a government debt default, but unless they are balanced by reductions in noninterest government spending they will, on balance, further reduce the ability of private-sector borrowers to meet their own obligations.

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## Commentary on “Increasing Indebtedness and Financial Stability in the United States”

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*Allan H. Meltzer*

Benjamin Friedman’s paper considers some recently popular questions among regulators and some parts of the financial community. When measured against some appropriate benchmark, is the aggregate debt in the United States rising too fast? Does the recent growth of debt pose a problem for monetary policy? What could, or should, be done?

Friedman concludes that there are some problems or, at least, some reasons for concern particularly in the corporate sector. Corporations are more highly leveraged and, therefore, he believes there is increased risk of default. Households have more assets as well as more debt, but he suggests, the debt has longer duration than the assets, so there is increased risk of default or debt restructuring for households also. Since defaults are procyclical, Friedman is concerned that the Federal Reserve may have to be more cautious. They may be required to avoid the sudden shifts in policy for which they are famous, or perhaps infamous. And policy may be more inflationary both to avoid recessions and to reduce the real value of outstanding debt. Friedman does not consider that inflationary policy might encourage what it did seek to discourage. Neither does he consider the benefits of failure and default.

### **Some general comments**

Before turning to some of the data that Friedman has brought together, I want to make three general comments about the problem. First, I believe that interest in this issue has been heightened because of some largely incorrect and unfounded remarks by Federal Reserve Chairman Paul Volcker, Federal Reserve Bank of New York Presi-

dent E. Gerald Corrigan, and some members of Congress. Second, I believe the risk to financial stability posed by the problem Friedman discusses is small relative to the problem posed by the international debt of some less developed countries or the problems of the Federal Savings and Loan Insurance Corporation and its clients, or the recent effort to depreciate the dollar. Third, I find little information in debt-to-income measures or debt-to-asset measures of the kind Friedman uses. I develop each of these points briefly.

Chairman Volcker and President Corrigan made the mistake of comparing new issues of debt to retirements of equity, the latter resulting from leveraged buyouts, mergers, acquisitions and, most of all, from the increased use of credit markets in place of banking markets. Their error was to neglect the increase in the market value of the assets acquired by issuing debt. Friedman's data are as free of this error as currently available data can make them. From his Table 5, we can compute the debt-to-net worth and debt-to-asset ratios for the years available. These data show that the debt-to-net worth ratio at the end of 1985 is lower than the comparable ratio in 1970 and not much higher than in 1965. The debt-to-asset ratio for 1985 is below the 1965 and 1970 ratios. The data are shown in Table 1. My conclusion is that Friedman's data show no evidence that corporate debt levels are high relative to available measures of corporate assets. The contrary view is based on the choice of 1980 as the base for comparison. This is an inappropriate choice since 1980 is near the end of a period of high inflation. Parenthetically, I may note that the Federal Reserve's recent policy of restricting debt issues and leverage finds no support in the data.

**TABLE 1**  
**Debt Ratios, 1960-85**

	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>	<u>1985</u>
Debt/net worth (in percent)	54.8	66.0	70.7	53.7	53.1	67.3
Debt/total assets (in percent)	35.4	40.8	41.3	34.8	34.7	40.2

Source: Benjamin Friedman's Table 5

The Federal Reserve and the government encourage banks to increase lending to less developed countries, especially to countries with recent debt servicing problems. At the end of 1985, all developing countries owed about \$850 to \$875 billion, and their debt was rising at a rate of 4 to 5 percent per year.<sup>1</sup> United States banks owned nearly 25 percent of this debt and 20 percent of the \$500 billion debt of countries with recent rescheduling problems. Last winter, I calculated that for a country like Mexico to be able to return to the financial market by 1990 without special assistance, exports would have to grow at a compound rate of 11 percent per annum. This is considerably faster growth than Mexico has achieved for any sustained period. These calculations were made when the market predicted that oil prices would fall by \$4, not \$14, this year. Compared with the possible losses on Mexico debt—not to dwell on Nigeria or Peru or the farm debt or the thrift associations—the problem Friedman addresses is low on my worry list.

Debt ratios are ambiguous. A high or rising ratio of aggregate debt to aggregate income or of business debt to business income may be the sign of either profligacy or perceived opportunity. The country may be on a spending spree, marked by high consumption and riotous living. Or, it may experience a surge of investment to take advantage of returns that, to the borrowers, appear well in excess of the cost of borrowing. Even national governments may borrow to finance productive investments in infrastructure or in capital, although this is not the common pattern in the United States. What matters for countries, as for firms and households, is the use of resources whose accumulation is financed by debt. When we turn to the data on allocation, we get a different perspective. These data show that currently the share of gross national product (GNP) used for nonresidential investment and personal consumption are near the highest values reached in the years 1951-86. For consumption, the peak is 65.6 in 1983, and the preliminary value for the first half of 1986 is 65.2. The range is small, however; the lowest value is 61.6 in 1974. For nonresidential investment, the 35-year range is 9.0 to 12.1 percent. For the first half of 1986, the preliminary data show that the United States continues to invest in productive assets at a rate that is above

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<sup>1</sup> Data in this paragraph are from A. H. Meltzer, "International Debt Problems," *Contemporary Policy Issues*, forthcoming.

the average for the postwar period. Investment is not rising rapidly, but neither is GNP. The investment share remains moderately high.

### **A more serious problem**

A more serious problem, in my view, is that when we add up all the spending shares, their sum is more than 100 percent. The reason is that U.S. spending exceeds production by almost 2.5 percent. We run a net export deficit and borrow from the rest of the world to maintain our spending. Each addition to our foreign borrowing carries an obligation to pay interest, so the longer we delay closing the gap between production and spending, the more we will owe foreigners and the larger the amount by which our future production must exceed our future spending. Eventually, we will have to close not just the deficit in net exports but the current account deficit. Our net interest payment to foreigners are part of that deficit, and they are rising at a rapid rate.

Unless our investments in nonresidential capital are extremely productive, we face a sizeable decline in living standards. This may be brought about by further depreciation of the currency, by restricting imports, by extending government sponsored cartels from steel, autos, textiles, microchips and food to additional products, by taxing ourselves to subsidize exports, or most likely by some combination of these policies. The temptation to inflate away some of the debt accumulated by those foreigners who persist in selling us better quality products at lower prices seems to me much more of a threat to future stability than the problem Friedman discusses. The Federal Reserve and the Treasury seem eager to depreciate the currency and to inflate, not to reduce corporate debt but to reduce real consumption and the dollar-denominated debt held abroad.

While I am cataloguing prospective problems, let me add the risks that trade frictions and protection pose to the system of political and military alliances that have maintained a considerable degree of international stability in the postwar years. Can these alliances be expected to retain their present structure if there is a substantial decline in the relative and absolute wealth and income position of the United States? Can they survive the reduction in trade that may follow protection and retaliation? I do not know the answers, and I doubt that they are known. I mention them to indicate that, if one is inclined to worry about debt, there are more worrisome problems than those discussed in the paper.

### **A possible benefit**

One of Friedman's concerns is that higher risk of private default may make the Federal Reserve less willing to risk a recession than in the past. He suggests that this may lead to higher future inflation. I share his concern that inflation will return, but I do not accept his argument. His conclusion does not follow.

Japanese firms have much higher debt-to-output ratios than U.S. firms, and the same is true of large German corporations. Yet both countries have lower average rates of inflation, and Japan has substantially less variability of output. Japan is the only major country that did not have a recession during the 1980s. In fact, Japan's growth rate of real output remained between 3 percent and 5 percent annually for nearly a decade. Yet Japan was able to reduce measured inflation from 20 percent to approximately zero during this period.

Japan's corporations have debt-to-sales ratios of about 100 percent. Public debt is now 42 percent of GNP.<sup>2</sup> Goldsmith (1983) shows that the ratio of loans and debts to GNP rose throughout the postwar years, from 0.9 in 1955 to 1.9 in 1977. These numbers are as large, or larger, than comparable data for the United States, and I believe Japan's debt-to-GNP ratio has increased since Goldsmith wrote.

The Bank of Japan announces monetary objectives and comes close to achieving them. If larger debt ratios induce the Federal Reserve to do the same, we should welcome them. A more disciplined approach to policy—monetary and fiscal—with closer correspondence between promise and performance and fewer surprises would be a welcome improvement.

### **Why more debt?**

Friedman does not give any reason for the rise in the debt ratios. I would like to close by suggesting three—taxes, anticipated inflation, and for households, changing age composition.<sup>3</sup>

Miller (1977) showed that high corporate tax rates encourage the use of debt as a means of reducing the cost of capital. This use of

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<sup>2</sup> The data are from (1) The 116th Tankan, Short-Term Economic Survey of Japan, Research and Statistics Department, Bank of Japan, (2) Japan 1985, Keizai Koho Center, Tokyo, and (3) Goldsmith (1983, p. 216).

<sup>3</sup> Friedman suggests that inflation may come, but he does not suggest that borrowing is done in anticipation of inflation.

debt is in the interest of stockholders and should be welcome. The proper policy response, if debt is to be controlled, would seem to be elimination, or substantial further reduction, in the corporate tax rate to reduce the gains from leverage.

Anticipated inflation is an obvious reason for going into debt. Was it an accident that corporations increased debt relative to GNP and to their net worth in the late 1960s, when inflation was low? Or, did the stockholders benefit from farsighted managers' decisions to bet against continued low inflation? Are managers placing their bets now on higher inflation? The fact that debt ratios were low in 1980, the base Friedman uses for many of his computations, probably reflects, in considerable measure, the previous inflation.

For households, age composition plays a role. Life cycle theory implies that households accumulate debt in early years, save from the middle years to retirement, then dissave. As an approximate life-cycle measure, I computed the ratio of dissavers to savers by taking population aged 20 to 24 and aged 65 and over as net dissavers and the population 45 to 64 as net savers. Table 2 compares liabilities to net worth, computed from Friedman's Table 3, to the ratio of dissavers to savers. Tax rates and anticipated inflation should affect the relation. These effects are ignored. Nevertheless, for the 25 years shown in the table, the debt to equity (liabilities-to-net worth) ratio rose by 48 percent. The ratio of dissavers to savers rose by 44 percent. The comparison suggests that the household ratio may reflect life-cycle considerations that will continue as the population ages and the proportion of dissavers rise.

**TABLE 2**  
**Household Debt Ratio and Proportion of Dissavers**

	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>	<u>1985</u>
Household liabilities/ net worth (in percent)	13.1	15.4	15.8	16.8	16.8	19.3
Dissavers/savers (in percent)	76.8	82.7	88.8	96.4	106.4	110.7

Source: Benjamin Friedman's Table 3

In sum, I think there are many more serious problems than the problems addressed in the paper and, I suspect, Friedman may agree with this. The best way to avoid problems of excessive leverage in the future is to allow market discipline to work. It should not be surprising that borrowers and lenders accept more leverage when government prevents failures at Lockheed, Chrysler, the Continental Illinois holding company and a long list of others. And the best way to control inflation is not by worrying about leverage and debt but by adhering to stable, noninflationary money growth.

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## International Debt and Economic Instability

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*Rudiger Dornbusch*

The debt experience of the 1920s and 1930s was one of pervasive default. Half the outstanding Latin American debt was completely in default by 1949, and nearly half was serviced on an adjusted basis, having been written down as to principal and interest. Only a tiny 1.9 percent continued to be serviced on the terms originally contracted. By comparison, today's debt performance is dramatically successful.<sup>1</sup> A great historical experiment is now underway in which involuntary debt service is being extracted at extraordinary costs to the debtors and to the trading interests of the creditor countries. The essential instruments are two: a return of government involvement in private debt collection that had gone out of fashion after nineteenth century gunboat diplomacy and the International Monetary Fund (IMF) as the administrator of the mugging.

Even with this help, debt collection is not totally successful. The Baker plan turned out to be primarily a cover for commercial banks to reduce their share in debt rescheduling, leaving the bag to multilateral agencies with no net benefit to the debtors. Today lesser developed country (LDC) debts trade at deep discounts, suggesting that not all is well. The recommendations for action go in three directions. The Bradley-Lever approach is to recognize the problem, treat debts as a political issue, and strike a bargain that enhances growth and trade. Improved LDC growth performance would be a positive

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<sup>1</sup> On the history of sovereign debts see Lipson (1985), Edelstein (1982), Rippy (1959), Landes (1979), Feis (1965), Mintz (1951), Lewis (1948), Maddison (1985), McGrane (1935), Royal Institute (1937) and Winkler (1933). A particularly important and controversial treatment is given by Eichengreen and Portes (1985).

benefit and a partial offset to concessions granted under the bargain, but there would also definitely be an increase in the quality of debts outstanding.<sup>2</sup> The banks' position, advocated most skillfully by Cline (1986), is to pretend all is well. The position is to hold out for the mystical day of a return to voluntary lending or, more pragmatically, for a bailout by taxpayers. A third approach is to focus on a more or less unconditional reduction in interest rates applicable to reschedulings, perhaps to the level of Libor. Other possibilities include gearing debt service to export prices or export revenues. These are the possibilities that debtor countries tend to think of as they enter rescheduling negotiations and before disillusionment is visited upon them.

It is clear that the LDC debts can be kept going for another year, or even several years if enough rescue ingenuity and pressure is applied. But the costs of avoiding a solution are mounting for the debtor countries, the creditors' trade and employment, and the creditors' foreign policy interests. The debt problem in its trade implications is certainly one element in the growing U.S. protectionist sentiment. This is now being more widely recognized and hence a welcome debate on realistic options is finally emerging. This paper reviews where the debt problem stands, how it relates to the macroeconomics and growth problems in Latin America, and what reasonable solutions might look like.

### **The debt problem**

We start in this section with a brief review of facts about the debt. What is their size, what part is owed to banks and what part to other creditors, and when were the debts incurred? The next question is where the debt crisis came from. Finally, we look at the broad facts of the adjustment process over the post-1982 period. The year 1982 serves as a benchmark since in August of that year the first country, Mexico, declared that debts could not be serviced on the contracted schedule. Credit rationing set in immediately, and in short order a long list of countries had to reschedule their debts.<sup>3</sup>

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<sup>2</sup> See Lever and Huhne (1986) and Bradley (1986).

<sup>3</sup> See Simonsen (1985) and Cline (1985).

*Debt facts*

Table 1 shows the value of external debts in current and constant dollars as well as debt-GDP ratios. The table brings out the large increase in debt in two stages. Between 1978 and 1982 debts increased due a combination of poor domestic macroeconomic policies and an increasingly adverse world economy. In 1982-85, domestic policies were geared toward adjustment, but the world economy was insufficiently accommodating to help reduce debt burdens.

Since 1982 total debt has continued to increase, even more in constant dollars than in current dollars. Table 2 follows up with the composition of debts and new borrowing by creditor. It highlights the changing role of private creditors before and after the debt crisis.

**TABLE 1**  
**External Debt and Debt-GDP Ratios:**  
**Capital Importing LDCs**

	<u>1978</u>	<u>1982</u>	<u>1985</u>
Debt in current dollars (billions)	399	752	888
Debt in constant dollars*	590	752	978
Debt/GDP Ratio (per cent)	25.6	33.2	38.1

\*Deflated by the world unit import value index, 1980=100.

Source: IMF *World Economic Outlook*, April 1986

**TABLE 2**  
**LDC Debts to and New Borrowing**  
**from Private Creditors**  
**(Percent of Total)**

	<u>1978</u>	<u>1982</u>	<u>1985</u>
<b>Debt</b>			
All LDCs	34.7	34.9	41.7
Major Latin debtors	67.0	75.6	72.8
<b>New Borrowing</b>			
All LDCs	71.2	51.5	37.6
Major Latin debtors	92.1	66.5	-13.3

Source: IMF and Morgan Guaranty

The interesting feature of this table is the difference in the participation of private creditors in the total of debt and in new borrowing. Beginning in 1982 and beyond, the share of financing from private creditors, specifically banks, drops sharply below their share in the total debt. This is, of course, particularly striking in the case of the major Latin debtors where in 1985 private creditors reduced their exposure absolutely while public money financed the small remaining borrowing requirement.

### *The origins of the debt crisis*

The domestic policies leading up to the debt crises involved in many instances overvalued exchange rates and inappropriate liberalization of the trade or capital account. The resulting speculative flight into goods or foreign assets was of an extraordinary magnitude. The World Bank estimates that, between 1979 and 1982, capital flight from the main Latin American countries amounted to more than \$70 billion.<sup>4</sup> Other estimates place the number even higher.<sup>5</sup>

The deterioration of the world economy certainly played a critical role. Table 3 shows the key variables: interest rates, inflation in world trade, and the growth of industrial countries. Where 1970-73 had been a debtors' period, with negative real interest rates and strong growth, the 1980-82 period was the reverse.

A balanced view therefore attributes major importance both to domestic mismanagement and to the deterioration in the world economy. Wiesner (1984, p. 19) offers a different interpretation:

“No other set of factors explains more of the debt crisis than the fiscal deficits incurred by most of the major countries in Latin America. Although there were other factors which were relevant, I have no doubt that the main problem was excessive public (and private) spending that was financed by both easy domestic credit policies and by ample resources from abroad. The world recession and high real rates of interest in international markets aggravated the crisis, but I do not believe they created it.”

This is a quite extreme position that may apply to an isolated instance, but certainly not to debtors across the board. Exceptions to the assessment offered by Wiesner readily come to mind, Chile being the leading example of a country that ran into deep debt problems without a budget problem to start with.

<sup>4</sup> See World Bank (1985), p. 64.

<sup>5</sup> For a case study of the sources of increased indebtedness in 1978-82 see Dornbusch (1985a,b) and Dornbusch and Fischer (1985) and the discussion in Fishlow (1985, 1986).

**TABLE 3**  
**Key Macroeconomic Variables of the World Economy**  
**(Average Annual Percentage Rates)**

	<u>LIBOR</u>	<u>Inflation</u>		<u>OECD Growth</u>
		<u>Manufactures</u>	<u>Commodities</u>	
1970-73	7.6	12.4	14.4	4.5
1980-82	14.7	-2.4	-13.3	0.7
1983-85	9.7	-2.0	-0.5	3.4

Source: IMF

### *Expectations and adjustment*

The reaction to the debt crisis in late 1982 and early 1983 was to develop rescue packages and create an accompanying frame of mind. The frame of mind consisted of two essential premises. First, that debt problems were problems of liquidity, not solvency. Accordingly, the recovery of the world economy from deep recession, accompanied by falling interest rates and a declining dollar, would help bring debtor countries back into the black.

A particular point was made that much of the adjustment would come as a result of terms of trade improvements. These were expected as part of the regular pattern of business cycle recovery. The expected dollar decline also was thought to help improve the terms of trade. To the extent that creditworthiness would be reestablished by terms of trade improvements rather than cuts in absorption, the adjustment would be particularly easy.

The second premise was that a return to voluntary lending was to be expected once debt ratios had been worked down to more acceptable levels. But such a return to voluntary lending could only be expected if debtor countries faithfully stood by their commitments, making utmost efforts to reestablish and demonstrate their creditworthiness. A rescheduling without new money, in this perspective would be interpreted as a particularly good show.

The facts on the adjustment were, of course, quite different. The noninterest external balance improved sharply under the impact of budget tightening, tight money, and real depreciation. Noninterest

surpluses soon earned the foreign exchange to cover the major part of interest payments. But the domestic counterpart was a sharp drop in per capita income, a significant increase in inflation, and a precipitous decline in investment.

Table 4 shows the data for Latin America to highlight just how the debt service was accomplished.

The current account surplus can be split into two components, the noninterest surplus plus interest payments. External debt increases when interest payments are not offset by a sufficiently large noninterest surplus. There was a noninterest deficit in 1977-82. Thus, debts increased to finance the noninterest deficit, to finance interest payments, and to finance the flight of capital. In the 1983-85 period, as a result of the adjustment programs, the noninterest deficit turned around to a large surplus, 5 percent of GDP. Moreover, the noninterest surplus was almost equal to the interest payments due. Thus, requirements for new money to finance interest payments were small. Chart 1 highlights the extraordinary size of the adjustment that has taken place.

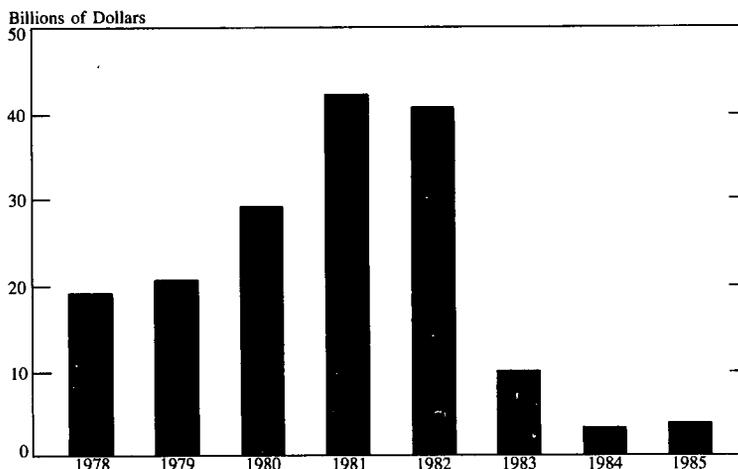
The last row of Table 4 highlights a striking fact: interest is being paid not out of improved terms of trade but by a cut in investment. The decline in net investment matches almost exactly the increased interest payments. Net investment has fallen to half its previous level and is now extremely low. These low investment numbers must be interpreted in the light of economies where labor force growth is 3-4 percent. They imply a growing discrepancy between labor supply and

**TABLE 4**  
**Latin America's Adjustment to the Debt Crisis**  
**(Percent of GDP)**

	<u>1977-82</u>	<u>1983-85</u>
External debt	34.3	47.2
Interest payments	3.2	5.6
Noninterest surplus	-0.8	4.7
Net investment	11.3	5.5

Source: IMF

**CHART 1**  
**Current Account Deficits**  
**Western Hemisphere LDCs**



SOURCE: World Economic Outlook (IMF)

jobs. It is also important to recognize that the areawide average conceals extreme variations. In some countries, notably in Argentina, net investment actually has been zero or even negative.

The fact that interest payments were financed by a cut in investment does not mean that output or consumption remained untouched. Against a per capita income growth in 1968-77 of 3.6 percent, per capita growth in 1981-85 fell to -1 percent per year.

*The transfer problem*

We dig a bit deeper to find out why debt service now appears to be such a major problem. In one sense, the answer is quite straightforward: countries that used to spend, borrowing the resources from official and private creditors with little thought of how to service or even less repay the loans, now no longer command these resources. They are limited to spending only their income, and that proves to be very little. The adjustment is complicated by two facts: the macroeconomics of earning foreign exchange and the political economy problem of finding extra budget resources for debt service. These issues are well-familiar from the discussion about German reparation payments following World War I. Exactly the same issues arise

in the context of the involuntary debt service now underway.

*The reduction in spending.* The first issue is how a country adjusts to a reduction in its spendable resources. Before the debt crisis, foreign loans supplemented domestic income, enlarging the resources that could be spent. Interest payments on loans were automatically provided in the form of new money and the principal of debts was automatically rolled over. With so much facility in managing the debt and with ready access to resources beyond what was required to service the debt, spending ran high. After the credit rationing of 1982 set in, spending had to be limited almost to the level of income with most interest payments now earned by noninterest surpluses.

But there remained the issue of how to distribute the cut in spending between the various components: government, consumption, and investment. As we saw above, a large part of the cut took the form of reduced investment. But there was, of course, also a decline in consumption. The reason that a fall in investment was not enough has to do with two special features of the adjustment process. First, cutting total demand has macroeconomic multiplier effects that translate into a reduction in output, income, and hence private spending. Second, at the same time that involuntary debt service started there also occurred a deterioration in the world economy that required an extra adjustment in spending.

*The foreign exchange problem.* The second macroeconomic issue in adjusting to debt regards the fact that the country needs to earn dollars, not pesos. In other words, it needs to generate a trade surplus. The cut in spending will, of course, reduce import demand and also free exportables for sale abroad, but that will not be enough for two reasons. First, a sizeable fraction of the expenditure cut will fall on domestic or nontraded goods, not tradeables. The spending cut thus creates directly unemployment rather than potential foreign exchange earnings. Even for goods that are directly tradeable, it is not necessarily the case that increased supplies can be sold. Often a market access issue is present or, if the goods are not homogeneous commodities like cotton or copper, a cut in their price is required to realize increased sales. Even then, unless demand is sufficiently responsive, total earnings may not increase.

To translate the spending cut into foreign exchange earnings, a gain in competitiveness is required. The gain in competitiveness in the home economy draws resources into the tradeable goods sector and in the world market makes it possible to sell the increased produc-

tion of tradeable goods. Of course, the only way to gain competitiveness is by reducing the wage in dollars by a real depreciation. But the real wage cut also generates, at least in the shortrun, increased unemployment as the spendable income of workers is cut.

The overwhelming difficulty in the adjustment process is that external adjustment through a gain in competitiveness takes a toll in terms of employment. The dominant effect on employment is the reduction in real wages and the resulting reduction in domestic demand. The employment response that would be expected in the tradeable goods sector is often very weak and slow. One reason for this is that expectations of a sustained change in competitiveness do not take hold immediately. The traded goods sector thus adopts a wait and see attitude that makes real depreciation a highly precarious policy tool. The Mexican experience in this respect is particularly instructive.

A second important difficulty arises from the systemwide adjustment to forced debt service. Since most debtor countries were overspending in the early 1980s and are now under a forced debt service regime, they all had to resort to real depreciation to enhance their competitiveness. But that means they are competitively cutting their wages relative to each other and not only relative to those of the creditor countries. As a result, an isolated country, cutting the dollar wage say by 50 percent, will gain much less in terms of increased dollar revenues because all the competing LDCs are doing much the same.

*The budget problem.* The third macroeconomic problem in the adjustment process involves the budget. Much of the external debt is public or publicly guaranteed. Of the part that was not, initially much has wound up, in one way or another, in the public sector in the aftermath of the crises, as a result of bank failures. The government thus winds up having to service a debt that before was either in private hands or automatically serviced by new money. The problem, of course, is where to find the extra 3 or 4 percent of budget revenue that will pay the interest costs that suddenly have to be met.

There are basically four avenues: raising taxes and public sector prices, reducing government outlays, printing money, or issuing domestic debt. Raising taxes is notoriously difficult since most of the taxes are already levied in the form of social security taxes on workers. The easier solution is to raise public sector prices or to eliminate subsidies. The elimination of subsidies is particularly cheered by creditors and international agencies since it means moving closer to efficient

resource allocation.<sup>6</sup> Of course, the imposition of extra taxes or the withdrawal of subsidies is inevitably inflationary. That in itself is undesirable but it also may feed back to the budget through indexation and the accompanying need to devalue to sustain competitiveness.

Cutting government spending is the other option. Attention here focuses on the often extreme inefficiency of the public sector. The public perceives that there must be a way to pay the bills out of increased efficiency rather than reduced private absorption. The fact is, of course, that there is very little room for public sector improvements in the short term. Large-scale firing of redundant workers would create an overwhelming political problem. Plant closings are of the same kind, and selling inefficient, overunionized firms runs into the obvious problem that the potential buyers might need to be paid to take over the liability. Perhaps the best advice comes from Milton Friedman, who argued that public sector firms should simply be given away. The problem is that the workers might oppose that, even if they were to get them for themselves.

The most common adjustment is a cut or freeze of public sector wages. This has happened in most of the debtor countries, and in some cases on a very large scale. It helps the budget, but it presents its own problems. The reduced relative wages in the public sector promote an exodus of the wrong kind. The efficient workers leave and the bums stay.<sup>7</sup>

In many of the debtor countries the answer to forced debt service has almost inevitably been to incur increased deficits and finance these by issuing debt or printing money. Money finance brings with it the inevitable problem of high and often extreme inflation. It is no accident that Argentina and Brazil experienced extraordinary inflation rates in the aftermath of the debt crisis. But when deficits are financed by debt, while the imminent inflation problem may be absent, there is still the issue of excessive debt accumulation that ultimately poses the risk of an inflationary liquidation or a repudiation in the way discussed by Sargent and Wallace (1982).

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<sup>6</sup> The fact that it is often food subsidies that are eliminated, without the proverbial neutral lump sum tax, to compensate the losers does not seem to limit the case for the policy recommendation.

<sup>7</sup> That is, below the ministerial level.

There is an interaction between the foreign exchange and the budget problem. The need to devalue to gain competitiveness implies that the debt service in home currency increases. A given payment of say \$1 billion now amounts to more in pesos, to a larger peso deficit, and hence to the need for increased inflationary finance. Thus, the devaluation required to earn foreign exchange is a source of inflation not only directly through the increased prices of traded goods and any accompanying indexation effects. It works also indirectly by raising the required inflation tax. In the classical hyperinflations, it is easily demonstrated that major movements in the exchange rate were the prelude to the outbreak of uncontrolled inflation, and there is some evidence that exactly the same is at work in the debtor countries today.<sup>8</sup>

The budget is also adversely affected by the problem of capital flight. To stem capital flight provoked by the inflationary consequences of debt service or perhaps by a tax reform, the country will have to increase real interest rates to very high levels. These high real interest rates in turn apply to the domestic debt, causing it to grow more rapidly, and thereby raising future budget deficits and hence the prospect of instability. That, in turn, leads to more capital flight and yet higher rates. There is accordingly an extraordinary vicious circle surrounding the sudden need to service debt and the inability to do so through ordinary taxation.

It is worth recognizing an important tradeoff in the adjustment process. To earn foreign exchange, the wage must be cut in terms of tradeable goods, thus enhancing competitiveness. But to balance the budget, it is often necessary or at least recommended to cut subsidies for such items as food or transportation and that also means a cut in real wages. There is thus competition between two targets, a cut in the dollar wage or the tortilla wage. A choice must be made because there is only so much one can cut. Taking into account the lags with which the trade sector adjusts, this suggests that the competitiveness adjustment should take precedence and that budget balancing should follow once the economy's resources are reallocated. Since the real depreciation by itself is already bound to produce slack, there is no risk of an overheating in this sequencing of the adjustment.

A final point worth noting is the link between budget cutting and the extraordinary cut in Latin American investment. The reason is

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<sup>8</sup> See Dornbusch and Fischer (1986) and Fischer (1986).

that, in the category of government spending, the easiest cuts are in the investment area. Postponing investment and maintenance is much easier than firing workers. The impact on aggregate investment is so large because the public sector, through public sector enterprises, accounts for a large part of total investment, and because the public sector was in the front row of adjustment. It is immediately obvious that this is a very ineffective means of adjustment that fails to recognize the distinction between the public sector's current and capital accounts.

*A case study: Mexico*

Mexico illustrates in a very striking way many of these issues. The least noted fact, apparent in Table 5, is the dramatic shift in the budget over the past three years. The noninterest budget has improved by more than 7 percent of GNP. (That improvement amounts to more than a full Gramm-Rudman in less than three years. Perhaps we should enlist Mexican policy makers to help control U.S. budget deficits.) Note that the whole improvement in the noninterest budget went to finance increased interest payments on the domestic and foreign debt.

**TABLE 5**  
**Mexican Macroeconomic Indicators**

	<u>1980-82</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986<sup>1</sup></u>
Budget deficit (% of GNP)		9.0	8.0	8.3	13.0
Interest payments	7.4	14.0	12.8	12.3	16.9
Noninterest deficit	3.6	-4.9	-4.8	-3.9	-3.9
Current account (\$ bill)	-9.4	5.3	4.0	0.5 <sup>1</sup>	-3.9 <sup>1</sup>
Real wage <sup>2</sup>	100	77	71	71	63
Real exchange rate <sup>2</sup>	100	78	92	90	69
Oil price (\$/barrel)	34	29	27	26	15
Investment (% of GDP)	25.1	16.0	16.3	17.0	—
Public sector	8.8	5.7	5.3	4.9	—

<sup>1</sup> Estimate, May 1986

<sup>2</sup> 1980-82 = 100

The increase in interest payments is to a large extent a reflection of inflation. Inflation and the accompanying exchange depreciation raise the nominal interest rates required to make Mexicans hold the depreciating asset. These interest rates in turn translate into a large interest bill in the budget. If by some miracle, meaning an Austral-type program, inflation were to disappear, the budget would be nearly balanced. There is a budget deficit because there is inflation, not the other way around.

But what happened to the budget after the oil price fall in 1986? The direct impact of lower oil prices meant a deterioration in the budget of 6 to 7 percent of GNP. Where at 1985 oil prices, the non-inflationary budget would have shown a surplus, it now is in deficit by about 2 percent of GNP. If zero is the magic number then clearly some extra budget work is necessary.

Consider next the current account. There is a striking turnaround from the deficits before the crisis to surpluses afterwards. In 1983-84 the surpluses were enough to help finance capital flight and also meet the interest payments. In 1985 all of interest was paid out of surpluses and by attracting a reflow of private capital through very high interest rates. But after the oil price decline the external financing problem is back, forcing a decision to have further real depreciation or an alteration of the terms of debt service.

The real exchange rate and the real wage show a dramatic drop in the past few years. Real wages today are 40 percent below their 1980 levels and the external competitiveness has improved by 40 percent. These are extraordinary adjustments to make for any country. The decline in investment is apparent from the table. Finally, not shown, there is the employment story. The labor force is growing at 3.5 percent per year, but employment after an initial decline has been entirely stagnant over the past four years. Thus unemployment is widening, and with it social conflict. The lack of employment growth, even after so extreme a real depreciation, is an issue of major concern. It suggests that depreciation works primarily through the income effect and very little through substitution.

### **Bank exposure and the quality of debts**

In this section, we sketch what bank exposure looks like and what can be said about the quality of the debts.

*Bank exposure*

Table 6 shows the claims by U.S. banks on the non-oil LDCs, both in dollar terms and as a fraction of capital. The table makes a distinction between various groups of banks to highlight the concentration of exposure in the large banks.

**TABLE 6**  
**U.S. Bank Claims on Non-OPEC LDCs**

	<u>All U.S. banks</u>	<u>9 major</u>	<u>15 major</u>	<u>All other (\$ bill)</u>
<u>Total claims of U.S. banks</u>				
1978	52.5	33.4	9.9	8.9
1982	103.2	64.2	20.2	18.9
1985	98.2	62.8	18.3	17.1
<u>Percent of capital</u>				
1978	110	163	107	57
1982	154	227	162	75
1985:				
All claims	99	156	99	41
Latin America	69	109	66	30

Source: Federal Reserve

The first point to notice from these data is the absolute decline in bank exposure over the past three years. This is the result of loan run-offs, writedowns, and asset sales. It applies particularly to Asia and Africa. The data highlight that banks are not moving in the direction of voluntary lending, but rather in the opposite direction.

Attention focuses on the exposure measures since these highlight the vulnerability of banks to possible defaults. We show separately the data for exposure to Latin America, which is of particular interest because Latin debt accounts for the major part of debts and, for cultural reasons, is judged the most vulnerable.

The table brings out that exposure has declined significantly since 1982. In part this is cosmetic, in part it reflects a strategy of raising bank capital (including notes) and a sharp curtailment in new money commitments. Part of the increase in capital takes the form of equity

**TABLE 7**  
**Price of Latin Loans in the New York**  
**Second Hand Market and Debt**

	Loan price (cents per \$)	Total debt	U.S. bank debt (Billion \$)
Argentina	63	49.6	8.5
Bolivia	7	4.2	0.14
Brazil	76	104.5	23.9
Chile	68	21.5	5.9
Colombia	85	13.6	2.6
Ecuador	64	7.7	2.1
Mexico	60	97.3	24.8
Peru	20	14.2	1.65
Uruguay	64	4.7	0.89
Venezuela	77	36.5	20.4

commitment notes rather than actual equity.<sup>9</sup> The strategy of raising capital through these notes reflects the double advantage of favorable tax treatment and a potentially more favorable timing of actual equity issue. It leaves open the question of where the financial effects of an actual call on the commitment would fall. It is clear that there is a sharp difference in exposure between the large money market banks on one side and all the other banks. A complete Latin writeoff of debts would wipe out the large banks but would keep the smaller ones intact. This is one of the senses in which LDC debts are a "Big Bank" problem.

#### *The quality of debts*

Latin debts do not fail to make the headlines. IMF agreements and reschedulings are hailed and welcomed with relief, breakdowns of negotiations are a source of anxiety until everybody gets accustomed to the fact that in the end an agreement always seems to be reached, even if the going is rocky. But even against a background of four years of highly successful reschedulings and not a single outright default, there remain doubts.

One measure of the quality of these bank loans is provided by the discount at which they trade in the second-hand market. There is now a well-functioning market in which banks can sell or swap loans in

<sup>9</sup> See the *American Banker*, August 9, 1985.

their portfolio. Business is done between banks but also with corporations and even private investors. Table 7 shows the discounts in mid-May for Latin American loans.

The evidence is, of course, quite striking. Discounts of 30 or 40 percent suggest that the market must assign a very significant probability to partial or complete default. These valuations might be affected by the market continuing to be quite narrow, without a massive spreading of the risks to widows, orphans, and insurance companies that might ordinarily be expected to hold some share of these claims. But even with allowance for the narrowness of the market, the discounts are very large. It must certainly be clear that these deep discounts suggest that an imminent return to voluntary lending is entirely inconceivable.

A separate source of information is provided by the yield differential between medium-term bonds (issued in Deutsche marks) by various debtor countries and the yield bonds of industrialized countries of comparable maturity.<sup>10</sup> Table 8 shows this differential in the yield to maturity. Charts 2 through 5 show the same information.

The risk premiums are strikingly concentrated in the early period of the debt crisis, in the fall of 1982. There are variations between countries, but in all cases there is a very sharp decline over the subsequent period. Individual country variations include quite obvious effects: the Malvinas war and the risk of a Peronist victory in Argentina in the fall of 1983, the effect of declining oil prices in Mexico, and the problems associated with Brazil's rescheduling in 1983. Perhaps the most striking fact of these series is the relatively small premium showing here compared with the data for discounts on bank debts. The difference in evidence raises the question whether assets are not really traded, whether the markets are unconnected, or whether bank debt is particularly vulnerable, which might appear at first sight surprising.

Another direction to look for evidence on the quality of LDC debts is in the stock market. The stock market value of banks with LDC exposure should be affected by variations in the prospects for loan recovery. Kyle and Sachs (1984) have indeed brought evidence pointing in that direction.

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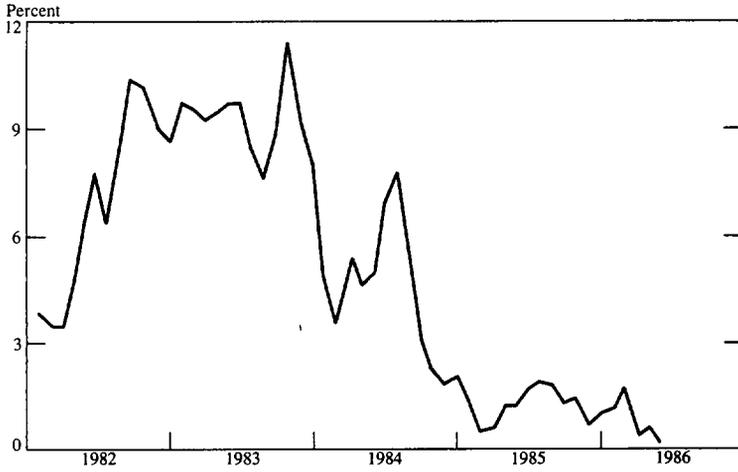
<sup>10</sup> The data are described in Folkerts-Landau (1985) and an update was kindly made available by the German Bundesbank. The Mexican, Argentinian and Brazilian bonds are to mature in 1988, the Venezuelan bond in 1990.

**TABLE 8**  
**Yields on Deutsche Mark Bonds**

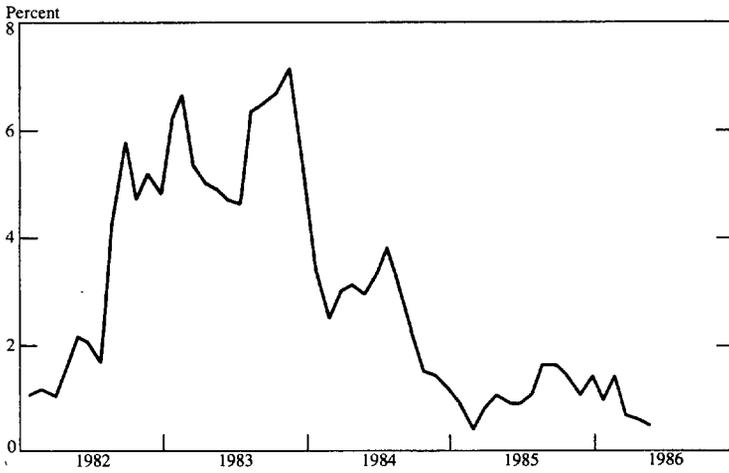
	<u>Industrial</u>	<u>Argentina</u>	<u>Brazil</u>	<u>Mexico</u>	<u>Venezuela</u>
1982:1	10.0	13.8	11.2	10.7	10.5
1982:2	10.1	13.6	11.4	10.8	10.7
1982:3	9.8	13.3	11.0	10.8	10.8
1982:4	9.2	14.0	10.9	10.7	10.8
1982:5	8.9	15.3	11.1	10.5	10.8
1982:6	9.2	16.9	11.3	10.9	10.9
1982:7	9.1	15.5	10.9	10.5	10.9
1982:8	9.1	17.8	13.4	13.1	11.5
1982:9	9.0	19.5	14.8	13.3	12.1
1982:10	8.8	19.1	13.6	13.0	12.2
1982:11	8.5	17.5	13.8	12.9	12.2
1982:12	8.1	16.8	13.0	12.1	11.7
1983:1	7.8	17.6	14.1	12.0	12.0
1983:2	7.9	17.5	14.6	13.2	14.0
1983:3	7.7	17.0	13.1	13.2	12.7
1983:4	7.5	17.0	12.6	12.2	11.9
1983:5	7.5	17.3	12.5	12.1	11.4
1983:6	7.7	17.5	12.5	11.6	11.5
1983:7	7.9	16.4	12.6	10.7	11.6
1983:8	7.9	15.5	14.3	10.3	11.6
1983:9	7.9	16.8	14.4	10.3	11.7
1983:10	7.8	19.3	14.5	10.7	11.7
1983:11	7.7	16.9	14.9	10.7	11.6
1983:12	7.8	15.8	13.1	10.4	11.1
1984:1	7.8	12.7	11.3	10.0	9.9
1984:2	7.6	11.2	10.2	9.6	10.0
1984:3	7.5	12.9	10.6	9.5	9.9
1984:4	7.6	12.3	10.8	9.1	9.9
1984:5	7.7	12.7	10.7	9.8	9.8
1984:6	7.8	14.7	11.2	9.9	10.5
1984:7	7.9	15.6	11.7	9.8	11.1
1984:8	7.8	13.4	11.1	9.6	10.1
1984:9	7.6	10.7	9.9	9.0	9.4
1984:10	7.5	9.8	9.1	8.7	9.3
1984:11	7.3	9.1	8.8	8.7	9.3
1984:12	7.2	9.3	8.5	8.7	8.7
1985:1	7.3	8.7	8.3	8.1	8.7
1985:2	7.7	8.2	8.2	8.5	8.9
1985:3	7.7	8.3	8.6	8.4	8.7
1985:4	7.4	8.6	8.6	8.1	8.8
1985:5	7.3	8.5	8.3	8.0	8.6
1985:6	7.2	8.9	8.2	8.2	8.7
1985:7	7.1	9.0	8.3	8.3	8.8
1985:8	6.8	8.6	8.5	8.3	8.8
1985:9	6.8	8.1	8.5	8.3	8.9
1985:10	7.0	8.4	8.5	9.0	8.8
1985:11	7.0	7.7	8.2	8.8	8.5
1985:12	6.9	7.9	8.4	9.0	8.6
1986:1	6.8	7.9	7.9	8.4	8.7
1986:2	6.7	8.4	8.2	8.8	8.8
1986:3	6.5	6.9	7.3	8.3	8.7
1986:4	6.5	7.1	7.2	7.8	8.5
1986:5	6.6	6.8	7.2	7.3	8.4

Source: Deutsche Bundesbank

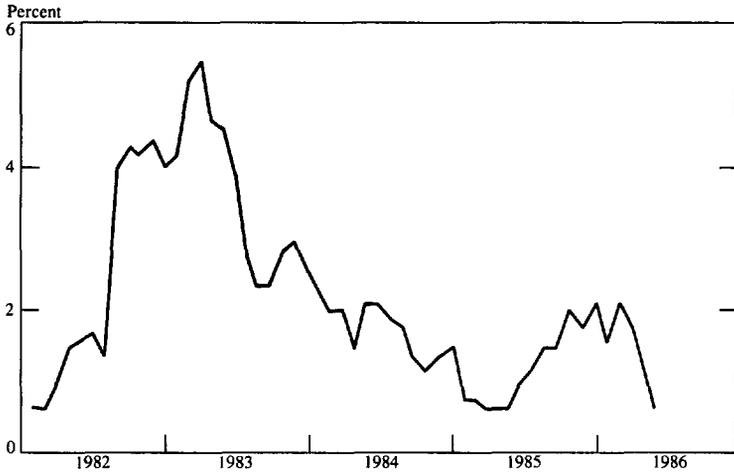
**CHART 2**  
**Yield on Deutsche Mark Bonds: Argentina**



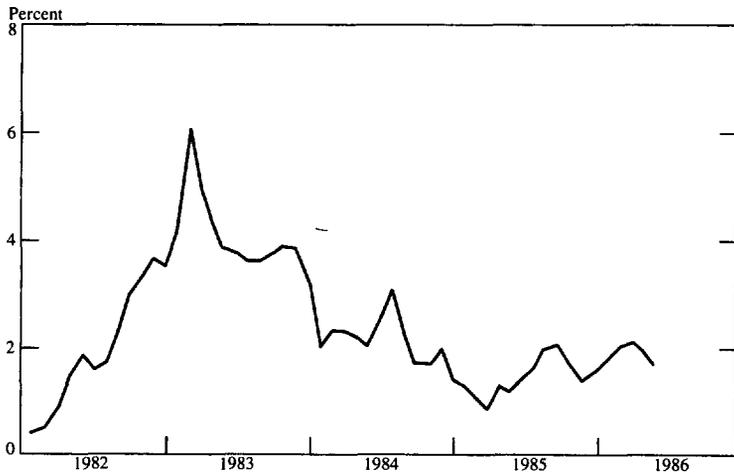
**CHART 3**  
**Yield on Deutsche Mark Bonds: Brazil**



**CHART 4**  
**Yield on Deutsche Mark Bonds: Mexico**



**CHART 5**  
**Yield on Deutsche Mark Bonds: Venezuela**



## Possible solutions

The basic fact in assessing the debt problem is that it will not go away. Every year, or every other year, will look good from the debtor's point of view, and soon an adverse shock or mismanagement will bring them back into a precarious situation. The world economy is unlikely to provide enough growth at low interest rates and booming commodity prices to make the debt problem go away. And even if it did, there is no assurance that in the debtor countries pent-up demands for expansion of demand and social programs would not simply squander quickly any available room and more. There is also no doubt that the debt problem is a first-rate political liability. We review here some of the more interesting or controversial solutions.<sup>11</sup>

### *Reversal of capital flight*

The wishful thinking turns to the \$100 billion or more of Latin assets that have fled from financial instability and taxation to the industrial countries, especially the United States. Reversing these capital flights, especially in the case of Mexico or Argentina, would make it almost possible to pay off the external debt. The reason is that much of the debt was incurred in the first place to finance the exodus of private capital.

The idea that private capital could be the main solution or an important one is naive. There is little or indeed no historical precedent for a major reflow and when it does happen, it is the last wagon of the train. Einaudi once observed that savers "have the memory of an elephant, the heart of a deer and the legs of a hare." Capital will wait until the problems have been solved; it won't be part of the solution.

It is often argued that if only countries adopted policies conducive to guaranteeing savers stable positive real rates of interest, the capital flight problem would not be an issue. But that argument is not very operational in two respects. First, in the context of adjustment programs, it is unavoidable to devalue for example. Compensating savers for the loss they would have avoided by having dollar assets would place a fantastic burden on the budget that in turn would breed financial instability. Second, practicing high, positive real interest rates poses a serious risk to public finance. The public debt which carries

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<sup>11</sup> See Lessard and Williamson (1985) for a thoughtful assessment of a large range of solutions.

these high real rates snowballs, and that in turn is the source of instability. Third, it is a very bad habit indeed to raise the return on paper assets above the prospective return on capital. That is terrible supply-side economics which ultimately erodes the tax base and deteriorates the financial system by souring loans. A country in trouble simply cannot opt to make the chief priority to keep the bond holders in place.

Capital controls, where feasible, are an essential part of a strategy to bring public finance in order rather than to paper over extreme difficulties for a while by extraordinarily high real interest rates. The latter strategy was, indeed, at the very source of the extreme mess in Argentina under Martinez de Hoz or in Mexico today.

It is also worth recognizing that the capital flight problem is to a large extent of our own doing. The administration, in an effort to fund our own deficits at low cost, has promoted international tax fraud on an unprecedented scale. The only purpose one can imagine for the elimination of the withholding tax on nonresident asset holdings in the United States is to make it possible for foreigners to use the U.S. financial system as a tax haven. To compete with the tax-free U.S. return anyone investing in Mexico and actually paying taxes there would need a yield differential, not counting depreciation and other risk, of quite a few extra percentage points.

There is much talk about the problems of banks putting in new money only to see it spent by debtors like Mexico on capital flight. The fact is that the big banks are the chief vehicles for and beneficiaries of the capital flight. This system, on all accounts, enhances the political explosiveness of the debt crises by placing on workers in the LDCs an even more serious adjustment burden. The treatment of capital flight by the banking community, with these ideas in mind, is not only outright cynical but also shortsighted.

### *Debt-equity swaps*

The second solution that is finding a lot of favor in the financial community is a more extensive system of debt-equity swaps, preferably geared to a privatization effort. The mechanics are easy. An investor, say a U.S. corporation, purchases in the second-hand market Mexican debt at a 40 percent discount. The debt is presented to the Mexican Central Bank for redemption at par into pesos, preferably at the premium prevailing in the free market. The proceeds are then applied

to purchasing Mexicana airline or some other asset being liquidated by the public sector in a distress sale.

When the accounts are done, the external debt is reduced, the banks are ahead, the investor is ahead, and the Mexican government can wonder whether they made a killing or they were had. Given the enthusiasm for debt-equity swaps, the latter is presumably the right view to take. Debt-equity swaps may be an extraordinarily expensive way to clean up the balance sheet. For one, there is no conceivable reason why debts should be redeemed at par if in fact they trade at a discount. Moreover, selling national assets under distress conditions may involve losses. Finally, the balance of payments consequences in the medium term do not amount to an improvement. Before interest was to be paid, and now it is profits.

But one certainly should not take an altogether negative view of the scope for foreign investment.<sup>12</sup> Certainly it is worthwhile promoting foreign investment, both direct and portfolio investment. In fact, if that had been the strategy in the 1970s and early 1980s the debt crisis would hardly have happened. But at the present juncture, as a short-term solution, foreign investment is unlikely to make a large contribution. Perhaps a better strategy than individual swaps is to set up a national mutual fund, including public sector firms, or even formed out of public sector firms, provide sound accounting standards, and sell the claims abroad. The proceeds can be applied to buy back debt in the second-hand market. There is no need for the funds to be sold in New York or to nonresidents; even pesos are fungible. Nor is there a need to retire external debt rather than domestic debt, unless there was inside knowledge about the utter determination to service the external debt. In that latter case, it is well worth buying up debts in the second-hand market at the present discounts.

Perhaps the two strategies amount to much the same, but there is a suspicion that the former implies more foreign control, which may be good or bad, and perhaps a much larger transfer to foreign creditors.

### *The Bradley plan*

Senator Bill Bradley has recently advanced a proposal that would link the debt problem to U.S. foreign policy and trade interests. The

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<sup>12</sup> Perhaps the most impressive evidence on the benefits of direct foreign investment comes from the free trade zone in the north of Mexico. Employment growth and prosperity in that area contrast sharply with the rest of Mexico.

proposal starts from the recognition that the debt problem is not only a banking problem but also a problem for manufacturing, since interest received means jobs lost. Premature and excessive debt collection goes against the interest of our manufacturing sector, which is already strapped by an overvalued dollar and now is hurt, in addition, by losses of export markets and a trade invasion from the South. Since 1981, our trade balance with Latin America, counting merchandise only, has deteriorated by as much as \$15 billion. Counting services, the number would be much larger still.

The proposal seeks targeted, limited debt relief under supervised, sensible growth programs. Countries opting for a program of debt relief would in exchange have to be prepared to offer trade concessions and presumably concessions in other areas of U.S. foreign economic interests. The specifics of the relief would be a 3 percentage point reduction in interest rates on debt outstanding, a 3 percent writedown of principal, and a pool of an extra \$3 billion in resources from multilateral agencies available for the participating countries. An annual debt summit would be joined to the General Agreement on Tariffs and Trade process to recognize that trade and debt come as a two-way street.

The important points about the Bradley proposal are two. First, the recognition that the U.S. Congress should get involved in the debt issue to broaden the debate because at present it is handled in the narrow and shortsighted interest of banking only. The second is that it proposes a specific action program. There are really only two ways the current debt collection process can be derailed. One is a recommendation by Milton Friedman, that the government should get out of the process altogether, letting the banks try to collect their debts if they can. The other is to provide a sensible legislative package that achieves the difficult task of combining four elements: keeping the taxpayer largely out, making the debts better (even if concessions and writedowns are part of the adjustment), and restoring sustained growth in Latin America while enhancing U.S. trade opportunities there. That sounds difficult, except when one recognizes that the trade and labor interests may swing the public policy debate.

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## Commentary on “International Debt and Economic Instability”

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*Rimmer de Vries*

Rudiger Dornbusch's skepticism about the fruits of the existing lesser developed country (LDC) debt strategy is understandable. Even with the boost the 1985 Baker initiative was intended to provide, the strategy that has been pursued over these past four years has not, at least not so far, delivered the goods in terms of what was and remains the ultimate objective—the renormalization of LDC access to the international financial markets. The latest figures show outright declines during this year's first quarter in the exposure of all Bank for International Settlements (BIS)-reporting banks to LDC's. If anything, financial markets appear to be more tightly closed now than at the peak of the crisis in 1982-83. It is little wonder that Rudiger craves a new, more “realistic” course of action.

Even so, I do not accept that the trials of the last four years have been for naught. It is a mistake to generalize from Mexico's current difficulties, which were coming to light even before the rude shock of this year's oil-price collapse. Taking the LDC debt picture as a whole, however, important progress has been made on several fronts. The progress should be both acknowledged and taken to heart by the numerous, albeit simplistic, advocates of “debt relief.”

Let me cite three principal achievements. First, several major LDC debtors show positive promise and several others already are performing well. Admittedly, opinions remain divided on Argentina and the Philippines. Still, in contrast to the despair manifest as recently as a year ago, hopes now run high because the governments of both countries evidence determination to realize their countries' economic potential.

In terms of actual performance, the honors go to Korea, Brazil, and Colombia. Amid fast economic growth, a strong balance of

payments, and the many other positive indicators for Korea's economy today, it takes some effort to recall that just three years ago many observers thought the country was headed for financial trouble.

Brazil, which did not avoid rescheduling and recession, nonetheless has staged an impressive comeback. Its economic growth hit 8 percent last year and will be only a little lower in 1986. Even if some further slowing is needed in 1987 to sustain the Cruzado plan's counterinflationary breakthrough, Brazil will have achieved substantial per capita income gains four years in a row. At the same time, Brazil's current account is headed for a surplus of \$3 billion this year and a like amount in 1987. Its exports will have grown at an average annual rate of 8 percent during 1984-87. Meanwhile, its external debt will have climbed only little. As a result, Brazil's debt-export ratio should be just a bit above 300 percent by the end of 1987—about a sixth less than the 1983 peak and the lowest since before the crisis. Interest payments will absorb only 20 percent of Brazil's export earnings next year, half the burden of 1983.

Elsewhere in Latin America, Colombia for a time teetered near the brink of rescheduling but chose at the last hour to work closely and constructively with the International Monetary Fund (IMF) and the World Bank. It thereby retained a degree of confidence on the part of the international financial markets and was spared the slide in per capita income suffered by most countries of Latin America. More recently, Colombia has been blessed by high prices for its coffee exports, such that its debt-export ratio now stands only a whisker above 200 percent (versus over 260 percent two years ago) and interest on the debt takes up just 15 percent of export revenues. If both sustain progress, Brazil and Colombia should be the first of the Latin American countries to re-enter the credit markets.

Second, by strengthening their own capital positions, the commercial banks have substantially reduced their vulnerability to any strains associated with their LDC credit exposure. On average, U.S. banks have brought down the ratio of their Latin American exposures to their own primary capital from a peak of 125 percent in 1982 to 75 percent at the beginning of this year. For the nine large money center banks, the ratio has dropped from 181 percent to 124 percent. For the 15 next-largest banks, the ratio has come down from 129 percent to 71 percent; while for all other U.S. banks, it has fallen from 65 percent to 33 percent.

Third, despite all the frustration and fashionable cynicism, the key players on the debt stage retain a constructive attitude—most recently on display in the new credit package for Mexico. The debtor countries are working in a cooperative, rather than confrontational way to help themselves toward improved economic and financial performance. In much of Latin America—many of whose present leaders were educated so well by Rudiger and his colleagues in Boston and elsewhere—there is growing appreciation that, for the region to prosper, it must be competitive in the global marketplace. Thus, if Latin America is ever to attain the much-admired dynamism of many developing countries in Asia, it must turn its back on the stultifying statism of the past. Accordingly, there is a surge of interest in the growth-boosting potential of basic reforms to privatize inefficient state enterprise, strip away protection of vested interests in both public and private sectors, and open economies generally to the bracing draught of real competition.

Such reforms have long been urged by the region's external creditors. The climate for progress now is more promising than for many years. Practical steps are already being taken. Realistically, however, progress will be slow and setbacks inevitable. Although the key decisions belong to the debtor countries themselves, the policy-based lending activities of the World Bank—an institution now led by a new president with strong U.S. Treasury backing—can make a vital contribution through advice, encouragement, and financial inducements for public-sector reform and private-sector rehabilitation.

My stress on the positive accomplishments of the last four years does not deny the serious international debt problems that still exist. After the crisis, much of the banking community took the view that all could be well again in three or four years. With hindsight, that view seems naive. Instead, it is increasingly clear that the issue will be with us a great deal longer than originally supposed. However, it does not follow that the strategy pursued hitherto must be discarded lock, stock, and barrel.

Rather, the sensible approach lies in adapting the existing strategy, preserving the good and necessary features of what already is being done, and adding new ones to cope with changing circumstances. In this spirit, I am all in favor of constructive *initiatives* adapting and carrying forward today's case-by-case approach. What I reject, as both unnecessary and unworkable, is the imposition of some fixed *plan* that would pretend to meet the needs of every country in all

circumstances.

Let me now set out what I regard as the *sine qua non* of any successful resolution of the debt problem. First, given the mood of the U.S. Congress and the reality of U.S. fiscal limitations, talk of a Marshall Plan for Latin America—implying year-in, year-out appropriation of substantial amounts of public money—is utterly unrealistic and counterproductive. Congress is not about to fund anything that might be construed as a bailout for the banks or vote foreign aid money over and above what is being given today.

Other public money will continue to dribble through from the regular activities of export credit and international lending agencies. But their funding is unlikely to grow rapidly. Having been burned in the past, many of the export credit agencies are keeping a low profile. Multilateral activity is circumscribed by the fiscal inability of the United States to contribute its normal share of any major step-up in funding and the reluctance of other industrial countries to step into the breach. Besides, the priority beneficiaries of additional official money may well be the very low-income countries of Africa and Asia rather than Latin America.

Since most of any significant increase in new money for the major LDC borrowers will, therefore, have to come from the private sector—certainly in the foreseeable future—the key objective remains the restoration of normal credit market access for the troubled debtors. To that end, debtors and creditors will have to work out their problems in a mutual and cooperative manner, avoiding resort to unilateral action, which would set back the realization of the ultimate goal for many years. Equally, it is a dead-end street to play up the notion of having the President of the United States convene a full-dress “relief” conference every year under the chairmanship of the president of the World Bank. The conference, according to proponents, would work for forgiveness of principal and interest on private and official credits according to some long-term plan for “debt relief.” Mandating such action, however, would assuredly put an end to private-sector funding without providing any public-money substitute.

Second, achievement and maintenance of a favorable world economic environment are crucial. Complacency is not in order. Although the world economy is more supportive today than in 1981-82, it remains seriously troubled. Only in 1984, thanks to stellar U.S. performance, did the industrial countries approach 5 percent economic growth. Since then their growth has fallen back below 3 percent and,

on present reading, is unlikely to pick up much for some years to come. Virtually the entire increase in LDC exports to industrial countries between 1982 and 1985 went to the United States, even though the latter accounted for only one-third of total LDC exports to the industrial world last year. Other industrial countries similarly became accustomed to feeding off the U.S. economy and the still-rising U.S. trade deficit. Japan and Europe remain extremely slow—indeed, flatly reluctant—to take overt and significant measures to increase their domestic demand and, thereby, offset the deflationary implications of the inevitable shrinkage of the U.S. trade deficit. Yet without open and growing industrial economies, the LDC's cannot expect the increase in their exports that is indispensable to the restoration of their creditworthiness.

In his paper, Rudiger notes how a negative external environment helped cause the debt problem, but he glosses over this external factor in his call for a realistic solution. Admittedly, none of us can be proud of the present state of internationalist thinking, cooperation, and decision making among the G-5 countries. But that is no reason to throw in the towel. I am, therefore, disappointed—indeed amazed—that Rudiger has passed up a golden opportunity to point up the policy shortcomings of Japan and Germany. Rudiger is rarely so shy. Japan seems willing to settle for minimal growth. Europe remains in the grip of its mercantilist traditions. Incredibly, many Europeans maintain that, with the dollar now lower, the only policy changes still needed are for the United States to reduce its budget deficit and resume lending to the LDC's—thereby enabling the LDC's to buy more goods not only from the United States but also from Europe and Japan. That is a formula for Europe to hang onto its trade surpluses with the United States shouldering the risk—an interesting concept of burden-sharing!

Meanwhile, in the United States, muddle-headed analysis and sheer protectionism plague discussion of the nation's trade problems. The moans over “job losses” in the export sector too often overlook the huge increase in overall U.S. employment since the recession. Nonetheless, I look forward to the recovery of U.S. exports to Latin America. The resulting boost to U.S. jobs would be welcome. However, it is unrealistic to suppose that higher U.S. sales to Latin America will do much to remedy the overall U.S. trade deficit (of which the bilateral deficit with Latin America is less than one-tenth) or that there exists some financial fix that will enable a strong rise in U.S. exports to the region before those countries themselves achieve

better export performance. Early improvement of the overall U.S. trade position will have to occur mainly relative to the other industrial countries. The turn of the LDC's will come later. If it is not to be at the expense of the LDC's through U.S. protectionism, it is vital that both developing and industrial countries recognize their common interest in mutual trade liberalization. Next month offers what may be the last opportunity to set that under way with the scheduled launch in Uruguay of the delayed new round of multilateral negotiations.

Third, structural reforms are essential for the return of confidence in the debtor countries. The first phase of the debt strategy successfully reduced the immediate balance of payments pressures on most. Confidence, nevertheless, remained low and it became obvious that attention had to turn to the strengthening of their internal economies. Even where effective in narrow terms, stabilization alone was not enough. It had to be supplemented with structural reforms covering a wide range of policy and institutional changes at both macro and micro levels. These include privatization, the creation of more profitable investment opportunities in the private sector, and less government intervention in trade and financial markets.

The Baker initiative, which stressed such reforms, gave rise to unrealistic expectations of speedy progress. Instead, the far-reaching and complex nature of reform efforts, and the political obstacles they inevitably encounter, suggests that progress will be gradual. Both the IMF and the World Bank could provide important support. Once the debtors' economies open up, become competitive, and offer attractive investment opportunities, money will begin to flow to them, both from foreign sources and through the return of assets their residents now hold abroad.

Fourth, the IMF should be more accommodating of countries in need of balance of payments assistance. The collapse of oil prices, from an average of \$27 per barrel in 1985 to less than half that level at times in recent months, has caused major balance of payments problems for Mexico and many other oil-exporting nations. The IMF's Compensatory Financing Facility was designed for just such eventualities. The institution's ample resources should now be put to work on behalf of oil exporters, especially those making respectable adjustment efforts. In no way should this be interpreted as the shoring-up of cartelized pricing. It seems fair to recall that, when oil prices soared after the first oil shock of the 1970s, the IMF was quick to assist rich industrial countries, such as Britain, France, and Italy. With

the shoe now pinching the other foot, it is hard to rationalize the IMF's present stinginess toward the much lower income oil-exporting nations. I believe the IMF can—and should—play a significant role in financing balance of payment deficits of oil exporters.

In a world of major current account imbalances, countries with large surpluses should be actively concerned with recycling those surpluses, either through the official international institutions or bilaterally. Saudi Arabia's constructive behavior in the 1970s should be emulated by Japan and Germany today. Japan reportedly is taking a positive, albeit modest, first step by extending a \$1 billion export credit to Mexico. But Germany and the other surplus nations of Europe have yet to be heard from.

Fifth, I must take issue with Rudiger's cavalier treatment of capital flight. If capital flight is given a free ride in the caboose of the debt train, the train is going to go nowhere but off the rails. I find it both necessary and feasible that capital flight be handled up near the front of the train. It is necessary for both quantitative and psychological reasons. It is feasible because we are neither ignorant of the causes of capital flight nor without means to stem and reverse it.

Quantitatively, the assets that residents of the debtor countries have accumulated abroad total up to a substantial offset of these countries' gross foreign debt. Several of the major debtor nations—notably, Argentina, Mexico, and Venezuela—have net investment positions that are much better than their gross indebtedness suggests. Similarly, their financing needs would be modest and manageable in the absence of capital flight, but immodest and unmanageable if the hemorrhage resumes.

Psychologically, nothing has contributed more to the pervasive sense of frustration over the LDC debt problem than the realization that capital flight persisted, if on a reduced scale, almost throughout the 1983-85 period of "involuntary" lending. Creditors, both private and official, are reluctant in the extreme—and understandably so—to provide fresh funds unless the debtors put a stop to the capital flight. Still less can creditors look warmly upon the cyclical suggestion that a smart debtor—not unlike the proverbial millionaire panhandler—should borrow all he can, invest abroad, and then demand debt relief. Fortunately, albeit belatedly, most Latin America governments have woken up to the capital flight problem. For the time being, at least, the flight itself has more or less dried up. Argentina and Mexico have each seen reflows on the order of \$1 billion.

With capital flight stemmed, the next priority becomes the repatriation of the earnings on the stock of overseas private assets. Regrettably, the new \$12 billion financial package for Mexico—soundly constructed as it is in most respects—takes for granted that the earnings will remain abroad in large measure, presumably in view of the inadequacy of Mexican financial investment vehicles and the general state of uncertainty in that country. Mexico's creditors are being asked to put up \$2.4 billion through the end of 1987 to cover nonrepatriated earnings, and a further \$1.4 billion to boost the reserve position. Bank creditors would be a lot happier with the package minus those provisions. After all, when reserves build up, Mexico has a history of failure to maintain a realistic exchange rate, thereby engendering private capital outflows. Moreover, full repatriation of the estimated \$3.5 to \$4 billion of earnings on assets held abroad by Mexican residents would yield sufficient foreign exchange *each year* to pay the interest owed on about half Mexico's total external debt. That would be a lot healthier for Mexico than forced debt relief and its attendant negatives.

The reversal of capital flight is not the fantasy flight that Rudiger alleges. The decline in U.S. interest rates lessens one incentive for residents of Mexico and other troubled debtors to hold assets abroad. However, repatriation will not occur on a substantial scale unless the conditions also are right in the debtor countries themselves. Individuals and businesses respond to market forces—hence the importance of sound economic management, including realistic interest and exchange rates plus attractive investment opportunities in domestic financial markets and business enterprises. The incentive to hold assets abroad could be further reduced if the debtor governments were to take steps to improve their ability to collect taxes on their residents' earnings on foreign assets. Tax and exchange rate inducements could be offered for repatriation of foreign assets. Amnesty programs also could be of value in recapturing capital sent abroad illicitly.

Sixth, with the recognition that not all may turn out for the best, what should U.S. commercial banks do? Their best strategy continues to be to build capital several times faster than exposure to the major debtors. No matter how worthy or promising the borrower's purpose, it is neither plausible nor prudent to expect creditors to lend from a position of weakness. Even though the banks' LDC exposure-to-capital ratios have come down in the last few years—they are now below end-1977 levels—the bankers generally regard these ratios as uncomfortably high. For the large money center banks, exposure to

the four largest borrowers in Latin America—Argentina, Brazil, Mexico, and Venezuela—ranged between 75 percent and 135 percent of primary capital at the end of 1985. It was lowest for Morgan and around the middle of the range for most of the others.

What may constitute the upper limit of prudence is difficult to judge amid today's credit quality and world environment concerns, not to mention the worries voiced about the possibility of collective default. However, LDC exposure is not the only source of vulnerability. For many U.S. banks, credits to such problem sectors as agriculture, energy, and real estate are far more important quantitatively than international exposure. Clearly, given the range of risks confronting the banking system, this is not the time for bold adventures in debt relief, whether forgiving interest or principal.

In the case of interest relief—unilateral nonpayment or forgiveness by agreement—banks would suffer an immediate reduction of pretax earnings by no less than the amount of interest in question and possibly by the amount of all interest on the affected loans. Conservative management, its accountants, or the regulators might put such loans on nonaccrual status, requiring that any interest received be applied to principal reduction rather than taken as income.

Principal forgiveness would result in immediate chargeoffs at least equal to the amount forgiven, as well as earnings reduction. Most banks could withstand some earnings losses and chargeoffs on loans to a single major debtor country. Yet if debt relief were offered to any one debtor, political realities would virtually dictate extension of relief to others. That might shake confidence in a number of banks. Indeed, snowballing debt relief still could threaten the international financial system as a whole.

Besides building up capital, banks ought to explore alternative forms of lending to LDC's. These might take their inspiration, if not literal specification, from the innovative instruments and techniques originating in other financial markets. Of course, not every device is appropriate. In particular, it is important for the integrity of the banking system now—and down the road, for the debtors' recovery of market access—that there be no forced capitalization of interest obligations nor any departure from market-related pricing. Swaps that lock in interest costs, or caps and collars that limit floating-rate exposure, conform to the latter requirement and may come to play a useful and significant role in LDC debt management as the markets concerned deepen and broaden.

Debt-equity swaps have considerable potential as a vehicle not only for attracting resident assets from abroad and foreign direct investment but also for reducing external debt. Such arrangements can provide for residents or foreign investors to purchase the debtor country's foreign-currency obligations at a discount abroad and redeem this debt for local currency with the debtor-country government or central bank at a smaller discount. The investors, thereby, obtain local-currency funds for all manner of business purposes, even to pay local taxes, using discounted dollar claims acquired through the emerging secondary market in securitized claims of foreign banks. Instead of being coerced into continuing an undesired position, these banks—small and medium-sized ones especially—may find this an attractive mechanism to work down their LDC exposure at a market-determined cost. Some banks, particularly in Europe, may even recoup more than book value. In the debtor countries themselves, the consequences for domestic monetary policies will have to be carefully handled. More important, attractive equity will have to be provided. That, in turn, will require more wholehearted acceptance of privatization and foreign direct investment than some governments display at present. Such acceptance is part and parcel of the broader challenge to improve investment opportunities.

As yet, the debt-equity swap market is not of great size or breadth. On the debtor side, Chile has been the most active, with deals that should approach \$750 million this year, over half representing repatriation of Chilean residents' holdings of assets abroad. Also in Chile, Bankers Trust has exchanged loans for an equity interest in a local financial institution. In Mexico, deals involving public-sector debt purchased at deep discount and converted to equity investments by multinational corporations have amounted to about \$150 million during the past year. Of these, the recent Nissan Motors deal came to \$40 million. In Argentina, following a limited exercise last year that yielded nearly \$470 million in swaps but that failed to ensure increased real investment, the prospects seem to be gaining for an improved and broader-ranging approach. This is targeted by the government to generate swaps upward of \$1 billion annually and boost investment too. Outside Latin America, the new government of the Philippines has recently decided to encourage swaps. Evidently, if the major debtors embrace the concept vigorously, the potential scale of debt-equity swaps could run to billions of dollars.

Altogether, debt-equity swaps and variants thereon bring benefits

to all parties involved. The developing countries gain through increased domestic investment and reduced external debt. Banks can work down their exposure-capital ratios more speedily, and the smaller banks can obtain a means for graceful exit, although at a charge to their earnings. And confidence in the LDC's could be enhanced as they attract equity finance in place of debt obligations.

To sum up, it is understandable that a certain fatigue and frustration have overtaken many of the parties to the LDC debt problem. However, it does not follow that some radical clearing of the decks will enable a new deal to be struck to work instant miracles for all concerned. Besides, I prefer not to throw the baby out with the bathwater. I caution, therefore, against a politically negotiated all-weather "plan" to solve the debt problem. This would require U.S. congressional involvement, which would surely politicize the debt issue. The deceptive promise of increased exports and jobs through debt relief would set the legitimate interests of the financial community against those of business and labor, while doing nothing to revive investor confidence in the debtor countries. When public money is as scarce as today, it makes no sense to alienate the private financial sector. If banks are required to write down their loans, simple prudence—and perhaps even legal considerations—would surely inhibit new lending to troubled countries for years to come.

My conclusion is that we have no realistic alternative to soldiering on within the precepts of the present debt strategy. They have the great virtue of keeping clearly in sight the ultimate objective of all concerned with the LDC debt issue—the restoration of the debtors' access to the international financial markets. Admittedly, that will not come about overnight or unfold in neat stages, as Mexico's troubles attest. The debtors will have to persevere with stabilization and structural reform. The commercial banks as a whole must stay in the game. So, too, must the official institutions—notably the IMF and, as never before, the World Bank. All parties involved will have to exercise patience and flexibility. They also will need openness toward new ideas, not least to cope with the inevitable setbacks and new problems that will emerge. Of course, not all "new ideas"—certainly not mandatory debt relief—are smart or wise. Those that are may not always meld smoothly with past positions and established practices. But the past should not be permitted to stand in the way of constructive initiatives. Nor should past failures preclude success in the future.



## International Debt and Public Policy

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*A. W. Clausen*

As we all know—there was a loss in momentum of worldwide economic recovery during calendar year 1985. Growth of world output declined from 4.3 percent in 1984 to 2.7 percent in 1985. The United States, Germany, and Japan (among the industrial countries) also are part of the trend which has persisted into 1986. This continuing drift downward is particularly troublesome because lower interest rates and the decline in oil prices were expected to stimulate greater economic activity in the industrial countries.

There was an appreciable slowing of growth in world trade in 1985 and no improvement is expected in that rate for 1986. The growth of industrial country import volume fell from 13 percent in 1984 to 5 percent in 1985 and developing country export earnings have stagnated.

On a more positive note, the recent decline in international market interest rates has brought welcome relief to those countries saddled with dollar-denominated debt. Yet, these rates are still historically high and exceed the average rates of GDP real growth in developing countries.

Less encouraging is the primary commodity price decline. Non-oil commodity prices are at an all-time low and these prices are still falling. Oil prices, also lower, have hit some heavily indebted oil exporters very hard while helping net oil importers worldwide. On the other hand, prices of manufactures exported to developing countries are rising. Consequently, many developing countries can expect a deterioration in their terms of trade this year.

Net long-term capital flows to developing countries—continued their

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This paper was presented as the symposium's luncheon address.

four-year decline into 1985, reaching \$35.5 billion—less than half the 1981 level. For the heavily indebted developing countries, net inflows of capital in 1985 were a quarter of what they were in 1981.

The net effect of these trends is that 1986 GDP growth in the heavily indebted countries may well fall even lower from the 3.2 percent registered in 1985. Again, there are important divergences among countries—such as Brazil, whose GDP growth may reach 6 percent this year—but the overall direction is not encouraging.

The protracted difficulties of the heavily-indebted middle-income countries have taught us all a salutary lesson: timely adjustment, together with adequate capital flows and an open trading system, is absolutely essential to sustained growth, restored creditworthiness, and the alleviation of poverty. On that there is now broad agreement. And on that there is at least an expressed collective will to promote and support such adjustment.

It can be argued that a measure of economic growth and poverty alleviation can result purely from internal adjustment. But the measure can never match the need. Sustained and adequate growth together with real progress in the alleviation of poverty cannot be achieved unless the industrialized countries play their required role. And that role is to adopt and implement policies that will create and maintain a trade and financial environment which is supportive of, and not inimical to, the growth objectives of the indebted countries. So let me turn now to the particular actions asked of them and seek to show just how crucial they are.

At the top of our list of priority actions stands the maintenance of a steady rate of real growth in the GNP of the industrial nations, creating durable non-inflationary growth in world demand. However, continued high budget deficits in some of the major industrialized countries are making it very difficult to sustain a steady rate of growth. The domestic effects of large and persistent deficits are principally on real interest rates and on inflationary expectations. There is surely no doubt that large deficits contribute to high real interest rates, and as these deficits climb, they are bound eventually to be accompanied by an accelerating rate of inflation and increased protection. The resulting stop-go policy mix that governments would adopt in their attempts to control either inflation, unemployment, or the trade deficit would inevitably slow world growth.

The message is clear: those economies with persistently high deficits must work to reduce them. And taking the route of public expenditure cuts seems the most appropriate approach. That is undeniably hard in political terms, especially if it involves cutting back on growth in social benefits, the second fastest growing item of public spending in the industrial world after defense. Governments should look to see whether, for example, expenditures on subsidies to manufacturing, especially in steel and shipbuilding, all in the name of easing structural change, are really to their long-term benefit.

Even more critically should they look at the rapid growth of subsidies to agriculture. Internal prices set well above world prices, especially in Europe but also here in the United States, encourage domestic production and depress domestic consumption. The resulting surpluses flooding the world at depressed prices do particular damage to developing countries trying to raise their output of agricultural products in which they often have a comparative advantage.

I know this is not an easy issue for those who come from America's farming heartland. But the issue must be faced.

The interaction between economic growth in the developing world and America's agricultural export opportunities is a crucial consideration. During the 1970s, developing country imports of wheat and coarse grains increased from 20.4 to 58.6 million metric tons per year. Over 70 percent of those imports were by the upper middle-income countries, such as Brazil, which were experiencing rapid economic growth. The agricultural export markets of the future will be found, not in the industrial economies, but in the fast growing developing countries of Latin America, Asia, and Africa.

The key to promoting rapid economic growth in the developing countries is the revitalization of agriculture. It is typically the largest sector in these developing countries, and raising its productivity is usually the only way that broad-based economic growth and a rise in per capita incomes can be obtained. And because low income groups spend a large portion of their individual incomes on more and better food, rapid economic growth and higher per capita income strengthen the demand for agricultural output in developing countries faster than it can be supplied domestically. This shortfall can only be met by imports.

Another important feature of successful economic development is that it typically leads to an upgrading of the diets of lower-income

countries. This means a more rapid growth in demand for poultry, livestock, and livestock products. The feed grains needed to produce more poultry and livestock are commodities for which the United States has a comparative advantage. As per capita incomes rise, the composition of demand also shifts from rice to wheat, and this too favors many U.S. producers.

At a time when the American farmer is enduring intense difficulties, such longer term perspectives regrettably are not an immediate antidote for his short-term problems. But these trends in developing country markets demonstrate that both the intent and effect of the World Bank's agriculture lending, which has aroused some criticism in recent months—are not the enrichment of some farmers at the expense of others, but the promotion of growth—global growth—which will expand opportunities for all.

Cutting back farm subsidies is far from easy, but whatever route is taken, reduction in fiscal deficits is crucial, and the more the major industrial countries can manage to coordinate their macroeconomic policies, the less disruptive will be the process of reduction. Concerted intervention in the foreign exchange markets by the Group of Five to reduce the value of the dollar illustrates the potential usefulness of such cooperation. And the fall in interest rates is also a welcome indicator of new efforts at international cooperation to achieve macroeconomic adjustments.

Lower real interest rates are crucial to the debt-servicing capacity of the heavily indebted countries. The fall in dollar interest rates has been one of the few changes in the external environment of benefit to the developing countries in 1985 and 1986. But interest payments continued to absorb 36 percent of exports in the Latin American region in 1985. One percentage point knocked off the interest rate means a reduction in the region's annual debt-servicing burden of more than \$3 billion. And that really makes a difference.

Easing rigidities in labor markets to reduce high unemployment and to help stimulate new industrial capacity is another necessary area of adjustment for the industrialized countries if economic growth is to be sustained. Policies to encourage flexibility and reduce marginal labor costs need to be pursued. Training and mobility need to be improved, and reductions in the protection afforded certain industries will be necessary to promote the movement of labor into more efficient and competitive activities.

Correcting distortions caused by inappropriate fiscal and monetary

policies and labor rigidities can create the conditions for strong sustained growth in the industrial countries, and thus increase import demand among them and boost both exports and imports of developing countries. This in turn creates the conditions needed to reduce "international trade restrictions", as reduced they certainly must be.

An open trading system is essential to the heavily indebted countries, whose hopes of restoring their creditworthiness will be dashed if they cannot expand their export earnings. The current decline in the growth of developing countries' export receipts and the continuing deterioration in the overall trading environment is therefore alarming. The slow-down in the growth of Third World exports to the industrial countries just cannot be explained solely in terms of such factors as exchange rate movements, the phase of industrial country recovery, or supply factors. The rate of decline strongly suggests that protectionist measures, particularly in manufacturing and agriculture, are among the causes.

Especially worrying is the increasing use by industrialized countries of non-tariff barriers, which, like tariffs, are often more restrictive on those products of specific interest to the developing countries, such as agricultural and textile products. As I have said, agricultural exports are of vast importance for many developing countries. Yet hardly a day goes by without new calls in the industrial countries for more import restrictions on these developing country commodities. It is true of the United States, the biggest agricultural exporter in the world. It is even truer of the nations of the European Economic Community. Their import controls greatly harm the interests of agricultural commodity exporters of the Third World, not to mention the interests of consumers of all nations.

Unless trends such as these can be halted and reversed, severe global macroeconomic problems of both debt-servicing and growth lie ahead. In broadest terms, the principles underlying the General Agreement on Tariffs and Trades (GATT) and the multilateral trading system must be reaffirmed and adhered to. I am, therefore, greatly relieved by the prospective launching of a new round of multilateral trade negotiations under the aegis of the GATT. This new round is essential to the rolling back of protection, and it will need to take into proper account the legitimate concerns of the developing countries, such as I have just outlined, and the developing countries' own interests will be best served if they are integrally involved.

Commitments to a standstill in protectionism and to support for trade liberalization have been made again and again by the industrial powers. Yet, despite these commitments, the continuing erosion of the GATT system threatens to eliminate the last vestiges of order in world trading arrangements. Why is it that governments will not live up to their commitments? Dare we hope that such pledges as are made next month at the Punta del Este trade discussions will also be acted upon? We must earnestly hope so.

Let me now turn to the last, but by no means least important, of the areas of action to be taken by the industrial countries: the provision of capital. The restoration of economic growth in the highly-indebted middle-income countries and in the troubled low-income countries depends to a critical extent on the mobilization of additional capital flows from both private and official sources. For example, the World Bank has concluded that even with substantial policy reforms in the heavily-indebted middle-income countries, restoration of growth and creditworthiness over a five-year period would require, depending on the performance of the industrial countries, between \$14 and \$21 billion of net capital flows annually.

With respect to flows of private capital, the revival of commercial bank lending to the heavily-indebted middle-income countries undertaking growth-oriented medium-term adjustment programs is crucial. In his proposals at the Seoul meetings, Secretary Baker called for \$20 billion in net new lending by the commercial banks in 1986, 1987, and 1988 in support of growth-oriented policies in the heavily-indebted middle-income countries. If they are to do this, the industrialized country governments must ensure that their regulatory authorities do not introduce conflicting signals. Certainly it is important to continue strengthening the banking system. We all benefit from that. But the measures intended for that purpose must not fly in the face of the need to restore growth in the debtor countries. I must therefore confess some concern over certain provisions of the tax bill in Congress which seem likely to discourage further commercial bank exposure in the indebted countries.

A return to voluntary lending by the commercial banks is an urgent requirement, and the trends so far have been disappointing. But, there are rays of hope. The acceptance by 50 banks lending to Mexico of the recommendation of the bank advisory group that they provide \$500 million towards an emergency bridge loan of \$1.6 billion to Mexico is encouraging. We must now hope that negotiations on the terms

and size of the commercial banks' share of the \$12 billion package in the works will be equally successful.

Let me insert here a word or two on what further role Japan might play in using its strong surplus position to bring capital to the countries that need it. There are good grounds for the view that, despite much advice to the contrary being offered to Japan, that country will not be able to rely increasingly on its domestic market for continued economic growth. A Japan that cannot export is a Japan losing its economic dynamism. And given the size of that economy, that spells a highly recessionary impact on the global economy. This means that Japan must continue to look for export markets. Expanding into Third World markets is one way of avoiding the problems involved in raising market share in the United States and Europe. And one way of reaching Third World markets is to provide them with the means to import. In other words: capital flows. Japan would find it very rewarding to increase the level of its capital flows to developing countries.

Japan has the ability to get capital to the Third World, owning today, as she does, 25 percent of total international banking assets. The United States comes second with 18 percent. But given the poor, and in many cases, deteriorating creditworthiness of the indebted countries, the Japanese banking system may hesitate to make major additions to its current exposure in the indebted countries without some form of governmental or institutional incentives. In this regard, mention has been made of the World Bank. It is my firm opinion, however, that the World Bank's authority to guarantee third party loans to developing countries should be exercised only on an exceptional basis and as a last resort.

You will not be surprised if I now make a strong pitch for my former employer, the World Bank. The bank clearly has a central role to play as catalyst and coordinator, helping to bring together the main actors in support of medium-term adjustment programs in the indebted countries and providing, in close collaboration with the International Monetary Fund (IMF), its own expanded financial and advisory support.

The bank can and does provide the kind of politically disinterested, expertly prepared advice on the formulation of medium-term adjustment programs. And then, to use an old colloquialism, it puts its money where its mouth is. Recent World Bank lending has placed major emphasis on structural and sectoral reforms in the highly-indebted countries. In its fiscal year which ended June 30, 1986, its lending to the ten highly-indebted countries undertaking adjustment programs

increased by 47 percent over the previous year compared with a 16 percent growth in total World Bank lending. Fast disbursing adjustment lending comprised some 19 percent of total lending in fiscal 1986 and 37 percent of the lending program to middle-income countries. Adjustment lending comprised only 3 percent of total lending just five years ago. In short, the bank has shown that it can move quickly, and with purpose.

These are early days for assessing the results to date of the adjustment with growth strategy that was endorsed a year ago at the World Bank and IMF meetings in Seoul. There are, however, early signs that the strategy can yield results if the indebted countries press forward with their programs of reform, and if the more favorable external economic environment and financial support they require are forthcoming.

Therefore, I urge that this strategy be supported. However, this does not mean that we should dismiss out of hand alternative proposals for easing the debt crisis. We should examine them carefully. But I remain convinced that we should not press upon the indebted countries strategies that might appear to bring quick relief in the short-run but weaken their creditworthiness—and, thus, the commercial banks' willingness to remain their partners—in the long-run. These countries need external capital as well as export earnings to support their growth-oriented adjustment programs. With growth they can grow out of their indebtedness. Without growth their future is murky indeed.

I believe, therefore, that the broad outlines of preferred public policy are clear:

- We must strive for sustained economic growth in the industrial countries.
- We must work harder towards a more open trading system and resist protectionism.
- We must maintain an adequate flow of supporting capital to the indebted countries.
- We must support the international financial institutions that play the central roles in restoring growth and equilibrium to these countries.

But none of the above will have been worth an atom of effort if the indebted countries do not themselves press on with their adjustments and their policy reforms. Help begins at home! How committed they are will decide how successful the international cooperative effort to contain and then wind down the debt crisis is going to be. But those countries which are committed and have embarked on growth-oriented with adjustment programs deserve to be supported. Indeed they must be supported.

## Regulatory Policies and Financial Stability

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*Robert A. Eisenbeis*

The U.S. economy is in the midst of one of the most prolonged recoveries it has ever experienced.<sup>1</sup> Truly impressive gains have been registered over the past three years as real gross national product (GNP) grew at a 4.5 percent annual rate, more than 10 million new jobs have been added to the economy, and unemployment has dropped dramatically. Equally important, this recovery has not been accompanied by inflationary pressures that were typical of the past two decades. Indeed, in the two months marking the end of the first half of 1986, prices actually declined slightly for the first time in many years.

Despite this generally positive economic performance, there is evidence that the U.S. financial system is showing signs of stress and that it may be more vulnerable than it has been for decades. The close correlation between the appearance of these supposed cracks in the financial system and the deregulation of deposit rate ceilings and other financial reforms contained in the Monetary Control Act of 1980 and the Garn-St Germain Act of 1982 led some analysts to question whether deregulation is consistent with a safe and sound banking system. Are these perceived problems of financial instability due to deregulation? What should public policy be to ensure financial stability? This paper investigates these questions and explores the links between deregulation and financial system safety. It is argued that many of the problems being attributed to deregulation are in fact legacies of past and present flaws in financial regulatory policies and the deposit insurance

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<sup>1</sup> See Frydli (1985).

systems. Finally, some basic suggestions are made to revise these policies to ensure that the financial system is less vulnerable to crisis.

### **Signs of financial stress and fragility**

Almost daily the financial press reports new problems in depository and other financial institutions that heighten concern about the viability of the financial system. What is particularly interesting is the diversity of these problems. Some are obvious, while others are more subtle.

The most obvious sign of difficulty is the dramatic increase in the rate of bank failures. Kane (1986) reports that during the 1970s, an average of eight banks and four savings and loans (S&L's) failed or were merged out of existence to resolve an impending collapse every year. In this period, the Federal Deposit Insurance Corporation (FDIC) classified fewer than 2 percent of the nation's banks as problem institutions. During the last 18 months, however, an average of 2.1 banks and 1.5 S&L's failed every week, and almost 10 percent of all banks and 20 percent of all S&L's were on the agencies' problem lists. Failures in 1986 are proceeding at an all time record pace. William Siedman, the present chairman of the FDIC, has projected that more U.S. banks will fail this year than any time since the Great Depression and will result in a net cost to the FDIC of more than \$1 billion. This dramatic increase in the number of bank failures comes after the phase out of deposit rate ceilings, raising the question whether deregulation is compatible with bank soundness.

Of even greater concern is the funding deficit of the Federal Savings and Loan Insurance Corporation (FSLIC), which would be \$18 to \$40 billion if market value insolvent S&L's were to be closed.<sup>2</sup> Last year, 20 percent of all S&L's were making losses at the rate of \$10 million a day and approximately 450 S&L's were insolvent using generally accepted accounting principles.<sup>3</sup> Close behind increased concern about the rate of failures are problems with the overall quality of assets in financial institutions. Loan delinquencies and defaults are running on average at about 1.4 percent of loans, which is substan-

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<sup>2</sup> Kane (1985) has provided estimates that suggested that up through 1983 these losses might be substantially greater.

<sup>3</sup> Ely (1986).

tially ahead of historical experience.<sup>4</sup> There are well-publicized credit quality problems in several major credit areas in both banks and thrifts, including oil-related lending, commercial real estate, agriculture, and Third World debt, particularly loans to Mexico, Venezuela, Nigeria, and Ecuador.<sup>5</sup> Problems in agriculture have already resulted in the near collapse of the Farm Credit System. These problems raise fundamental questions about lending policies in general. Financial markets have been especially mindful of these difficulties, which help explain why many bank stocks continue to trade below their book values.

These credit quality problems have heightened federal banking agencies' concern over the capital positions of the industry, and of major money center banks, in particular. They have instituted policies to increase significantly the capital of these banks. Most recently, growth of off-balance sheet activities at major money center banks has been attributed by the agencies to attempts to circumvent the new capital requirements and lies behind recent proposals to base capital adequacy standards on risks represented by both balance sheet and offbalance sheet activities. These new funding devices involve credit and interest rate risks that are not reflected on bank balance sheets and may not be correctly priced. As a result, they may be a major problem in the future. The banking agencies have recently met informally to discuss such new off-balance sheet activities as note issuance facilities (NIF's) and revolving underwriting facilities (RUF's) and have sent a memo to banks with the greatest amount of off-balance sheet liabilities in conjunction with the "Cooke Committee" about the need for greater internal controls. The memo also indicates that the significant increase in such activities represents "a significant additional risk to banks' funding strategies. Banks may wish to assess [and set limits on] their total volume of commitments in terms of their perceived funding capacity, perhaps assess this on a 'worst case' basis..."<sup>6</sup>

The increase in reported problems of fraudulent activities in both securities activities and depository institutions and in deficiencies in

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<sup>4</sup> Recent data from Salomon Brothers indicates that for their composite of major money center banks, net charge offs in 1985 were 0.68 percent of loans as compared with 0.26 percent in 1981.

<sup>5</sup> See excerpts of semiannual report of Chairman Volcker to the Congress before the Senate Banking Committee, July 23, 1986.

<sup>6</sup> Source *Bank Letter*, July 14, 1986, pg. 3.

internal controls lead one to question the basic underlying motives and ability of management to control their activities effectively. For example, fraudulent activities by the management of Penn Square Bank in originating and placing oil-related loans led to the failure of that bank. More important than the failure of this small Oklahoma bank were the spillovers of this failure that exposed imprudent management policies and significant weaknesses in credit quality control in several major banks. These problems resulted in funding difficulties culminating in the de facto failure and subsequent rescue of Continental Illinois Bank by the FDIC.

Even the form of the rescue of Continental was noteworthy. Out of fear for the impact that the closing of Continental would have on its correspondents and public confidence in the banking system, the federal banking agencies went to great lengths to avoid closing the bank. This included extending a 100 percent guarantee of all the liabilities of the bank.

Fraudulent activities and excesses in the repurchase agreement (RP)/government securities market exposed problems in not only securities firms but also in both money center institutions and thrift institutions. These led to the failure of not only some government securities dealers but also many non-federally insured thrift institutions in Ohio and Maryland. For example, the failure of ESM Securities in Florida and Beville, Bresler, and Schulman in New Jersey caused massive losses to one large Ohio S&L and loss of confidence in thrift institutions insured by the state-sponsored insurance fund in Ohio and resulted in the collapse of the Ohio fund. Similar problems of dealings with two failed dealing firms by Maryland thrifts was followed by collapse of the Maryland insurance fund. A major element in these problems were weaknesses in the operational procedures of many inexperienced participants in the RP market as they reached for higher returns and failed to take possession of the underlying collateral for their transactions.

A number of questions about recent developments in financial markets pose potentially large and unknown risks to the financial system. The large growth in financial transactions has increased both the volume and complexity of completing payments transactions. In some instances, these payments have taxed the capacity of the operations systems and their ability to handle these transactions. The recent overload of the computer system of the Bank of New York for transfers of government securities resulted in a \$22.6 billion

overnight loan from the Federal Reserve to enable the bank to complete transactions. Similar concerns about the volume of intra-day credit extended by the Federal Reserve to banks using Fedwire and what might happen in case of a major default has led to pressures to limit the volume of daylight overdrafts by individual banks in both the Fed's clearing system and in the private systems. In some instances, banks had intra-day borrowings in the form of overdrafts in excess of three times their equity. Failure to honor these overdrafts could place the entire payments system under great stress and result in a pyramiding of defaults if transactions could not be completed.<sup>7</sup> An example of this type of problem was when Bankhaus I.D. Herstatt failed and transactions were truncated in midstream.

These problems reflect perceived crises of management, credit risk, interest rate risk, and liquidity within our depository institutions. They represent major sources of concern to the regulatory agencies, Congress, and to the consuming public.

In the face of numerous signs that the U.S. financial system has become unduly vulnerable to shocks and cyclical variations in interest rate, increasing attention has begun to be given to ways of improving the safety and soundness of the banking system. In some respects we have moved through a full circle. It began more than a century and a half ago when entry and exit into banking were unrestricted, moved through a period of heavy regulation and government involvement, to one in which we began to deregulate, and to one in which we are again attributing the present failures and fragility of the financial system to a failure of regulation and the regulators that could be addressed by redesigning the regulatory system. Many are calling for more regulation as the means to ensure the safety and soundness of the banking system.

It can be argued, however, that many of the present problems depository institutions find themselves in are rooted in past regulatory policies. While often well intended responses to short run problems in the banking industry, these policies may have unwittingly weakened the very system they sought to protect. To understand how this can be the case, it is first necessary to explore how regulation has impacted financial intermediaries and may have contributed to financial instability.

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<sup>7</sup> Federal Reserve System (1985).

## **Regulation, innovation, and financial system fragility**

There are many reasons why the U.S. financial system is heavily regulated. A principal rationale has been to ensure the safety and soundness of the banking system.<sup>8</sup> Loss of confidence led to periodic panics as runs on individual commercial banks often spread to other institutions. The resulting contractions in the money supply, while now understood not to be the cause, certainly served to exacerbate recessions and depressions.<sup>9</sup> To keep these problems from reoccurring, depository institutions were regulated. Entry was controlled to prevent ruinous competition. Asset and liability composition was restricted, and capital limitations were imposed. In addition, rules were prescribed to limit self-dealing and other abusive practices by managers and owners, which had often resulted in loss of confidence and triggered inconvertibility of currency into specie and which remain today as one of the major causes of individual bank failures.<sup>10</sup> Besides placing limits on the activities of individual institutions, Congress also created the Federal Reserve System to protect the payments system and serve as provider of liquidity when banks faced temporary liquidity problems. Finally, the federal deposit insurance system was established to protect small depositors.

Since the Great Depression, other important reasons have emerged for constraining depository institutions. Particularly important have been the desire to reallocate credit, especially into "socially desirable purposes," such as home ownership, to facilitate the conduct of monetary policy, and to prevent discrimination and fairness in the functioning of financial markets.<sup>11</sup>

These regulatory responses to perceived problems have been important elements in affecting change in the U.S. financial system. Kane (1981) describes how regulation closes off arbitrage opportunities

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<sup>8</sup> Benston (1986) reviews the historical reasons for regulating financial institutions, which include taxation of banks as monopoly suppliers of money, prevention of centralized power, safety and soundness, provision of adequate banking services, support of housing and other credit allocation objectives, and prevention of invidious discrimination and other unfair practices. See Harris, Scott, and Sinkey (1986) or Benston, Eisenbeis, Horvitz, Kane, and Kaufman (1986).

<sup>9</sup> See Meltzer (1986), Cagan (1965), Benston and Kaufman (1986), and Rolnick and Weber (1985).

<sup>10</sup> See Benston and Kaufman (1986) and Peterson and Scott (1985).

<sup>11</sup> See Benston (1986) for a discussion of the historical reasons for regulating financial institutions and evaluation of their continued validity.

and prevents banks from raising funds in some markets and intermediating them by acquiring certain assets. This imposes costs and reduces profits, which limit returns to the shareholders of regulated institutions and provide economic opportunities for less-regulated competitors.

The costs associated with these regulations were heightened by the persistent inflationary rises in interest rates during the 1970s and induced significant financial innovations to avoid those costs. For example, commercial banks responded to binding deposit rate ceilings and member bank reserve requirements by devising new reserve-free and ceiling-free accounts, by funding themselves in the Fed Funds/RP and Eurodollar markets and through commercial paper issued through bank holding company subsidiaries and parents. Similarly, to compensate for funds disintermediated into the open market and lost to other institutions, thrift institutions found ways of augmenting the returns on existing account offerings to more closely approximate market rates. They also sought to tap into transaction account markets by offering automatic transfer accounts, NOW accounts, and share drafts. Equally important, less regulated firms were quick to jump at profitable opportunities foreclosed to traditional depository institutions by regulation and public policy and offered instruments and services, such as cash management accounts and money market accounts. Brokerage firms, in particular, have augmented their services to so-called higher income, or up-scale customers, and have increased their market share by offering packages of services that eliminate the need for their customers to deal with both a commercial bank (or thrift institution) for transactions and related financial services and with a brokerage firm for investment services.<sup>12</sup> They have also exploited the nonbank bank loophole in the Bank Holding Company Act of 1970 and have aggressively begun to offer traditional banking services and federally insured deposits to consumers.

These innovations have been made possible because of the fungibility of funds, the flexibility of financial markets, creative interpretation of existing law, and changes in technology. The expansion of com-

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<sup>12</sup> Eisenbeis (1985), Kane (1981), Cargill and Garcia (1985), and Cooper and Frazer (1984) have described and documented both the nature of these changes and their effects on the financial system.

puters, in particular, has facilitated the chaining together of accounts and transferring funds between regulated and unregulated accounts at the same and different institutions. It has made possible new methods for delivering financial services through automatic teller machines, automatic transfer accounts, cash management services, and money market funds. Similarly, computer technology has permitted the centralization of accounts and the creation of combined statement accounts that open up potential scope economies in bundling accounts and services.

Kane (1981) points out one aspect of these innovations that is particularly important. Innovations in nonfinancial areas have typically been economically productive because they improve product quality, reduce costs, or make possible the production of goods or services not previously possible. For example, the transistor and micro chips revolutionized electronics and made possible a whole new array of products both because of the speed at which they operate and their small size. The jet engine cost-effectively increased several fold the practical speed of both military and commercial air travel. Most new financial innovations, on the other hand, have been pursued and have prospered, not because they necessarily improved efficiency in providing financial services, but rather, because of their productivity in regulatory avoidance. They were simply ways of providing traditional lending, savings, and transactions services at or near market rates that had been precluded by regulation. In effect, they represented second-best, and not necessarily cost-reducing, solutions to deregulation and regulatory reform.

During the 1970s and early 1980s, successful innovation has often been accompanied by demands for reregulation from those that have experienced declines in market share or profits or who perceive that they might be competitively disadvantaged. These demands are not usually for a relaxation of all regulation. Rather, injured parties seek to restore competitive equilibrium in a market by equalizing regulatory burdens, and hence the tax that regulation imposes. The cries for a "level playing field" usually mean extending to less-regulated competitors the same regulations that prevented the disadvantaged from offering the new service rather than relaxing regulatory burdens.<sup>13</sup>

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<sup>13</sup> The regulators have not always realized that many of their actions were merely to ratify events that had already occurred in the marketplace. See, for example, Martin and Higgins (1986).

Sympathetic regulators and legislators usually have responded by realigning the competitive balance through selective modification of the regulatory constraints, often times shutting down the new innovation completely or imposing regulations that make it too costly to be offered profitably.

The end result is an interactive and dynamic process. Cost-imposing regulations spawn avoidance innovations, which lead to additional regulations being added or existing regulations being modified. This, in turn, changes the underlying economic incentives and brings forth the potential for a new round of financial innovations.

### *The consequences of financial innovation*

Nowhere has this regulatory dialectic process been more clear than in the banking agencies' responses to the innovations by depository institutions made to avoid Regulation Q.<sup>14</sup> Almost as quickly as one activity was shut down, another took its place. Interestingly, the financial regulatory agencies' short-run responses to deal with the nuisance of particular innovations have had long-run consequences that have dominated the short-run concerns about particular innovations and have seriously impacted the health of the financial system.

This interplay between regulation and financial innovation has had far reaching effects on the structure of U.S. financial markets and its institutions. For example, the traditional compartmentalization of financial service markets into commercial banking, thrift banking, and investment banking has virtually disappeared. Thrifts now offer checking accounts and can make commercial loans. Commercial banks are important sources of credit for housing, and they compete aggressively for consumer savings. At the same time, traditional bank corporate borrowers no longer find it necessary to depend on financial intermediaries for funds. They can float their own securities in the open market at rates that commercial banks can no longer meet.<sup>15</sup> Finally, investment banks are actively seeking to provide a wide array of bank

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<sup>14</sup> Table 3.2 and 3.3 in Eisenbeis (1985) document the sequence of innovations and regulatory responses as the agencies tried to keep depository institutions from paying market rates for funds.

<sup>15</sup> Sanford (1986) indicates that money center banks are finding it increasingly difficult to compete in the wholesale market. Newly syndicated Eurobank loans dropped by a factor of almost five times (from \$97 billion to \$22 billion) since 1981 while corporate issuance of international bonds increased from \$44 billion to \$163 billion. Domestically, the volume of nonfinancial commercial tripled and the number of issuers has doubled since 1978. Bank's shares of total short-term credit to businesses dropped from 49 percent to 26 percent.

and thrift-like services and commercial banks, in turn, are arguing for a repeal of Glass-Steagall.

Similarly, the process also has important implications for the formulation and conduct of monetary policy during the 1970s and into the 1980s. Financial innovation to avoid deposit rate ceilings clearly had important effects on the channels of monetary policy. When deposit rate ceilings were truly effective, tight money and high interest rates reduced the availability of credit from depository institutions. The incidence of restrictive policies was greatest on sectors that did not have quick or easy access to alternative sources of funds. In particular, credit restraint policies fell most heavily on the housing industry as flows of funds to thrifts were cut off. With the advent of new unregulated instruments and, finally, deposit rate deregulation, the incidence of tight money policies were spread more widely over the entire economy. From an equity point of view, this had the virtue of spreading the costs of policies across all sectors. But it also contributed to short-run policy formulation problem.

The proliferation of near-money substitutes, the expansion of cash management techniques, the growth and increased reliance by commercial banks on the Fed Funds/RP market for funding, the blurring of the distinctions between checking accounts and other financial liabilities at banks, thrifts, and nondepository institutions have also confounded the measurement of the money supply. Furthermore, because the functions of these near-money substitutes are not identical to traditional checking accounts or savings accounts, changes in interest rates have different effects on peoples' decisions to hold money, near-money, and other financial and nonfinancial assets. For example, a series of regulatory decisions designed to accommodate bank liquidity needs and stimulate growth of the government securities markets stimulated and paved the way for growth and expansion of the Fed Funds/RP market.<sup>16</sup> These decisions clearly had far reaching

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<sup>16</sup> In 1963, the Comptroller of the Currency exempted national banks' federal funds transactions from statutory borrowing and lending limits. A year later, the Federal Reserve exempted the borrowings of interbank deposits from Regulations Q and D. This effectively meant the federal funds included both deposits held at Federal Reserve Banks and other banks. Finally, the Federal Reserve's switch to lagged reserve accounting in 1968 provided additional incentives for banks to manage their reserve accounts and engage in large temporary purchases and sales of idle balances. Finally, in 1970, while attempting to reduce the flow of idle corporate balances into the federal funds market on an overnight basis (because such transactions were exempt from Regulations Q and D) the Fed also expanded the potential suppliers of funds to the market by redefining a bank to include S&L's, cooperative banks, mutual savings banks, federal agencies (including the Home Loan Bank System), and government securities dealers.

unintended effects. In particular, they accommodated a temporary shift of funds from holders of otherwise temporarily idle transactions balances into the market and thus contributed significantly to the measurement and prediction problems of M1 and the other monetary aggregates. The redefinition of the monetary aggregates in 1980 were the direct result of changes that had taken place in financial markets as the result of financial innovation.<sup>17</sup>

Similarly, low member bank reserve requirements on time deposits relative to demand deposits and the high opportunity cost to corporate treasurers and others of holding temporarily idle funds in noninterest bearing checking accounts provided incentives for banks to develop methods to enable their depositors to shift these transactions funds into interest bearing nonreservable liabilities. This further contributed to the blurring of the distinction between transaction and other liabilities.

These changes in the holdings of financial assets and patterns of financial intermediation affected previous estimated relationships between the monetary aggregates, interest rates, bank reserves, and economic activity. Moreover, these behavioral relationships have continually changed as a consequence of the interplay between regulation and financial innovation. Thus, reliance on data from previous periods to estimate parameters to use in policy formation for future periods must be biased and subject to error, making effective formulation of monetary policy difficult.

#### *Regulatory induced financial innovation and system stability*

The consequences of the regulatory dialectic have gone beyond affecting the structure of financial markets, increasing competition, and frustrating the conduct of monetary policy. There are also important implications for the safety and soundness of individual institutions and for entire industry segments. For example, many factors suggest that both banks and thrifts became more vulnerable to exogenous shocks and increases in the variability of interest rates, and many of the present signs of system vulnerability are the direct consequence of past legislative and regulatory policies.

*Interest rate risk.* One clear pattern was that Regulation Q and Regulation D-related innovations resulted in increased dependence

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<sup>17</sup> See *Federal Reserve Bulletin*, February 1980, also Porter, Simpson, and Muskopf (1979) and Tinsley, Garrett, and Frier (1978).

by depository institutions on shorter and shorter term liabilities.<sup>18</sup> As depository institutions turned increasingly to the Fed Funds market, the commercial paper markets, the Eurodollar, and short-term large CD market for funding, this resulted in an effective shortening of the effective maturity of the liability structures of depository institutions, especially for thrift institutions, and widened the maturity gap between their assets and liabilities. If interest rates were to rise, the resulting increases in costs as liabilities matured meant that interest rate risk had increased and that the potential for short-term liquidity problems heightened.<sup>19</sup>

The extent of this vulnerability became especially obvious when the Federal Reserve modified its operating procedures in October 1979 to focus on controlling the monetary aggregates rather than interest rates. The subsequent run up of market interest rates—to levels as high as 20 to 23 percent in the case of the prime rate—meant that institutions, like the thrifts, that borrowed short and lent long would be especially vulnerable. The squeeze on thrift institutions during this period has been well documented.<sup>20</sup> Following October 1979, there also was a significant increase in the variability of interest rates, which suggest that there had been a likely permanent increase in an exogenous source of financial system risk.

*Foreign risks.* Several regulatory and legislative incentives spurred the expansion of major U.S. banks abroad. First, rate ceilings on domestic sources of funds induced money center banks to look abroad in their search for lower cost funds.

United States tax policy also provided an incentive to conduct more and more business abroad. In particular, if bank holding companies were properly organized and foreign activities were conducted through

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<sup>18</sup> While interest rate risk exposure may have increased without the innovations, disintermediation would likely have become so severe during the early 1980s as market rates rose into the high teens that the thrift industry and many other regulated depository institutions would surely have failed.

<sup>19</sup> Martin and Higgins (1986) incorrectly argue that deregulation of deposit rate ceilings increased interest rate risk exposure. In fact, the opposite is more likely the case. The selective relaxation of the ceilings in only the shorter maturity segments, meant that the main way to respond to disintermediation was to widen the maturity gap. With ceilings deregulated and institutions given more freedom to fund themselves over the entire maturity spectrum, interest rate risk exposure is likely to be reduced.

<sup>20</sup> See Kane (1986) and Carron (1978, 19) for a most comprehensive discussion.

subsidiaries, then income earned abroad would not be treated as taxable income until it was repatriated. This meant that a bank holding company could raise funds abroad, say in the Eurodollar market or by issuing commercial paper, and then acquire foreign denominated assets. United States taxes would not have to be paid until the funds were brought back into the United States for domestic purposes. This feature of the tax law helps partially to explain the explosive growth of foreign subsidiary activities of major U.S. banks in the Cayman Islands and Bermuda, both of which are low-tax countries. This policy may have also stimulated the proliferation of foreign operations that would not have been profitable had it not been for the tax consequences. For example, until March 1978, banks could claim full foreign tax credits for a 25 percent tax that Brazil imposed on interest that banks earned in that country. Brazilian authorities typically rebated 85 percent of the tax to the borrowers, but banks still received a full tax credit for the taxes paid in the United States.

So powerful were these incentives to expand abroad, that many major U.S. banks earned more income and had more assets abroad than they did in the United States. The consequence was that the U.S. financial system, and especially its money center banks, were becoming increasingly intertwined with the rest of the world. Most recent data show that U.S. money center banks now have about 43.3 percent of their loans in foreign offices.<sup>21</sup>

This internationalization of U.S. money center banks' business suggests increased vulnerability to foreign exchange risks, to political risks such as the Iranian crisis, and to credit risks. However, even when these risks surfaced after oil prices fell radically, the banking agencies pursued damage control policies designed to minimize the short-run effects of an immediate crisis rather than to deal with the long-run incentive problems. For example, accounting rules were manipulated to avoid forcing large banks to recognize large declines in asset values in the case of troubled foreign credits.<sup>22</sup> In addition, special bridge loans have been arranged by the United States and other governments to allow Mexico, Argentina, and Brazil to continue meeting their interest obligations and not force the recognition of

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<sup>21</sup> Salomon Brothers (1986). This foreign exposure is down from 50 percent in 1982 and 1983.

<sup>22</sup> See Mussa (1986).

declining asset values and impending losses on the balance sheets of major banks. Moreover, public officials have repeatedly stressed that the long-term viability of these countries' economies require continued extensions of credit from private banks.<sup>23</sup> In part, the continued efforts of U.S. government officials to expand the credit exposure of U.S. banks represents an indirect way of subsidizing foreign governments instead of providing direct government-to-government loans and aid. The short-run cost is hidden in the implicit guarantees that the U.S. government provides to banks increasing their exposure. The long-run costs may be even larger if these guarantees are not appropriately priced and significant defaults occur that require nationalization of particular institutions.

*Capital adequacy problems.* In the mid-1970s, following a secular decline in bank capital ratios, the banking agencies took steps to modify the definition of capital for capital adequacy purposes rather than to tighten standards and force weaker institutions to increase their equity. In particular, the Comptroller of the Currency modified the definition of unimpaired surplus to include subordinated debt with a maturity of more than three years and all the agencies began counting such debt as capital for capital adequacy purposes. In effect, since many institutions could not meet the old capital standards, the agencies modified and relaxed the standards.<sup>24</sup> In part, these changes were in response to increased competition from less-regulated competitors and the resulting push for greater leverage by money center banks to bolster lagging equity returns due to a decline in return on assets.

In the case of bank holding companies, regulatory policy was designed to enable banking organizations to compete with the unregulated portions of the financial service market while maintaining the integrity of commercial banking subsidiaries. This policy was based on the premise that a bank holding company could be divided into two parts, a regulated component and an unregulated component. The regulated segment consisted of the bank subsidiaries while the unregulated segment was comprised of the parent holding company and its nonbanking subsidiaries. The aim was to isolate insured

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<sup>23</sup> See for example, the Baker proposal and Volcker (1986).

<sup>24</sup> Most recently, the Federal Reserve has proposed that perpetual debt, which does not exist to any extent in the United States but is becoming increasingly prevalent in other countries, be counted as capital for capital adequacy purposes.

bank subsidiaries from the rest of the organization and permit the less regulated segments to compete without the fetters of bank-type regulations. However, these policies, had the effect of contributing to the further decline in the capital ratios of banking organizations by encouraging double leverage. With double leverage, the proceeds from debt issued by parent bank holding companies was downstreamed as equity in subsidiary banks to improve the capital adequacy of subsidiary banks. As long as the insured banking subsidiaries were isolated from risk taking at the parent level or in nonbank subsidiaries, the insurance fund would be protected.

However, profit-making incentives make it neither practical nor possible to isolate bank subsidiaries effectively from the rest of the organization without reducing the potential to achieve the benefits of economies of production and scope.<sup>25</sup> This was recognized by the banking agencies when they published numerical capital adequacy standards in 1981.<sup>26</sup> In the case of bank holding companies, the numerical standard applied to the consolidated entity that restricted the practice of double leverage to avoid capital adequacy requirements.

Banking organizations have responded to these new capital adequacy guidelines by shifting more and more of their activities off their balance sheets. The growth of off-balance sheet financing, with its contingent risks, are only now beginning to be fully understood. It was because of these risks that the banking agencies attempted in their recently published risk-based capital adequacy standards to apply capital requirements to these off-balance sheet liabilities. As the Shadow Financial Regulatory Committee (1986) has pointed out, however, these proposed capital standards exclude significant dimensions of off-balance sheet financing, thereby making the excluded activities more attractive than regulated activities.

Tougher capital standards have also provided an additional impetus to the securitization of assets of depository institutions. Securitization increases asset turnover potential. Thus, a given level of capital

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<sup>25</sup> For discussions of how bank holding companies organize their activities, see Murray (1978), Rose (1978), and Whalen (1982a, 1982b). In addition, see the discussions in Benston, Eisenbeis, Horvitz, Kane, and Kaufman (1986); Cornyn, Hanweck, Rhoades, and Rose (1986); Flannery (1986); and Volcker (1986). For a contrary view, see Chase and Waage (1983).

<sup>26</sup> These standards were extended to multinational banking companies in June 1983. The International Supervision Act gave the agencies authority to impose binding capital requirements on banking organizations.

supports a greater volume of activity than if the underlying assets had remained on the books. Moreover, fee income is increased since a fee for forming the pool and servicing the underlying assets is usually retained as an income generating activity by the originating institution. In addition, securitization provides a relatively cheap source of funds and enables the institution to avoid reserve requirements and deposit insurance premiums.<sup>27</sup>

Pavel (1986) argues that securitization facilitates risk taking.<sup>28</sup> Regulations, like reserve and capital adequacy requirements, function as a tax by increasing the cost and lowering the net returns from holding lower yielding, less risky assets, as compared with the returns earned by less regulated competitors that might hold the same assets. Securitization enables an institution to package and sell off low-yielding, low-risk assets to add higher yielding, higher risk assets to its portfolio in an effort to increase net returns. Of even greater concern, however, is the fact that institutions often guarantee the payment of principal and interest. Thus, even though such securitized assets do not appear on the depository institution's balance sheet, it does retain both the interest rate and credit risk. To the extent that deposit insurance is mispriced and the federal deposit insurance agencies implicitly guarantee these contingent liabilities, this risk is ultimately shifted to the government. Pavel (1986) states, "Indeed, some bankers have even suggested that securitization would dry up if capital requirements and deposit insurance were correctly priced."

*Geographical and product diversification problems.* Public policies restricting geographic and product expansion have also had an important impact on financial system safety and soundness. State statutes providing home office protection and state and federal limitations on branching were instituted to limit entry into local markets and restrict competition.<sup>29</sup> One justification for these restrictions was to limit ruinous competition. Thus, one rationale for these policies was to promote safety and soundness.

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<sup>27</sup> See Pavel (1986).

<sup>28</sup> Securitization clearly has facilitated risk shifting as well. Thrifts have been able to employ securitization to remove long-term illiquid assets off their books and shift some of the credit and interest rate risk to the market.

<sup>29</sup> See Gilbert and Longbrake (1972), U.S. Senate (1972).

Historically, these restrictions have had just the opposite effect. Institutions that were mainly dependent on business derived from a relatively small geographic area had portfolios that were undiversified on both the deposit and loan sides of their balance sheets. Moreover, they often tended to depend on relatively few customers as both suppliers of funds and users of credit. This lack of geographical diversification meant that unit banking firms, and those whose branching areas were confined to a narrow area, were particularly vulnerable to general declines in economic activity and resulting credit quality problems that might hit their local markets. Indeed, during times of economic distress, geographically undiversified institutions suffered more than those operating widely disbursed branching and bank holding company networks.<sup>30</sup> During the Great Depression, bank failures were not uniformly distributed over the country.<sup>31</sup> Rather, they tended to be concentrated in agricultural areas in the Midwest and other states that restricted branching. In fact, even in states that permitted branching and bank holding company activity, the failure rates for more diversified institutions were significantly less than for unit banking institutions. Often, troubled unit banks were taken over by stronger branch banks and bank holding companies.

This same pattern is holding up today. The banks that are having the most difficulty as the result of the crisis in oil and agriculture are those institutions whose activities are not geographically diversified. And these tend to be in states in the central and western portions of the country whose economies have been based on agriculture and oil and that have historically had the more restrictive policies toward branching.<sup>32</sup> Most recent data on bank performance through

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<sup>30</sup> If geographic restrictions were so important to ensuring diversification, then one might ask how the multinationals could experience problems due to lack of diversification in their foreign loan portfolios. While much of the foreign lending problems in the major multinationals' portfolios are geographically dispersed, the soundness of many of these loans was dependent on prices prevailing in energy markets. The drop in oil prices affected all of these credits, and in this sense these loans were not diversified at all.

<sup>31</sup> See Gilbert and Longbrake (1972) and Warburton (1966), or Benston and Kaufman (1986), or Kaufman (1985).

<sup>32</sup> See Nejezchleb (1986). There are tradeoffs between the cost-reducing advantages of specialization and the risk-reducing benefits of diversification. But there is certainly evidence that the likelihood of catastrophic consequences are increased when institutions tend to specialize in particular industries, as illustrated by the problems in the thrift industry, the high failure rates of banks in Oregon specializing in timber (see Bovenzi and Nejezchleb (1985), and the problems in Texas and Oklahoma with oil-related specialties.

1985 clearly shows that asset quality problems were the dominant cause of financial difficulties at both large and small banks. Both Wall (1986) and Nejezchleb (1986) show that profitability, as measured by return on assets, declined for all banks through 1985. However, net interest margins have been maintained at all but new banks.<sup>33</sup> On the other hand, loan-loss provisions have increased substantially, especially at small banks. For banks under \$100 million, the increase in loan loss provisions accounted for all of the decline in return on assets. Only gains in net interest margins and reductions in tax liabilities kept the declines in return on assets from being even greater. Based on this evidence, they conclude that asset quality problems, especially in new and undiversified institutions, and not interest rate deregulation, is at the root of the present bank soundness problem. And this problem, in turn, is largely exogenous to the financial system, except to the extent that institutions have been prevented by regulation from diversifying sufficiently.

Limitations on product diversification have also adversely affected the soundness of many depository institutions. Nowhere is this better illustrated than in the case with S&L's and mutual saving banks, whose portfolios were restricted primarily to long-term housing and real estate-related assets funded with shorter term liabilities. Restricted portfolios, especially in combination with deposit rate ceilings, proved particularly vulnerable to the secular rises in interest rates in the late 1960s and in the 1970s. Rather than permit needed portfolio restructuring to reduce the maturity gap of their assets and liabilities, as had been urged early on by the Hunt Commission (1971), Congress clung stubbornly to the idea that these institutions needed to remain specialized lenders to help achieve the nation's housing goals. Policies, which included modifying accounting rules to avoid having to recognize declines in the net worth of thrifts and selective relaxation of Regulation Q ceilings to provide short-term funding at the margin, were followed to enable these institutions to limp along. The present problems of the thrift industry and the serious funding problems of the FSLIC are the long-run consequences of these short-sighted and short-run policies and not related significantly to the diversification that has been permitted.<sup>34</sup>

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<sup>33</sup> In fact, net interest margins increased, on average, for banks under \$100 million between 1984 and 1985.

<sup>34</sup> See Benston (1986).

Interestingly, there is evidence that the kinds of diversification that would have been helpful to thrifts would not have necessarily resulted in thrift institutions giving up their role as specialized lenders. Credit unions, for example, did not have the extreme mismatch in the maturities of their assets and liabilities. Deposit rate ceilings were substantially removed for these institutions before their repeal by the Monetary Control Act of 1980. As a result, they had a chance to adapt to lower interest rates before other institutions, and they have done so reasonably successfully without changing their traditional roles as lenders. Similarly, Massachusetts mutual savings banks had somewhat wider powers than other thrifts, and they have not suffered comparably with more restricted institutions in other states.<sup>35</sup> On the other hand, New York mutual savings banks, which labored under a 10-percent usury ceiling on mortgage interest rates, did significantly worse and have resulted in the greatest losses to the FDIC.

#### *Present regulatory policies contributing to financial instability*

Some of the more troublesome regulatory restrictions that contributed to the present signs of vulnerability have been eliminated or reduced significantly in their impact on depository institutions. Deposit rate and usury ceilings have been phased out pursuant to the Monetary Control Act of 1980 and the Garn-St Germain Act of 1982. Reserve requirements, although extended to all institutions issuing transaction accounts, have been substantially reduced in their level, blunting but not eliminating them as sources of competitive disadvantage to banks and thrifts. Thrifts have received expanded powers and can now issue transaction deposits, make commercial loans, and engage in a wider range of consumer lending.<sup>36</sup>

On the other hand, other regulations and policies continue to play important roles in constraining depository institutions and providing

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<sup>35</sup> See Kopcke (1981), Eisenbeis (1982), and Crockett and King (1982). Eisenbeis and Kwast (1982) have also shown that commercial banks voluntarily chose to specialize in real estate activities significantly outperformed S&L's and did as well or better than many more diversified commercial banks. The key seems to be portfolio balance rather than the types of activities engaged in per se.

<sup>36</sup> The evidence is, however, that they have not moved very far in taking advantage of these powers, especially in the commercial lending area. Presumably, this failure is related to their present financial condition as well as the inability to issue corporate demand deposits. See Baker (1982), Crockett and King (1982), Dunham (1982), and McCall and Peterson (1980).

incentives to further innovation and risk taking. Foremost, are the incentives provided by policies for dealing with troubled and failing banks. These include the present flat rate deposit insurance and a host of related policies, such as accounting and capital forbearance policies, which defer recognition of losses and do not impose costs on the managers and owners of troubled and failing depository institutions according to the risks posed to the insurance funds. Other policies that also have important systemwide risk implications include the Federal Reserve's daylight overdraft procedures and the subsidies in float. Some of these issues have already been discussed in reviewing past risk enhancing policies and will not be discussed again.<sup>37</sup>

### *Deposit insurance and failure resolution policies*

There are numerous ways the present deposit insurance structure tends to subsidize and encourage risk taking. Most discussed is the system of flat-rate premiums, which levies charges for insurance based on total deposits of the insured rather than on the risks imposed to the insurance funds.<sup>38</sup>

Such a system encourages risk taking in several ways. With flat-rate premiums, there is no incentive for managers to be concerned about costs increasing as they acquire more risky assets to obtain higher returns. This is especially important for weak institutions, whose only hope for survival may be to gamble by taking on higher yielding and more risky assets in a last gasp effort to get out of their difficulties. Their ability to issue federally insured deposits enables these institutions to raise funds without having to pay a risk premium. If the same volume of funds were to be raised through uninsured means, the institutions would have to compensate the suppliers of funds for the risks that their money would not be returned. With government insurance, the supplier of funds need worry only about the credibility of the insurer, assuming that transactions costs are low.<sup>39</sup> A risky

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<sup>37</sup> Time and space limitations mean that this list cannot be exhaustive.

<sup>38</sup> See Kane (1985, 1986).

<sup>39</sup> Failure of the insurer to issue creditable guarantees can lead to loss of confidence in the system. This is precisely what happened when the losses imposed by Home Saving on the state-sponsored insurance fund in Ohio raised questions in the public's mind about the ability of the fund to make good on its liabilities. The resulting run on the non-federally insured institutions was fueled further by the failure of the state to provide supplemental funding.

depository institution purchasing such funds need only offer a slightly higher rate for the federally insured deposits, which are not otherwise differentiated from the federally insured liabilities of sound institutions, to be assured of ample resources. The risks in such instances are borne by the government insurance funds, which we have already established are not fully compensated for the risks to which they are exposed.<sup>40</sup> Least one doubt that such policies are pursued, recent hearings document the extreme rates of growth of financially troubled thrifts as they issued federally insured deposits in an effort to “grow out of their problems”.<sup>41</sup> The hearings also showed that these rapidly growing institutions did not increase their equity to support this growth, suggesting that they became even more risky in attempting to solve their problems. Making matters worse was the failure of the FSLIC to monitor and attempt to limit the increase in its risk exposure that resulted from these go-for-broke strategies.

The incentives for weak institutions to engage in such gambles are heightened by the policy of limited liability. Limited liability creates an asymmetry in the way losses of failed institutions are borne relative to the how returns are distributed to owners. Should a weak institution fail, limited liability means that losses are imposed only up to the amounts invested, where there are no limits to the distribution of earnings to the owners of a successful firm, including those weak ones whose gambles pay off. This means that the closer weak institutions come to insolvency, the greater the value of the subsidies inherent in government guarantees.

One might hope that the uninsured creditors of risky institutions would become concerned about especially risky gambles and exert market discipline on such institutions. However, this has not usually worked for several reasons. In the case of many thrift institutions, there simply are not large amounts or large numbers of uninsured depositors and creditors, and thus there is little potential for such discipline to operate.

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<sup>40</sup> The banking agencies, especially the FDIC, had argued that deposit brokerage activities were a significant element in the failures of many smaller banks. A recent study by the Government Operations Committee concluded that brokered deposits were not a major cause of the failure of troubled S&L's.

<sup>41</sup> See “Financial Conditions of the Bank and Thrift Industries,” Hearings before the Subcommittee on Financial Institutions, Supervision, Regulation and Insurance of the Committee on Banking, Housing and Urban Affairs, U.S. House of Representatives, 99th Congress, First Session, Part I, September 11, 12, 18, 19, 1985.

For large banks, a different problem arises. Regulatory agencies are often reluctant to close large institutions because of concern about the ripple effects to other institutions and financial markets. This has led to a number of different policies, all designed to prevent or limit losses to uninsured creditors.

First, the Federal Reserve will typically provide temporary liquidity by purchasing assets and extending discount window loans to troubled institutions. This gives uninsured creditors the opportunity to get out whole. Such loans often involve no penalty rate, and when they do, the rate is not especially high.<sup>42</sup> Meltzer (1986) makes the telling point that without a penalty rate, this policy for administration of the discount window subsidizes risk seeking behavior, such as the speculation on asset prices engaged in by Franklin National and First Pennsylvania, and increases, rather than reduces, overall system risk and the risks borne by the taxpayer.

Second, in the case of Continental Illinois Bank, concerns for system safety and soundness led the agencies to guarantee all the liabilities of the bank. Thus, *de facto* 100 percent liability insurance was extended far beyond the \$100,000 provided by law.

To make matters worse, the Federal Reserve first arranged for a group of money center banks to extend credit to Continental. Instead of acting to making the likely failure of a large bank an isolated event with no system implications—as the Fed clearly could have done through use of the discount window—other institutions were induced to accept a share of the risk of loss. This institutionalized—and communicated to the rest of the world—the interdependence among money center institutions, even if none had existed before. Meltzer (1986) concludes that this confuses the health of the system with the health of individual institutions and suggests other ways in which this policy could have reduced rather than increased confidence in the system. In particular, the Fed's reluctance to provide discount window loans to Continental raised questions about the soundness of the collateral in Continental's portfolio. Moreover, it suggests the Federal Reserve may not have fully understood its function as lender of last resort.

Third, if a failure does occur, the agencies have a propensity to

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<sup>42</sup> Penalty rates were instituted following the failure of Franklin National Bank, to which large volumes of subsidized discount window loans were extended.

arrange a purchase and assumption transaction by another institution that acquires the assets and assumes all the liabilities of the failing firms. Relying on purchase and assumption transactions to avoid temporary, and possibly large, disruptions that might be caused by the failure of an institution also eliminates any tendency for the uninsured creditors to be concerned about their own risk exposure. Should a failure occur, the purchase and assumption transaction results in their uninsured claims being assumed by a healthy institution with no losses being imposed. The entire risk, and cost of the failure, is imposed on the equity holders and the FDIC. The FDIC must often compensate the acquiring institution by buying loans for cash from the failed bank's portfolio or by indemnifying the acquiring institution for losses that might occur in the future. This enables all the creditors except the equity holders to get out whole with de facto 100 percent liability insurance.

Policies preventing costs from being incurred by uninsured creditors have been administered unevenly. During 1983 and 1984, the FDIC began a policy of paying out only a portion of the claims to uninsured creditors with its so-called modified payout program, notably when Penn Square Bank failed. But this policy was abandoned in the case of Continental Illinois, reflecting the propensity to protect the creditors of large institutions more than small institutions.<sup>43</sup> This not only removes an important source of market discipline on the risk-taking propensities of management, but also institutes a system of differential guarantees in which large institutions are favored over smaller institutions. Such differential coverage conveys a subsidy to larger institutions, since their costs are not increased to cover their increased coverage. This policy also raises a fairness issue since large institutions are given a competitive advantage over small firms by virtue of their better guarantees.

The deposit insurance problems are heightened by closure and related policies, such as the use of regulatory accounting principles (RAP) and capital forbearance, which tend to postpone the closure of insolvent institutions. The present funding problems in the FSLIC are the direct result of improper closure policies that have permitted insolvent S&L's to continue in operation long after their net worth

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<sup>43</sup> In the arrangements for Continental Bank, the Comptroller of the Currency indicated that the top 11 banks were too large to let fail.

had gone to zero. Moreover, the longer these institutions are permitted to continue in operation, the more valuable mispriced deposit insurance becomes and the greater the incentives are to engage in go-for-broke strategies. This increases the probability of even greater losses for the government and taxpayer.

Kaufman (1985) correctly points out that when a sick institution is closed at the instant the market value of its net worth goes to zero, there are virtually no risks to the insurance fund and, thus, no need for an insurance fund at all. With such a policy, insurance risks exist only because continuous monitoring of the value of net worth may be so costly that they exceed the risks of loss when audits are performed at discrete intervals and because of the difficulties in valuing the assets.<sup>44</sup> Overvaluing assets might lead one to conclude that an institution's measured net worth was positive when its true net worth was negative.

## Summary and conclusions

### *Proposals to ensure financial stability*

In examining a number of the supposed signs of fragility causing concern in the U.S. financial system, this paper has concluded that deregulation had played a minor if insignificant role. Exogenous factors, on the other hand, such as the decline in oil prices or the collapse of the speculative real estate markets that caused a drop in the value of agricultural land values, were significant in impacting bank profitability and causing failures. Many of these problems, however, were exacerbated, directly or indirectly, by regulatory policies.

Understanding that many of the perceived weaknesses in the present financial flow from or have been exacerbated by the unintended effects of past regulatory policies provides an important clue to needed financial reforms. For example, unneeded regulations that impose costs and prevent portfolio diversification, either geographically or in products, should be eliminated, and regulatory policies that create incentives to increase risk should be modified.

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<sup>44</sup> Pyle (1985) shows that when the insurance agency charges for audits and if audits are more costly the closer the institution is to insolvency, then the institution chooses the optimal level of capital to balance the costs of equity with the costs of being audited. In this model, capital adequacy becomes a decision variable for management that is related to examination costs and not portfolio risks.

Numerous proposals have been made recently to reform the structure of the deposit insurance system and improve the safety and soundness of the financial system.<sup>45</sup> Rather than propose a detailed set of alternatives, it would be useful to briefly summarize a few of the major areas where reform efforts should be directed and the basic elements that such reforms should encompass.

*Closure policies for failed institutions.* The present crisis in the deposit insurance system is rooted in closure policies that fail to close institutions when the market value of the net worth of insured institutions go to zero. Keeping insolvent institutions afloat, rather than closing them when the market value of their net worth goes to zero and imposing costs on uninsured creditors and shareholders, creates a set of perverse incentives that increase the risk exposure and potential losses to the insurance fund and eliminates the beneficial effects that market discipline can provide.

Implementation of a market value net worth closure rule, however, requires effective monitoring of the market value of net worth by the parties at risk, which include the insurance fund, the lender of last resort, uninsured creditors, and equity holders. Market value reporting and accounting to risk bearers are critical to effective monitoring.<sup>46</sup> It also means that both balance sheet and off-balance sheet risks be assessed.

*Deposit insurance.* Deposit insurance reform is needed in several areas. Pricing reform is needed to get rid of incentives for increased risk-taking in the flat-rate premium system. Moreover, both on and off-balance sheet risks should be valued and priced. Until these incentives are eliminated, moves to increase diversification of the industry and expand powers will be severely limited by incentives to shift risk to the government.

Pricing reform requires the introduction of market-based methods to price risk and enhance market discipline. This suggests modification of the insurance contract to place more creditors at risk. Increasing the liability of equity holders; reducing insurance coverage, providing for coinsurance, providing for deductibles, and increasing the amount

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<sup>45</sup> See, for example, Benston, Eisenbeis, Horvitz, Kane, and Kaufman (1986) or the papers in Kaufman and Kormendi (1986).

<sup>46</sup> Kane (1985, 1986) has made numerous interesting suggestions on how to deal with the problems of assessing hard-to-value assets.

of uninsured subordinated debt holders have all been proposed to accomplish this.<sup>47</sup>

Risk charges for insurance coverage for should also be market based to prevent governmental credit allocation and to discipline the insurance agencies. This could encompass reliance on reinsurance and/or competition among federal agencies in pricing insurance coverage.

For the insurance guarantees to be credible in the market place, provisions should be made to provide backup funding for the insurance funds. Lack of a credible guarantee was the major reason that the Ohio insurance fund collapsed. The public and financial markets should also know exactly how problems will be resolved and that costs will be imposed when required.

*Lender of last resort reform.* The lender of last resort function is closely related to the insurance function. Provision of emergency liquidity is the principal tool for dealing with runs. The Federal Reserve should provide this emergency credit to market-value solvent institutions that might otherwise become insolvent if they were forced to liquidate assets in the market at fire sale prices to meet liquidity needs.<sup>48</sup> Effective functioning of the discount window and limiting the risk exposure of the insurance funds, however, requires that market-value insolvent institutions not be kept afloat. Furthermore, it implies that discount window borrowing should only be done at a penalty rates to enhance market discipline and reduce incentives for risk shifting to the lender of last resort.

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<sup>47</sup> See Kane (1985, 1986) or Benston, Eisenbeis, Horvitz, Kane, and Kaufman (1986).

<sup>48</sup> See Benston, Eisenbeis, Horvitz, Kane, and Kaufman (1986) for a discussion.

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# Commentary on “Regulatory Policies and Financial Stability”

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*George J. Benston*

## **Introduction**

I find it difficult to carry out the traditional role of a discussant. Discussants attempt to expose egregious errors, if possible, and trivial mistakes, if necessary. At the least, a discussant can disagree with the author about major points or, if one is sufficiently clever, minor ones that can be made to appear vital. But I agree almost entirely with Eisenbeis's paper. So, I am reduced to adding some supplementary remarks.

## **Systemic stability**

I would have preferred that Eisenbeis had considered the stability of the financial system as a whole separately from the stability of individual financial institutions. Systemic stability is of greater concern because the collapse of the financial system often results in a depression, causing great waste in resources and personal distress to many people. System failures in the United States has generally included the failure of individual institutions. However, a depression can occur without bank failures; an example is the Canadian 1930s experience, when no bank failed. (See Schwartz, 1986, for an excellent discussion and analysis.)

## *Regulation and system failure*

Regulation affects systemic stability primarily through the control of base money and the money supply by the central bank. As is well known, a fractional reserve banking system is particularly subject to exogenous changes in high powered money. When the country was

on the gold standard, specie could be exported or hoarded, with a resulting decrease in bank reserves and in the money supply. This occurred, for example, in 1893, when the London banking firm of Baring Brothers, which specialized in financing U.S. enterprises, failed. Its European creditors demanded that Americans pay their debts in gold. The outflow of gold resulted in a liquidity squeeze that led to the panic of 1893 and the suspension of 491 commercial banks.<sup>1</sup>

The failure of individual banks also can lead to a reduction in base money. Should a bank fail and depositors decide that no bank is safe, they could hold their funds in currency, or gold if the country is on a convertible gold standard. This converts fractional reserve money to 100 percent reserve money, with the consequence that the money supply must decrease. The Panic of 1907 was due to such a situation. The Knickerbocker Trust Company was unable to meet nervous customers' demands for gold. The bank suspended operations until 1908 and other trust companies experienced runs.<sup>2</sup>

The failure of one or more banks also could result in a run on other solvent banks. The attempt by these banks to sell assets to meet their depositors' demands could result in lower "fire sale" asset prices. The losses incurred could be sufficient to result in these banks' insolvency.

### *The role of the Federal Reserve as a regulator*

The Federal Reserve was established to prevent such systemic crises. It can produce as much high powered money as is necessary to offset any desires of the public to hoard or export base money. Further, as lender of last resort, the Fed can delay the legal insolvency of any institution and prevent fire sales losses. However, in exercising this power, it runs the risk of expanding the money supply beyond the growth of the economy, thus causing inflation with an attendant redistribution (and waste) of resources as people restructure relationships to deal with unexpected changes in the value of contracts.

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<sup>1</sup> The situation was exacerbated by gold hoarding as a result of the fear, in 1892, that the United States would leave the gold standard.

<sup>2</sup> The successful prior campaign of the Secretary of the Treasury to stabilize interest rates set up the panic, for two reasons. First, banks were induced to hold lower levels of reserves. Second, the goal was accomplished with a stabilization fund of gold acquired with a Treasury-provided import subsidy. The Bank of England retaliated in 1906 by raising its discount rate and asking British banks not to renew American finance bills. (Cleveland and Huertas, 1985, Chapter 3, pp. 27-28).

*The Fed's control of the money supply.* It is not clear whether the Fed has, on balance, reduced or exacerbated financial instability. In its effort to reduce what was believed to be a destabilizing inflation of stock market prices, the Fed allowed and possibly caused the money supply to decline in the early 1930s. As people converted their deposits to currency and gold, the Fed could have used open market operations or a reduction in reserve requirements to replace the high powered money removed from the system. In part because it was legally constrained by its limited holdings of gold and the legal requirement for a gold reserve against Federal Reserve notes, and in part because it misjudged the situation and was more fearful of inflation than depression, it did not perform well during this period and the money supply declined by about a third. As an important consequence, over 9,000 banks failed. Another, perhaps as important, cause of the large number of failures was the banks' regulation-required inadequate diversification imposed by state-enacted anti-branching laws. (See White, 1983, for a good analysis.)

*The Fed's control of interest rates.* Until the late 1970s the United States experienced a very low rate of financial institution failure, in part because the Federal Reserve did not allow or create large decreases in base money. Regulations limiting entry also played an important role by increasing the value of bank charters, and hence of bank capital, thereby increasing bankers' incentives towards avoiding risks that might reduce the value of their charters. However, the Fed's 1979 shift from a policy of stabilizing and restraining nominal interest rates to one of allowing these rates to increase as the supply of money increased resulted in an unexpected sharp increase in rates. As a result, the market value of fixed-rate obligations declined sharply. Thrift institutions were particularly hard hit, because they specialized in fixed-rate mortgages while holding essentially short-term liabilities. Between January 1981 and August 1986, over 230 savings and loans associations (S&L's) officially failed, 6 percent of the number operating at the beginning of the period. Over 300 more were merged by arrangement of the authorities to avoid their being closed, and an additional 500 are probably economically insolvent, although they were allowed to remain open by the authorities. By far the most important reason for these failures is the effect of the unexpected increase in interest rates on the thrifts' duration-unbalanced portfolios (Benston, 1985).

It is possible that unexpected nominal interest rates could have gone up as much in the absence of central bank regulation. After all, the

Fed did keep interest rates very stable during most of the years following the Great Depression. It also is possible that the stability the Fed imposed was responsible for thrift associations' believing they could safely hold duration-unbalanced portfolios that were subject to interest-rate risk, because the risk was slight. Other regulatory factors, though, also played a role—in particular deposit insurance and regulations that constrained thrifts' portfolios. All these factors worked towards thrifts' holding interest-risk-sensitive portfolios.

*The essential role of the Fed.* Whether or not the regulation of the money supply and interest rates by the central bank caused or reduced financial system instability in the past, it is clear that such instability can be prevented by the Fed. There is no reason to believe that any contemporary event—short of nuclear war, which relegates concern for financial instability to insignificance—can result in financial collapse if the Fed takes the appropriate action.

*The improbability of an exogenous event causing system failure*

Consider, for example, the banking equivalent of a nuclear war—the default by Mexico or other countries of their debts, with the result that several banks, large and small, become insolvent. In the first instance, the stockholders and de facto uninsured creditors of these banks would lose some or all of the wealth they have invested in these banks. Losses also probably would be incurred by the Federal Deposit Insurance Corporation (FDIC). In effect, there is a shift of wealth from these persons and organizations to the taxpayers of the defaulting countries. Second, there would probably be a loss of wealth as banking relationships were disrupted—in particular, funds would not be available to the failed banks' customers as and when expected and some customers would have to establish new banking connections. Third, some additional wealth would be lost as lawyers were diverted from more productive pursuits, such as suing doctors and airlines, to suing auditors and bank directors, and as bank examiners and supervisors were shifted from preventing frauds to sorting out the mess. Fourth, there might be some foreign policy effects. But there is no reason to expect a systemic collapse.

There might be a loss of consumer confidence in the banking system. Depositors might fear that other banks were similarly subject to failure. However, this fear, even if contagious, should not result in a systemic collapse, as shown by the following description of what people who fear these other failures might do.

First, consider the options available to holders of large deposit balances. They can either shift their balances to presumably safe banks or use the balance to purchase securities or other assets they believe to be safe from default. Keeping the funds in currency is not an option except for those few who have large, secure vaults. Even then, these former depositors not only lose the use of their funds for transactions purposes—which, presumably, is the reason they were holding the balances—but they also lose interest earnings that, say, U.S. government bills could yield. If the funds are deposited in other banks, there is no decline in the money supply and no systemic liquidity problem, although transactions costs to the banking system are greater. If safe securities are purchased, it seems clear that the sellers of the securities would deposit the funds in some bank, thus returning the funds to the banking system. (If they did not trust any bank, they would not have sold the securities for cash.) This is not to say that there would be no effects on the financial system—interest rates would increase somewhat and costs would be incurred as securities were traded and bank accounts were changed. Velocity might change, but the Federal Reserve can offset the change with appropriate open market operations.

Second, consider the possible actions of holders of small deposits. They might convert their deposits into currency that is held in safes or mattresses. Or, as seems to have occurred during the Great Depression, gold could be hoarded, which could be a problem if gold were a part of the monetary base.<sup>3</sup> Unless the central bank took offsetting actions, there could be a decline in the money supply, such as that which occurred during the Great Depression. But, even if the Fed does not do its job, there is little reason to fear such conversions of fractional-reserve to 100 percent-reserve money, because federal deposit insurance removes peoples' fear that their funds will be lost if an insured bank fails.

A similar analysis could be conducted for the effects of the failure of a large bank, such as the Continental Illinois Bank. Indeed, Continental Illinois did fail—its shareholders lost most of their investments and the officers lost their jobs (if not their pensions). But the bank went on. Had the interests of the depositors and other creditors not been protected, these people would have lost some or all of their funds to the benefit of the FDIC. There also might have been runs on some

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<sup>3</sup> See Wigmore, 1986, for some evidence.

banks. Had this occurred, these banks would have had to sell assets or borrow funds in the market or from the Fed. Some might have been found to be insolvent or would have become insolvent. (However, the cost of fire sale losses could, and should, be reduced to minor proportions if the Fed operates effectively as the lender of last resort.) As a result, their shareholders would have lost wealth and, possibly, their officers would have lost their jobs. There would have been some disruption in financial and employment relationships, perhaps a costly disruption, but the financial system would not have collapsed.

It should be noted that the insolvency even of banks that cannot be merged with another bank, sold, or transferred to creditors (such as a giant bank or one in a unit banking state that prohibits holding company acquisitions) need not be resolved by their dissolution. Instead, the FDIC could impose a modified trusteeship in which the claims of the shareholders were eliminated and a "haircut" was applied to the claims of uninsured depositors and other creditors equal to the expected loss plus a cushion for estimation error. The balance of their funds could be freely transferred. From past experience, the amount impounded should be no more than 10 to 20 percent of their claims, except in cases of fraud or massive mismanagement. The disruption in commerce, then, should not be very serious, even for those depositors who suffer losses.

Some concerned observers might argue that foreigners would nevertheless fear a collapse of the U.S. banking system. The result might be a run from the dollar. But unless foreigners feared that all banks would collapse, they would simply redeposit their funds in banks they considered safe. Even if foreign (or domestic) depositors distrusted all domestic banks, base money could not decline if the funds were redeposited in a foreign bank, since they would have to return to the U.S. banking system by way of the central bank. It is only if foreigners feared that the Federal Reserve would not maintain the level of base money that there would be a change in the relative value of the dollar. In that event, though, the fault would lie in the failure of the central bank to act appropriately, rather than in the failure of the banking system.

Finally, some might argue that there would be a chilling psychological effect on bankers and investors. Bankers might become overly cautious in making loans, and investors might take fewer chances or demand higher expected rates of return. Against this possibility one should consider the expectation that bankers and

investors would make excessively risky loans and investments on the assumption that no bank would be allowed to become insolvent. I believe that the recent record of banking operations and losses provides some evidence that excessive rather than insufficient risk taking is the more important concern.

Thus, systemic collapse is not a problem, assuming that the central bank does not sharply reduce base money. This is not to say, however, that regulatory actions to prevent the failure of individual financial institutions or to mitigate the effect of failures is not worthwhile in the sense that the benefits exceed the costs. At the same time, we should consider the *ex ante* benefit from banks operating at lower degrees of risk because they fear runs.

### *Payments system risk*

Before considering the stability of individual institutions, the risk of payments system failure should be mentioned. Federal Reserve Chairman Volcker has emphasized that banks are special because they offer payments services to consumers and have access to the payments system and the Federal Reserve's discount window. In this regard, he argues for both too much and too little. It is true, as Eisenbeis points out, that the failure of a bank could disrupt the payments system. If this were a serious problem, the Fed should consider barring access to the system by all banks that do not meet stringent equity tests. It seems clear that some banks could add a significant amount of risky assets and operations and be safer than other banks that also have access to the system. Thus, Chairman Volcker is asking for less than he should. He argues for too much by emphasizing the special nature of commercial banks. An institution that specializes in loans rather than in bonds, equities, real estate, or another set or combination of assets is not, for that reason, less likely to fail suddenly, and it is sudden failure that characterizes the risk to the payments system. Indeed, the history of sudden bank failures is dominated by the failure of lending institutions that were too highly specialized or were subjected to loan-related fraud by top management rather than by those with other types of asset-value problems.

### **Individual institution stability**

Regulation affects the stability of individual financial institutions by (1) constraining institutions from diversifying efficiently, (2) enhancing or reducing the profitability of regulated institutions, (3) providing

incentives to owners and managers towards risk taking or avoidance, and (4) monitoring, supervising, and preventing fraud and grossly incompetent management. Each of these effects of regulation are discussed briefly.

### *Diversification*

It is not possible for people to predict events perfectly. Hence, diversification of assets, liabilities, and operations is generally recognized as an important means of ensuring financial stability.

*Branching (geographic) restrictions.* Eisenbeis identifies limits on branching as among the more important government regulations constraining institutions from diversifying efficiently. The insolvency of many banks that served agricultural and natural resource producers in the 1920s and the 1980s were due, in large measure, to their having served only these customers. Banks located exclusively in towns dominated by a few industries, such as steel producers, suffered similar problems when these industries failed or declined.

*Asset-liability restrictions.* Tax laws encouraged and regulations required thrifts to specialize in fixed-rate mortgages that were funded by short-term liabilities, thus subjecting them to interest rate risk. Until 1980, most thrifts were not allowed to make consumer or business loans, except those related to real estate or education. Federally-chartered and most state-chartered thrifts were not allowed to make variable-rate mortgages until 1981. Direct investments are restricted to 3 percent of assets for federally-chartered thrifts and to similarly small percentages for most state-chartered thrifts. Commercial banks are not allowed to hold corporate securities or direct investments.

As is discussed above, the potential interest-rate disaster to which thrifts were subject became a reality in the 1980s. Commercial banks, which could hold much better duration-balanced portfolios, suffered relatively little from the sharp increase in nominal interest rates. It is not clear how much the statutory and regulatory restraints on commercial bank assets has made them more subject to interest rate and other risks.

The liabilities of financial institutions were constrained by ceilings on the interest that could be paid on deposits. Regulation Q limits on time deposit interest below \$100,000 encouraged institutions to shift to larger deposits, which made them more subject to rapid outflows of funds. The prohibition of explicit interest payments on demand deposits also distorts bank portfolios, encouraging disintermediation

and making funds more sensitive to interest rate changes.

### *Regulated institutions' profits*

Interest rate controls have both enhanced and reduced the profits of regulated institutions. The prohibition of interest on demand deposits initially enhanced profits, because commercial banks had a monopoly on third-party transactions accounts. However, as the opportunity value of unregulated substitutes, such as cash management by corporate treasurers and cash management accounts offered by brokerage firms, increased with increases in nominal interest rates and improvements in technology, this advantage was eroded severely.

Regulation Q ceilings on time deposits benefited institutions initially. But, as Eisenbeis points out, the consequence appears to have been a fatal delay, for many thrifts, at least, in adopting their operations to changing market conditions. Thus it is not clear whether on balance Regulation Q benefitted depository institutions.

The Glass-Steagall Act (Banking Act of 1933) prohibition against most security transactions and holdings appears to have been detrimental to bank profits. On the other hand, constraints on entry into banking benefited institutions. However, technology now has allowed brokers to enter the bankers' markets, while Glass-Steagall still constrains bankers from competing with brokers.

### *Incentives towards risk taking or avoidance*

*Deposit insurance.* As Eisenbeis emphasizes, federal deposit insurance that is not priced according to risk has introduced a very serious problem of moral hazard. Depositors with less than \$100,000 per account have no reason to be concerned with how an insured institution operates as long as the deposit insurance fund is considered to be adequate. After the FDIC bailed out all of Continental Illinois' creditors, depositors, and perhaps all creditors, of similarly large banks appear to have little reason to be concerned about losing their funds because of the way their banks are operated. And, as Eisenbeis points out, as long as the authorities are slow in closing an insolvent institution, all uninsured depositors need to do is monitor rumors rather than analyze banks' portfolios and operations.

It is important to recall that deposit insurance was raised from \$40,000 to \$100,000 per account in 1980. I do not believe it is a coincidence that thrift and bank failures followed shortly thereafter. Deregulation of interest rates also played a role by allowing risk-seeking

owners and managers to offer higher rates of interest on federally insured funds. Hence, they could obtain large amounts of funds, either through brokers or directly, that could be placed at risk according to the banking rule of riches—"heads I win, tails the FDIC or FSLIC loses."

However, it might not be correct to ascribe too much to the moral hazard of deposit insurance. Even with a complete payoff of creditors by the FDIC and FSLIC, owners and managers, who are the owners in mutual thrifts, really lose their investments and positions. Indeed, in a study of the direct investments and growth of S&L's over the three years ended June 1984, I found little evidence of excessive risk taking (Benston, 1985) Almost all S&L's with more than small amounts of direct investments earned significantly positive net profits, often sufficiently great to offset losses on other operations, and virtually none of the failures were associated with direct investments. Higher net worth was associated with greater proportions of direct investments, indicating that direct investments increased net worth or that stronger S&L's tended to make direct investments. Growth also was associated with higher net profits and net worth and not with failure. The key variable with respect to failures and successful direct investments appears to be "net worth." (I would feel more secure about drawing conclusions, however, if net worth were measured in terms of markets rather than accounting variables.) In addition, commercial (nonreal estate business) and consumer loans were not associated with failures. Thus, this study does not support the belief that failures were the consequence of deregulation of thrifts' investment powers.

*Capital.* Eisenbeis also emphasizes the effect of deposit insurance that is not risk priced on the insured institutions' capital. The economic value of the insurance can be enhanced by an institution's reducing its capital to the minimum that the authorities will accept. The fact that most institutions have not reduced their capital to lower amounts (or, equivalently, increased their risk exposure more) is evidence either of the authorities' ability to constrain such behavior or of the institutions' owners and managers' risk aversion. It is not clear which explanation dominates.

I suspect that risk aversion is the most important determinant because there are few regulatory limits on the total amount of risk that institutions can take. (In this regard, it should be noted that the relevant metric is the total or portfolio risk of an institution, rather

than the risk accepted for individual products and services.) For example, commercial banks and thrifts can make loans with almost any degree of risk, taking payment in fees and points if they want to avoid recording very high nominal rates of interest. They also can invest in long-term fixed-interest government bonds and gamble that interest rates will fall. Thrifts also can buy high yield-high risk (junk) bonds. Both types of institutions can purchase and sell futures and options contracts. Thrifts can make direct investments and equity-kicker loans. Long-term fixed interest liabilities can be sold. Off-balance sheet guarantees can be sold. These and other products can be held and provided so as to give risk-seeking managers as much exposure as they want. It is doubtful that giving them additional powers, such as securities underwriting, could offer them opportunities to take risks that bring them beyond where they now want to be.

In general, I believe that most financial institution managers are risk averse, except where the equity of their institutions is so low that they have little to lose. Hence, I would suggest that the authorities try to limit excessive risk taking by requiring higher levels of capital to be held by depository institutions. In this regard, I do not understand why Eisenbeis characterized the Comptroller of the Currency's counting subordinated debt as part of capital as a "relaxing of standards." If the debt really is subordinated to the interests of the FDIC (as successor to the insured depositors), it serves as a means of introducing effective marketing monitoring. If insured depository institutions had sufficient subordinated debt outstanding with varying maturities, the authorities would be provided with a useful measure of the market's assessment of the institution's risk posture. A higher-risk institution's outstanding subordinated debt would sell at a higher rate of interest and its maturing debt would be either difficult to sell or would sell at a considerable discount, other things equal. Furthermore, the institution could not argue against increasing its capital on the grounds that additional issues of equity would cause the owners to lose control or that no one would buy stock in a closely-held corporation. It could not argue that increasing equity is costly because dividends are not a tax-deductible expense. Nor could it point to a lack of interest by stockbrokers and limited resources in the bank's community, or for an S&L or savings bank, to its status as a mutual. Subordinated debt issues can be sold to local people as can certificates of deposit. The only difference is that certificates of deposit below \$100,000 are insured while subordinated debentures are not. (See

Benston, et al. 1986, Chapter 7, especially pp. 192-95, for a further elaboration.)

### *Fraud and grossly incompetent management*

A large part of the regulation and supervision of financial institutions is related to preventing fraud and excessively risky behavior—and appropriately so. The largest losses incurred by the FDIC and the FSLIC are the result of acts that were not detected or stopped quickly enough by the authorities. Because these government agencies bear much of the cost of fraud and gross mismanagement, they have a legitimate interest in preventing or reducing fraud and mismanagement.

Fraud is the most difficult to identify and stop because the perpetrators know that what they are doing is illegal. Hence, they have incentives and opportunities to alter the records to make detection difficult. Unfortunately, there are no simple regulatory answers. Almost any asset or liability is subject to a fraud. Therefore, limiting a financial institution's operations to a limited set of operations will not be successful. Indeed, mechanical supervision by regulation often makes frauds easier to perpetrate. Rather, evaluation of the quality of management, including a complete check on the managers' personal records in fiduciary capacities is required, along with testing of the system of internal controls and careful monitoring of institutions, particularly those with low levels of economic capital.

Gross mismanagement can be more easily discovered from analysis of financial statements and trends. While high rates of growth do not prove gross mismanagement, it often is associated with a breakdown of controls and with poor investment practices. Again, the level of economic capital is an important variable.

### **Deregulation**

Deregulation has been blamed by some for the recently comparatively high level of failures and poor condition of many operating institutions. Eisenbeis states that his "paper has concluded that deregulation has played a minor if insignificant role" in this history. I agree with his conclusion, but I do not believe that he has demonstrated it.

He could have pointed out that deregulation has taken place in only three regards. First, interest rates on savings and time deposits were removed gradually from about 1980 through 1986. Second, most thrift institutions were given the power to make consumer cash loans and

some business loans and to offer checking accounts in 1982. (Some others previously had these powers.) Third, S&L's were given the power by some states to invest directly in assets.

As I noted above, the removal of Regulation Q restrictions did allow growth-oriented institutions to bid for deposits. But, in the absence of an increase in deposit insurance coverage from \$40,000 to \$100,000 per account, the riskier institutions could not have attracted the large volume of funds they obtained. Hence, it was not just deregulation that made their growth possible.

Consumer cash loans, business loans, and direct investments are not associated with S&L failures, as noted above, (Benston, 1985). Rather, the contrary is the case—these assets are associated with higher profit levels. Nor was growth, as such, associated with failure. The major cause of S&L failures was interest rate risk. Institutions that did not become sufficiently insolvent to be closed when interest rates increased, in effect, “bled to death” as the negative spreads they experienced used up their equity. Some others failed as a result of poor investments, but these tended to be bad loans rather than bad direct investments. Thus, regulations that required or induced S&L's to hold duration-unbalanced portfolios and deposit insurance that allowed institutions with low or negative levels of capital to continue holding depositors' funds were, and still are, a major cause of the massive number of failures experienced in the 1980s.

Similarly, most commercial bank failures appear due to traditional, pre-deregulation ways of failing. Banks specializing in farm, timber, and energy loans failed when their customers failed. Fraud continued to play a important role. And Penn Square gave new meaning to gross mismanagement. Continental's management was not quite as original, but was sufficiently incompetent.

Hence, deregulation had little to do with the present state of financial institutions. Rather, excessive regulation in the form of restrictions on branching and the overlong continuance (if not the imposition) of Regulation Q together with the increase in deposit insurance levels appear responsible, with one exception. Regulations that limited the entry of competitors to existing institutions, such as regulations forbidding thrifts from offering checking accounts and consumer loans, tended to make bank charters more valuable. The removal of these regulations reduced the value of their shareholders' equity measured in terms of economic market values. But the imposition of binding Regulation Q ceilings and improvements in technology probably played

a more important part in reducing the value of chartered financial institutions' charters. Brokers and other nonchartered providers of financial services entered banks' and thrifts' markets, eroding the value of their charters.

### Conclusions

Eisenbeis's suggestion that insolvent institutions be closed promptly is a good one. But it is difficult to put into practice. As I mentioned above, requiring that the institutions have a greater amount of subordinated debt might be a useful way for the authorities to obtain the evidence of insolvency before the deposit insurance agencies incur losses. Perhaps more important, subordinated debt provides an incentive for market participants to act to monitor managers' and shareholders' actions and to remove those who risk the debenture holders' investments.

Risk-based deposit insurance would be desirable. However, it would be nice someday, to read just how this could be accomplished. In this regard, I suggest that charging insured institutions for the full cost of examinations is one means of imposing risk-related insurance premiums. Eisenbeis's suggestions for improvements in the lender of last resort function are good. Market value accounting certainly would be an improvement, although it also would be difficult to implement.

To these suggestions, I would add more effective monitoring, particularly of low equity institutions. Statistical means of detecting potentially insolvent institutions can be helpful for this purpose. At the same time, increases in capital invested in financial institutions can lessen the need for supervision. The removal of regulations that impose costs on financial institutions and that constrain them from effectively diversifying their portfolios of assets, liabilities, and operations can serve to attract capital to institutions while reducing the risk to the insurance agencies.

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## Commentary on “Regulatory Policies and Financial Stability”

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*William Peter Cooke*

Bob Eisenbeis' paper raises a host of issues of particular interest to the banking supervisor. However, I can only pick a few plums out of the pie. I will try to bring to my comments—as I understand I am expected to do—something of the perspective of the overseas observer looking in. Indeed, if I do not treat many of the issues that he raises with the seriousness and depth they deserve, or appear to ignore them, it is partly because George Benston has already covered a number of them. It is also partly because I have assumed my task is rather to give a detached, but I hope not too detached, international view of the major issues. I am troubled, though, by the extent of agreement among my academic colleagues and hope I am not failing the audience by not testing these areas of agreement more closely. I also offer no apologies for speaking as a working regulator in a group that contains—particularly on the platform yesterday and today—many academics. I find myself often coming out with a perhaps undesirably woolly, but perhaps desirably pragmatic, approach to problems that others are trying to grapple with in absolutes.

I have little difficulty in accepting the principal conclusion of the paper that deregulation has been only a minor cause of the principal problems experienced by the U.S. financial system. Compared, for example, with the impact of macroeconomic forces—whether oil or real estate prices or the problems of the agricultural sector—it seems to me that the consequences of deregulation, both in your country and mine, have been of lesser moment. Disentangling the various factors involved is, of course, always difficult, but I would suggest that deregulation has not of itself made the financial system more vulnerable to shocks. Rather, it may have exacerbated the effects of particular

financial and economic developments on the system. It may be that these developments may themselves have produced pressures for deregulation; the existing regulatory arrangements prove unable to cope and some deregulation is introduced to allow the financial system to continue functioning effectively. A tightly regulated system is most likely to work effectively in a stable, unturbulent financial environment. Change induces pressures that tend to undermine the effectiveness of much regulation and requires its review.

It is a question how much of recent moves under the umbrella heading of deregulation have been an active or a passive process as far as the authorities are concerned. From a look at the structure of the U.S. financial scene, apparently well ordered with, for example, its Glass Steagall division and at least some remaining laws that constrain interstate activity, the surprising thing is how much is changing not as a consequence of the deliberate act of the authorities to move goalposts but rather as a consequence of the marketplace finding ways of spilling over the barriers that still exist. There will always be, however, a difficult question for the authorities of how far change can or should be resisted. We have been wrestling much with this question in London in recent months. In general, we have taken the view that, in the present state of markets, it is right for U.K. authorities to be positively removing barriers in order to assist what was felt to be a desirable process of change, particularly in the area of rapidly changing relationships between banking and securities markets. But it is always easier to make simple changes to simple structures; changing complex systems is often more difficult, and the consequences of change may be less easy to predict.

One question I found myself asking when reading Bob Eisenbeis' paper, but which I did not find an answer to in the paper, is, what exactly is that financial stability which is thought to be desirable? If I had to be pressed to define it, I would describe financial stability as an environment in which the market can operate with confidence but not with license. Stability in a financial system should not be equated with absence of change. Furthermore, and very importantly, stability cannot be separated from confidence. Confidence in the system is an essential ingredient of stability—people need to believe in the system to have confidence that it works. The problem is, confidence cannot be relied on to operate rationally. It may impact in different ways, at different times, and in different places. Confidence in the banking system may be maintained even when bank failures

occur regularly—as might well be said to be the case, *par excellence*, in the United States at present. But confidence may also suffer when the system appear unreceptive to change.

It is also I think a *sine qua non* of financial regulation—like other constraints on the activities of individuals and corporations—that it will have behavioral consequences that cannot always be predicted. The decisions and behavior of the institutions subject to financial regulation will be affected in ways intended and in ways that are unintended, both on the directly regulated institutions and those not so regulated. The paper makes this clear in describing the innovative moves that are often the direct response to regulation. One frequent unintended consequence is a reduction in the competitiveness of the regulated institutions and an increase in the incentive for those escaping regulation to undermine the purpose of the regulation. This seems to be an important factor currently at work in the United States, and the process is all too familiar to us in the United Kingdom—for example, in the events leading up to the secondary banking crisis in the early 1970s.

Now, there are two particular issues relevant to public policy on which I would like to concentrate a few remarks. First the trend toward “decompartmentalization” in the financial sector, particularly the move to financial conglomerates, and second, the problems in an increasingly global financial marketplace of handling the interaction of national regulatory policies and achieving a measure of coordination of them internationally. Both issues seem to carry at least the seeds of future instability if not handled effectively.

The first of these trends is particularly manifest in the development of the new multifaceted financial service conglomerates—a development for the moment most strongly evident in the United States and the United Kingdom. Certainly, as we see it in London, this phenomenon may well lead to confusion on the part of the authorities, the general public, and the institutions themselves about the interconnection of the different activities, the extent to which they are or are not controlled by the authorities and are or are not likely to be supported if they get into difficulties. This brings us back to confidence again. In London, we feel this is a particularly difficult current and potential problem as far as the traditional banking sector is concerned. How far can or should bank deposits finance other than mainstream banking activities? Is it sufficient to create separately capitalized corporate entities to undertake different financial

businesses? How far does a bank have to stand behind its related financial (or, if permitted, nonfinancial) companies in a complex multifaceted group? Is the very nature of banking changing and will it be possible effectively to identify and deal with a traditional banking sector separately? And at the end of the day, importantly for the stability of the system, how far—if at all—in this new world is the central bank's responsibility expected to extend beyond the traditional banking sector in the discount window function or in the provision of lender of last resort support? How much more do these national problems become exacerbated when the matrix is extended to international groups of this kind?

I confess I do not have the answers to all these questions, but we need to make a stab at some of them soon in constructing the regulatory framework appropriate to this new situation. I have some doubts, however, at least outside the United States, of the merits of the concept outlined by Henry Kaufman yesterday of a "compendium" agency. There is certainly scope for regulatory mistakes in this new environment—perhaps big ones—but I am not sure that they would be less with one financial regulator. Where can such a polymath be found, I wonder? It would seem to me the organization would be extremely complex. And I wonder if such an inevitably ponderous organization could meet another of Henry's imperatives—a capacity to "act with alacrity?" In London, we are working on the assumption that there will be several regulatory bodies interacting and cooperating closely, but to try and bring them together in one super agency seems to me too ambitious and could be counterproductive. It is quite right, however, that the regulation of securities and banking businesses in particular are going to have to be closely coordinated.

Turning now to the globalization of markets. It is a truism that over the past decade or so national markets have all become part of one single global market. All national authorities are increasingly having to take account of this in devising and implementing national regulatory systems. I believe we are really only beginning to grasp the implications of this phenomenon for national regulation.

From the U.S. point of view, one might have thought that the predominance of the U.S. dollar as the main international means of payment and store of value would mean that U.S. authorities could ignore this global factor. Not so, I think. It becomes even more important for them than for many others just because the dollar is so internationalized. I sometimes think that many looking at the U.S.

financial scene tend to overlook the influence of international factors.

The U.S. authorities, no less than many others, cannot conduct domestic financial regulatory policy without taking account of the international dimension. This is frequently acknowledged in the public statements of the authorities. So the exposure of the U.S. banking system to problem debtor countries is a problem in the minds of many countries outside the United States and those countries' responses to the debt situation need to be taken into account in the stance U.S. authorities take. I worry, for example, about the divergence of the banks' response to their involvement in problem international lending in Europe, where on the whole they resort to rigorous and extensive provisioning or writedowns against problem country debt, and in the United States, where the response has been largely to build up general capital levels. These kinds of different approaches already—and may still more in the future—make for troublesome differences of perception and responses to the overall problem not conducive to stability. It also needs to be borne in mind that one consequence of the U.S. external deficits in recent years has meant that increasingly the funding of U.S. banks, particularly overseas, is undertaken by non-U.S. owners of dollar balances—another factor contributing to a global view of the market.

The potential for strains, fragility, or instability in international markets caused by this intertwining process requires that the problems be addressed increasingly at the international level. But how? There is no authority that can be wielded to deliver answers to the whole range of problems, assuming answers can be found. Effective international action—coordinated international action—has to rely on persuasion or more often a general perception of self-interest. Global acceptance of the need to improve capital adequacy levels is a good example of a positive and coordinated response—one, I may say, that was set in train before the Mexican crisis broke by the regulators in Basle made possible because many international authorities chose to follow a common path. We do what we can in Basle to identify trends internationally and to commend sound and homogeneous, if not necessarily identical, responses from national authorities. But the regulators meeting there cannot deliver. No international law can be invoked. Results depend on the goodwill and positive follow-up by national authorities.

This brings me to another suggestion of Henry Kaufman's yesterday when he advocated a new international body to exercise autho-

rity in finding solutions to international debt problems. I must say, it is not clear to me how such a body would acquire or be invested with the necessary authority to require action of national authorities. Of course, such a capacity would in many ways be desirable—just as it would for the far more important integration of the monetary, interest rate, exchange rate, and general economic policies of major countries. But I wonder if in practice it will be possible to move far from where we are at present where regulatory matters are debated closely and, certainly in the context of the regulators meeting in Basle, solutions are proposed for national authorities to consider sympathetically. This is, nevertheless, a major issue. Credibility and confidence in regulation—and I come back to confidence again—is important in sustaining stability. To take a topical example, a good deal of work is being done on the problems of banks' off balance sheet exposure. In this area (as well as others) the cry of "level playing fields" and consistency of regulatory approach is heard more and more often. We may be coming to a point where the international cooperation of the past ten years will be put to the test. The marketplace is asking for, and half expecting, some coordinated and consistent regulatory response in different countries to this growing feature of international banking business. Will it be possible to deliver, and how far will countries be prepared to modify their own systems and sometimes swallow long-hallowed prejudices to produce convergence in regulatory approaches? How will the market react if this is not achieved?

Now in addressing these two particular issues—and I raise them because I think they will become major regulatory policy issues in the period ahead—I have drifted away from the issues raised in the main paper for this session. Let me try to cover some of these briefly.

Bob Eisenbeis' paper touches on another important area of potential fragility in an integrated international system. This is in the technologically complex and technologically dependent systems for effecting payments within the financial sector. The nature of the problems and dangers are well known and I do not need to elaborate them here. I would make one general comment, however. There are, of course, dangers in concentrating the operational heart of the system in one place. But it is not all bad. Tom Lehrer said a long time ago, "We'll all go together when we go." But in a perverse way, I believe such concentration can be a source of strength. Just because everyone depends on the system and everyone would suffer from its breakdown,

there is induced a community of interest that operates to ensure that the worst never happens. There may be some high risks in relying totally on this assumption, but in practice mutual self-interest operates as a powerful adhesive. More Bank of New York-type problems, while of course undesirable and potentially very troublesome were they to occur, might not in fact prove a total shock to the system. Banks may well be prepared to muddle along until the technological problems are sorted out. This is not to brush aside what could well be a real headache for the authorities, but I do think we can derive some comfort from the fact that the last few years have demonstrated that there is a great deal of robustness in the international banking system. The debt crisis of 1982 and thereafter, for example, have been managed in a way that those of us who sat in Toronto wondering where and when lightning would strike next could hardly have dared hope. The cohesive forces at work that have helped to make this possible will I believe continue to be a powerful influence.

Now I suppose no comment on the U.S. financial scene would be complete without some reference—and I confess to being surprised not to find the phrase anywhere in the Eisenbeis paper—to the issue of moral hazard. An important part of the regulators job is balancing the stick and carrot for individual institutions and balancing the risk to the system against allowing individual failures. The paper treats the related subjects of deposit insurance, lender of last resort, and bank failures provocatively and in doing so puts forward a number of interesting ideas. I would though take issue with some of the proposals that are put forward.

First, deposit insurance. The paper argues that pricing reform is needed and, in particular, that market-based methods to enhance market discipline, involving the introduction of a risk-based premium system, should be introduced. I understand and sympathize with the desire to improve discipline when safety nets seem to make life too comfortable, but I have always had doubts that this is the best way to achieve it. It seems to me to duplicate the role of capital as a means of containing a bank's risk taking. But then I come from a country that, with others in Europe, relies on a measure of capital adequacy that is related to the risks in the balance sheet (and off it). If the U.S. authorities are moving toward a similar system, risk-based premiums should be unnecessary; capital requirements should already take account of the risks for creditors of different banks' business. In such circumstances, a risk-based insurance premium would look to me like

double taxation—and fiendishly difficult to administer. In the United Kingdom at least, we see deposit protection as having the limited role of providing a significant but not comprehensive protection for the small personal depositor. Under this approach, depositors and investors are expected to accept some responsibility for addressing the safety of their savings and should be made aware that depositing with a bank involves an element of risk. That is why the U.K. system places a limit on the size of a protected deposit (only up to the equivalent of some U.S. \$15,000) and limits protection to three quarters of that sum. The larger investor, and especially the professional, is expected to carry out his own risk assessment and diversify his exposure. This seems a better approach to injecting market discipline. But then I would say that, wouldn't I, and I do not wish in any way to undervalue the importance of the insurance schemes of the FDIC's and other federal agencies' schemes in holding what might otherwise be a somewhat fragile situation currently.

The paper also proposes a closure policy for failed institutions. Unless I have misunderstood the argument, this policy would require banks to be closed “when the market value of their net worth goes to zero” because it is only by doing so that the imposition of costs on uninsured creditors can be avoided. This rule would also avoid perverse incentives that increase the risk exposure and potential losses for the insurance fund. Again, it is suggested that it is only by such a rule that market discipline and its desirable incentive effects can be ensured. I cannot fault the tidiness of the concept but I doubt its applicability. The range of issues that the authorities have to weigh do not in my view allow such simplistic solutions. In practice, the difficulty of valuing a bank's assets, and the often marked difference between the value of a bank's assets on a going-concern and on a break-up basis, would mean that, to avoid all possibility of loss to creditors, banks that are marginally solvent would also need to be closed down. Sudden events, too, may occasionally cause insolvency, but even in those cases, the exact point when a bank becomes insolvent is, in my experience, impossible to determine. In practice also, such a policy could lead to higher losses for depositors than a more flexible approach. Finally, the paper seems to me to pass rather too lightly over the systemic consequences of liquidating a significant bank.

This latter point leads me to the paper's comments concerning the lender of last resort function. You will not be surprised to hear a central banker say that the authorities must reserve their judgment to keep

afloat, in the paper's terminology, "market value insolvent institutions." The central bankers view of this in my experience is invariably: no hard and fast rules; consider each case as it comes along in the light of the circumstances at the time. The idea that it will in all circumstances be possible to act to make "the likely failure of a large bank an isolated event" does not seem to accord with experience, although, of course, it has to be said it has not often been put to the test.

I am also not sure about the argument that, to enhance market discipline, discount window borrowing should only be done at penalty rates. This may be reasonable in day to day lender of last resort operations, when penalty rates are often applied in many countries. But for problem bank situations, it does not seem so attractive, or necessarily desirable. If a bank requires assistance because of a perhaps vicarious lack of market confidence, a penal rate would not appear justified. If a bank is near insolvency, applying penal rates may merely force it into liquidation. Adequate and attentive ongoing supervision should be the principal means of ensuring that risk taking by banks is properly controlled. It is too late to worry about incentive effects when the bank is seeking help from the authorities. The supervisor's objectives, I believe, should be principally preventive rather than punitive. Punishment is often merely a sign of failure and often counterproductive to boot.

The author's inherent caution will probably mean that rescues take place more often than some purists might desire. This is not to say, however, that a bank's managers or shareholders should escape all the consequences of failure. It is only right that bad and reckless management should be replaced and sleepy shareholders should lose their equity, but forcing all technically insolvent banks into liquidation would seem to me excessive. Inevitably, size will be a determinant of decisions whether to rescue or not, but it continues to be important, in my view, that the authorities make clear that it should not be assumed that they will stand behind a bank just because it is large.

Now just a very brief and, therefore, an all too inadequate word on problem international debt. In considering the banks' exposure to problem country debt, the paper again takes a somewhat purist line and seemingly would require banks to write off problem country debt, and desist from new lending. The international debt problem, I do not need to say, is difficult and complex and, as with bank rescues, involves important systemic issues. I will eschew simplistic

statements about the justification for increased lending to problem debtors. Suffice it to say that I believe such lending can be justified on systemic grounds and from the point of view of the interests of individual banks. This is not to say, however, that the judgments are not often difficult and finely balanced, and the problem of keeping everyone pointing in the same direction more and more difficult. The trouble is, much international debt is in the wrong form. The banks are not natural providers of the kind of financing the Third World needs. Reverting to another issue mentioned earlier in this meeting, I wonder if some way may not be needed of injecting some more direct element of public financing into the rolling process of adjustment as international markets and countries work toward a better equilibrium over time.

In all of this, the critical question seems to me to be the manner of the supervisor's response to the world as he observes it. He needs to be alive to the consequences of the actions of other regulators abroad and those of different but related disciplines at home. He needs to be continually on his toes, responding in timely fashion to change and trends both in markets and, very importantly, in the macroeconomic environment. This year and last year, the push has been for capital adequacy. This year and next, it will be the capturing of off-balance sheet business. Perhaps looking ahead, liquidity strains may appear, as a consequence in part of regulatory pressures on capital, and require the supervisor's attention. Alternatively, if the international environment becomes recessionary, profit levels could start to look rather sick.

But please recognize the limits of what the regulator can achieve on his own. He has his particular corner to fight and should do so. But he should never fight blindly in the face of the realities in the world around him. Judgment and flexibility should be key elements of his armory, without, I would hope, the compromising of basic supervisory imperatives. As I said at the outset, far more instability and problems for the financial sector derive from changes in the macroeconomic environment than through imperfect regulatory rules and practices.

"We are," as a former Governor of the Bank of England remarked "where we are" in the context of the international debt problems a few years ago. We are still there. Grand designs are for the birds. The situation has to be handled as it is. In this respect, I agree very much with what Rimmer de Vries was saying yesterday. We do not

have the luxury of the Irishman saying, when asked the way to Tipperary, "Oh if I were going there, I wouldn't start from here." Thoughts of perfection anyway is a reverie that financial regulators cannot allow themselves to be seduced by.

Markets and institutions wax and wane. Regulation needs to keep abreast of change. We are now perhaps in a deregulatory mode. Certainly in London it has been a deliberate policy to give the market its head—a high-risk strategy that of necessity carries with it a warning of pain and tears to come and a willingness to see market discipline operate. Perhaps in a few years, or even sooner, some re-regulation will be considered necessary to bed down a market that has settled into a new environment.

But in this sometimes dangerous, always difficult, world, prudential regulators, alive to events and fleet of foot, still in my view hold one of the most important keys to sustaining financial stability. They must set a sound framework with relevant prudential parameters for individual institutions and the financial system that allows them to play their proper role in the economy. But they cannot and should not, and should not be expected to, set out to cover every exogenous pressure in advance.



## Debt Problems and Macroeconomic Policies

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*Lawrence H. Summers*

Events of the last few years have led to increasing concern about the possibly adverse consequences of the substantial accumulation of debt by key sectors of the American economy.

Fears are often expressed that excessive private debt burdens will threaten financial stability, with adverse consequences for the real economy, or that increases in debt will create political pressures that will make an acceleration of inflation inevitable.

A combination of a rapidly rising ratio of total indebtedness to gross national product (GNP) and widespread financial distress manifested most vividly in the Continental Illinois bank failure, the agricultural sector of the American economy, and problematic foreign loans, has led to calls for policy action to head off debt problems. Henry Kaufman (1986, p. 52), for example, has labeled the rapid growth of debt as "one of the most pressing problems of the day." And one study group has urged that we "fix the roof while the sun is shining" (Center for a New Democracy, 1986).

Debt problems have both a micro and a macroeconomic dimension. The case for microeconomic policies directed at limiting the indebtedness of firms and households is easily made on the basis of standard externality arguments. In an interdependent economy, the failure of any institution has pervasive consequences for the remainder of the economy, consequences that cannot be internalized by the affected parties. Creditors represent only one class of losers when a large corporation or bank fails. When a corporation fails, a network of employees, customers, and suppliers, all of whom have made investments in anticipation of the corporation's continued viability,

suffer as well. And in a world where information is far from perfect, the failure of any one company inevitably creates doubts about the solvency of others, making it harder for them to attract capital and enter into long-term relationships with customers and suppliers. In addition to these types of costs, the failure of a bank imposes direct costs on the government because of deposit insurance or through the costs of bailout.

The externalities associated with financial failure make it unlikely that any *laissez faire* policy towards the accumulation of debt will be optimal. The private costs of taking on increased debt almost certainly do not reflect the full social costs that are imposed by the increased risk of financial failure. This creates some presumption in favor of regulatory and other microeconomic policies directed at preventing the excessive accumulation of debt, especially in sectors of the economy, like banking, where the externalities are likely to be large. But regulation imposes costs of its own and in many cases requires information that government is unlikely to possess or be able to obtain easily. It is reasonable, therefore, to ask whether there are alternative macroeconomic policies that could complement microeconomic measures by altering the environment to make the accumulation of debt less attractive. Even if macroeconomic policy can do little to alleviate debt problems, it should surely be sensitive to their existence.

This paper explores the issue of monetary and fiscal policy responses to possible debt problems. In considering debt problems, I draw a sharp distinction between private and public sector debt. The excessive accumulation of private sector debt is a source of concern primarily because of default risks. For the foreseeable future, the risk of explicit default is not a serious concern with respect to the buildup of federal debt. Rather, distortion in the composition of economic activity is the primary problem posed by federal deficits.

The first part of the paper considers the relationship between monetary policies and the accumulation of debt in the private sector. I begin by assessing the usefulness of credit aggregates in the setting of monetary policy. Following the decision of the Federal Reserve in 1983 to monitor domestic nonfinancial debt as an intermediate target, increasing attention has focused on the debt-GNP ratio as an object of policy. I review the evolution of this ratio briefly, noting its recent extreme instability. Then I argue that while it may have some value as a cyclical indicator, a number of definitional and conceptual prob-

lems preclude its use as a gauge of risks to financial stability. More generally, it appears that monetary policy, as distinct from regulatory policy, is too blunt a tool to be useful in preventing debt problems. However, when debt problems do surface, the Fed has a crucial role as a "lender of last resort."

Recent years have witnessed an increased degree of financial distress. However, this distress is for the most part a concomitant of sharp disinflation and major changes in the sectoral composition of output. It is not primarily the result of excessive financial leverage. If policies restricting growth in nonfinancial debt had been in place over the last five years, they would have exacerbated the costs of disinflation.

The second part of the paper examines the relationship between fiscal policies and debt problems. I argue that rapid increases in government debt burdens, such as those experienced recently in the United States, have potentially serious consequences for long-term economic growth because of their crowding out effects. They may also exacerbate the debt problems of the private sector by pushing real interest rates upwards and causing sectoral dislocations.

Beyond the effects of the total level of tax collections on the government deficit, the structure of taxation exerts an important impact on financial structure. Because much more interest paid is reported on tax returns and deducted than interest received is reported and taxed, the tax system works to encourage the issuance of debt. The tax incentive to issue debt for corporations at least is likely to be increased by the tax reforms currently under consideration. However, tax reforms that moved in the direction of consumption taxation could significantly reduce the tax incentive to leverage.

The paper concludes by arguing that concerns about the buildup of debt should occupy a prominent place on the microeconomic but not the macroeconomic policy agenda. Macroeconomic policies can best contribute to financial stability by trying to keep the real economy on an even keel. Reductions in federal deficits are especially important in this regard.

### **Monetary policy, credit growth, and financial stability**

The maintenance of financial stability has been a priority of the Federal Reserve since its inception. The current combination of disinflation, high real interest rates, financial deregulation, and severe sectoral dislocations has brought the problem of financial stability

into sharp policy focus. While monetary policy has traditionally focused on monetary aggregates and interest rates as intermediate targets in its efforts to ensure steady growth and price stability, attention has recently focused also on credit aggregates. Following demonstrations by Friedman (1982) that there had been a stable relationship over many years between the level of total domestic non-financial debt and nominal GNP and that the linkages between this credit aggregate and GNP was as close as the relationship between nominal GNP and the traditional money aggregates, the Federal Reserve in 1983 decided to set monitoring ranges for this aggregate.<sup>1</sup>

Since the Federal Reserve's announcement, the debt-GNP relationship has broken down. Over the last three years, nonfinancial debt has grown at an average rate of over 12 percent, exceeding the upper end of the monitoring range in each year. Since 1981, the ratio of non-financial debt to GNP has risen by 22 percentage points after varying within a 13 percentage point range over the whole of the 1952-80 period. The seemingly anomalous behavior of the debt aggregate and recent strains on the financial system raise obvious questions for policy. Does the unusual pattern exhibited by the debt-GNP ratio recently represent a cause for concern? Are changes in debt ratios likely to be useful forecasters of future financial problems? If so, what monetary policy response is called for? I take up these questions in turn.

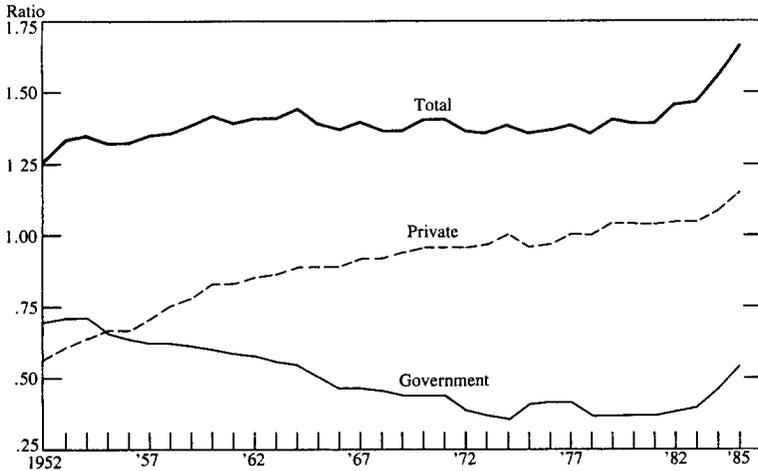
### *Explaining movements in the debt-GNP ratio*

Chart 1 illustrates the evolution of the total debt-GNP ratio over the 1952-85 period, along with movements in several of its components. The unprecedented movement in the total debt-GNP ratio in recent years is evident as is its remarkable stability over the 1952-80 period. Friedman (1982) noted the stability of the debt-GNP ratio and stressed that total debt appeared to be much more closely related to GNP than to any of its components. He went on to offer several hypotheses regarding the reasons for stability in the debt-GNP ratio. On the view that the debt-GNP ratio tends to revert toward some long-run equilibrium value, the recent sharp rise in the ratio is alarming. It

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<sup>1</sup> Domestic nonfinancial debt is defined as the sum of the credit market instruments issued by federal government, state and local governments, business firms, and households. It does not include the obligations of financial intermediaries. For a fuller description of its measurement, see Friedman (1982).

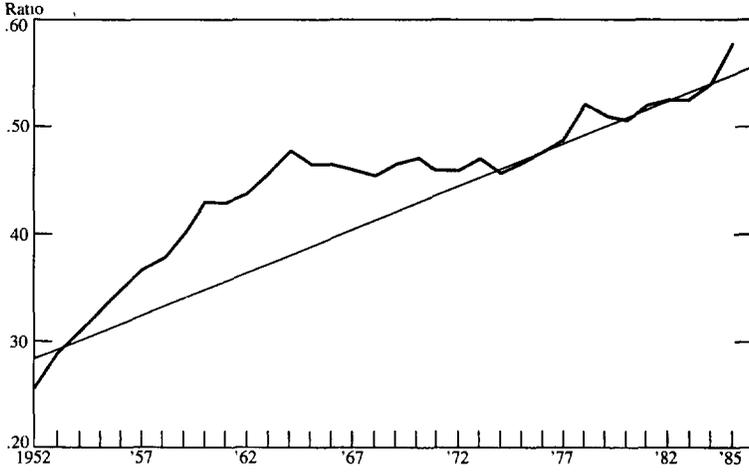
**CHART 1**  
**Debt Ratios Over Time**



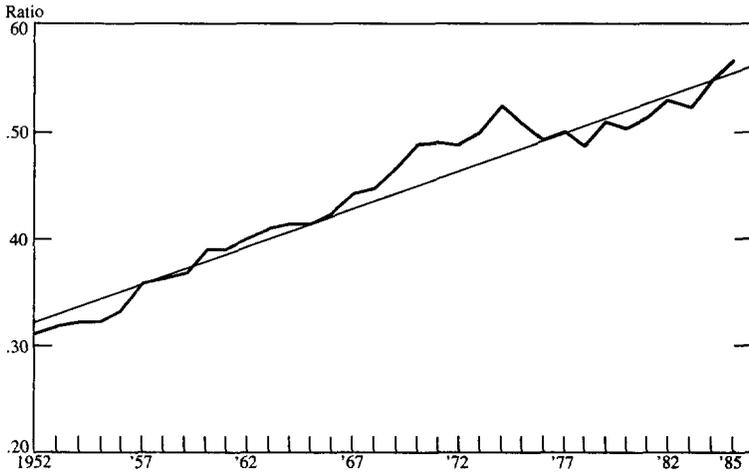
presages either rapid inflation, tending to reduce the value of the debt relative to GNP, or a wave of defaults, tending to bring the value of outstanding debt back in line with GNP. Either would be a cause for serious concern.

Studying the chart with the benefit of recent experience suggests an interpretation of the evolution of debt and GNP that is less alarming than Friedman's. It may be that there has been a secular, relatively steady trend towards increased private sector indebtedness that only coincidentally was offset by a declining ratio of government debt to GNP up until 1980. On this view, there is nothing very surprising about the recent behavior of the total debt-GNP ratio. Increases in private debt have continued since 1980, but the long-term decline in the federal debt-GNP ratio has been reversed. And there is no particular cause for concern about the solvency of the private sector. To assess the validity of this alternative view, Charts 2, 3, and 4 present some evidence on trends in the ratio of household, business, and total private debt to GNP. In each case, the values during the mid-1980s are quite close to what would have been predicted on the basis of secular trends. There is no indication that either businesses or households have deviated from long-term patterns in recent years. The aberrant behavior of the ratio of total debt to GNP appears to be almost

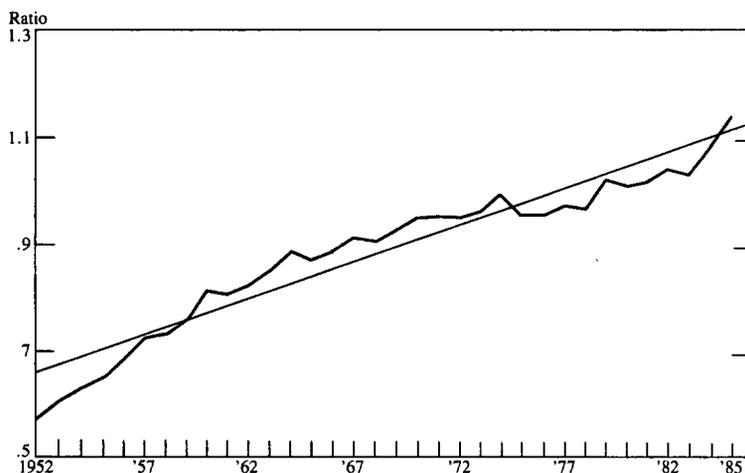
**CHART 2**  
**Total Household Debt/GNP**



**CHART 3**  
**Total Business Debt/GNP**



**CHART 4**  
**Total Private Sector Debt/GNP**



entirely the result of increases in federal borrowing. As I discuss below, the rapid growth of the national debt during the 1980s is a serious problem but not one closely related to the question of the financial stability of the private sector.

It could be argued that the conclusion that nothing unusual has happened to private sector indebtedness is misleading because one would expect, as Friedman originally argued, that increases in federal borrowing would curtail private borrowing. On this view, the failure of private debt ratios to grow less rapidly than normal in recent years should be a source of concern. An easy way to test this idea is to see whether there has been a tendency historically for increases in government debt to be offset by reductions in private debt, once allowance is made for trends. Table 1 presents a number of regression equations for both the 1953-85 and the 1953-80 periods relating the private debt-GNP ratio to the federal government debt-GNP ratio, its lags, and a simple time trend.

The results suggest that there is no systematic historical tendency for increases in federal indebtedness to be offset by reductions in private sector indebtedness. Equations estimated through 1985 suggest that after controlling for the trend, increases in government debt are actually

**TABLE 1**  
**The Relation Between Government and Private Debt Ratios**

1952-1985

<u>GOVDEBT</u>	<u>GOVDEBT(-1)</u>	<u>GOVDEBT(-2)</u>	<u>TIME</u>	<u>RHO</u>	<u>R<sup>2</sup></u>
.281 (.166)			.013 (.003)	.834 (.085)	.981
.466 (.120)	-.276 (.242)		.012 (.002)	.780 (.010)	.980
.572 (.178)	-.592 (.216)	.678 (.195)	.012 (.006)	.883 (.079)	.984

1952-1980

<u>GOVDEBT</u>	<u>GOVDEBT(-1)</u>	<u>GOVDEBT(-2)</u>	<u>TIME</u>	<u>RHO</u>	<u>R<sup>2</sup></u>
-.154 (.229)			.008 (.004)	.816 (.096)	.983
-.038 (.249)	-.352 (.231)		.005 (.004)	.784 (.109)	.981
.228 (.323)	-.502 (.277)	.363 (.290)	.009 (.006)	.844 (.109)	.978

Note: The table presents regressions of total private debt on a constant, a time trend, and lags of total government debt. Total private debt and total government debt are expressed as a percentage of GNP. GOVDEBT(-1) and GOVDEBT(-2) are one and two period lags of total government debt. TIME is the coefficient on the time trend, and RHO is the AR(1) coefficient. Standard errors are in parentheses.

associated with increases in private debt. Even the equations estimated through 1980 do not reveal any statistically significant negative relationship between government and private debt accumulation. Moreover, the point estimates suggest that any effect of increases in public debt on private debt is relatively modest. Quite similar results are obtained from alternative specifications using logarithms of the debt ratio variables and various components of the private and government debt ratios. This evidence suggests that rather than there being a stable ratio of total debt to GNP, private sector debt has trended upwards

relative to GNP largely independent of the behavior of government debt.<sup>2</sup>

Such an empirical conclusion is consistent with received economic theory. There is little reason to expect stability in the ratio of private debt to GNP or to expect that it will be systematically negatively related to increases in federal debt. Leaving aside the foreign sector, which even today holds only a negligible fraction of total U.S. financial liabilities, private debt is a purely inside obligation. Increases in debt on one part of the private sector's balance sheet are tautologically related to increases in assets on another part of the balance sheet. The level of both assets and liabilities in the economy depends largely on the extent of intermediation in the economy, a variable about which economic theory makes few predictions.

Friedman, on the contrary, suggests a number of possible mechanisms through which the debt-GNP ratio might tend to be stabilized, relying alternatively on ultrarationality, limits on collateral, and limits on the substitutability of assets in individual portfolios. Even on the unlikely supposition that households were ultrarational in the sense of David and Scadding (1974) and Barro (1974) and saw through the government sector fully, it is unlikely that they would reduce their liabilities dollar for dollar when the government issued debt. Rather, they would increase their asset holdings in anticipation of future tax obligations. Recall that the private sector as a whole cannot affect its wealth position by issuing less debt since private sector debt is a purely inside asset.

Nor is it likely that increases in government debt would reduce the private sector's ability to take on debt. Government debt surely represents as good collateral as any tangible assets that it might crowd out. It is hard to see why one should expect the private sector's willingness both to hold and issue debt obligations of the nonfinancial sectors to be reduced when government indebtedness rises. Any set of risk preferences that asset holders might have would presumably condition their net, not gross, holdings of financial assets and liabilities.

A fair conclusion seems to be that what has happened to the debt-GNP ratio in recent years is not surprising, given the fiscal policies

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<sup>2</sup> Friedman (1982) emphasizes the stability of the debt ratio over periods much longer than the one considered here. The longer term evidence is however difficult to interpret. The debt-GNP ratio fluctuated substantially during the Depression and War years. Whether the similarity of its value in the 1920s and the post war period has structural significance or whether it is coincidental is difficult to judge.

followed by the federal government. Both empirical evidence and theoretical considerations support the judgment that the private-sector's long-term trend toward increased indebtedness has continued largely independent of the actions of the federal government. Although the private sector's debt ratio has not behaved aberrantly in recent years, the question of whether its secular increase poses problems remains, as does the question of whether a policy response would be appropriate if it were to show large unexpected movements in the future.

### *Financial stability and the credit aggregates*

The debt ratio monitored by the Federal Reserve is the sum of all the debt issued by the nonfinancial sectors of the economy. In thinking about financial stability, it is clearly necessary to treat the debt issued by private households and firms and federal debt very differently. Only the former is plausibly likely to lead to financial distress. Therefore, I focus on the question of whether or not the ratio of aggregate debt to GNP for the household and business sectors is likely to be a very satisfactory proxy for future financial risks. I also consider the closely related question of whether, in an aggregate sense, the business and household sectors of the economy are overly leveraged.

The most obvious problem with using debt-GNP ratios to measure financial risks is that they ignore the asset side of the balance sheet. Careful evaluations of potential debt problems such as Benjamin Friedman's contribution to this volume have long recognized the importance of simultaneously considering both sides of the balance sheet. Non-academic evaluations of financial stability have sometimes been less careful. Many types of transactions that are innocuous from the point of view of financial stability because they lead to equal increases in assets and liabilities will lead to increases in debt ratios. For example, if a corporation issues debt to fund its pension obligations, the measured debt ratio will increase with little consequence for financial stability. If corporations make increased use of bank as opposed to trade credit, their debt ratio will increase while financial stability is actually enhanced. If households borrow in order to take advantage of attractive investment opportunities, to make Individual Retirement Account contributions, or to engage in other forms of tax-favored savings, their measured debt will increase without important consequence for financial stability. A similar pattern will be observed if,

as has been the case recently, households make increased convenience use of credit cards. Without knowing why the debt to GNP ratio has moved, it is impossible to make inferences about financial stability.

While movements in the debt-GNP ratio need not have important implications for financial stability, it is also the case that developments with important consequences for financial stability are likely to leave little trace in debt-GNP ratios. When the assets of a sector decline in value relative to its liabilities, the risks of default are increased but the ratio of liabilities to GNP need not decline. This point is vividly illustrated by the farm sector of the U.S. economy. While financial distress is painfully evident, the ratio of farm sector credit market liabilities to GNP has declined by 25 percent over the last five years. The point is very general. Fundamentally, financial solvency has to do with differences between assets and liabilities. Measures that look only at liabilities are not likely to be especially useful in assessing financial risks.

While the debt-GNP ratio may at times move in tandem with the degree of financial distress, the preceding considerations suggest that it is hardly satisfactory as an indicator of the degree of distress. Examining net worth rather than total liabilities on a sectoral basis is likely to provide a much better indicator of the risks of financial distress. Viewed in this light, it is unlikely that recent increases in debt pose serious risks. The dramatic increase in the stock market over the past three years has improved the net worth of both the corporate and household sectors. Even making some allowance for differences in the distributions of assets and liabilities within sectors, it is hard to see how the risks of default could have increased a great deal recently. Indeed, the impressive feature of recent experience is that a period of sharp disinflation and unprecedentedly high real interest rates has been associated with so little financial distress outside of parts of the economy that have experienced adverse sectoral shocks.

A point of major concern in many discussions of financial stability has been the sharp increase in the use of junk bonds in recent years, particularly in the context of hostile takeovers. In assessing the risks posed by junk bond financing, two points frequently ignored in popular discussions should be recalled. First, the vast majority of junk bond financing has not been associated with hostile takeovers. The total volume of new issue high-yield debt grew from \$1.7 billion in 1981 to \$19.8 billion in 1985, while new issue debt for takeovers

was only \$1.6 billion in the first half of 1986. In many cases, it is likely that junk bond financing was used by companies as a substitute for more expensive bank debt. In these cases, it probably enhanced financial stability. Second, as Jensen (1986) persuasively argues, in many cases where junk bond financing substitutes for the use of equity it improves capital market efficiency. Where fixed debt obligations constrain managers from investing in marginal projects, and so force more investments to meet market tests, they probably improve the allocation of investment in the economy.

The preceding discussion does not imply that current concerns about financial stability are wholly unwarranted. Strains on the financial system are an inevitable concomitant of the sharp disinflation of recent years. The agricultural and energy sectors of the economy, along with parts of the manufacturing sector, are in difficult straits. But these problems reflect the very large adverse demand shocks that have buffeted these sectors in recent years and the effects of high real interest rates more than they reflect a systematic pattern of overborrowing. There is little basis for generalized concerns about the excessive growth of private sector debt.

The point may be made in another way. Suppose that policymakers, either through direct credit controls or indirect monetary policies, had restricted the growth of debt in recent years. Marginal borrowers would have been rationed out of credit markets. No doubt, some would have failed. Others would have survived but cut back on new capital outlays, reducing the total level of demand in the economy. It is likely that restrictions on debt growth would have raised rather than lowered the costs of disinflation.

### *Monetary policy and credit aggregates*

It might be argued, however, that debt ratios, even if they are not useful predictors of financial distress, are useful in predicting movements in GNP. As a huge amount of econometric literature documents, there are literally hundreds of variables with some predictive power for GNP over some intervals. The crucial issue is whether or not there is a strong reason to expect movements in the debt ratio to have a causal influence on GNP. The financial distress arguments just considered would, if anything, tend to suggest that increases in the debt-GNP ratio would tend to precede downturns associated with financial problems.

On the other hand, arguments linking economic activity to credit availability such as those of Wojnilower (1980) and Blinder and Stiglitz (1982), would tend to suggest that increases in debt ratios should be associated with subsequent strength in GNP. If, as these authors suggest, various informational imperfections lead to credit rationing at relatively rigid interest rates, it may be necessary to look at the quantity of loans being made as well as their price to gauge the effects of monetary policy on the real economy. However, it is hard to see why credit availability doctrines would justify looking at an aggregate that included government debt and freely traded long-term securities. Credit availability theories would suggest investigating much narrower aggregates linked to the parts of the financial system where credit might plausibly be rationed. A measure of total bank credit would seem more suitable, but Friedman (1982) reports that the empirical evidence linking such measures to GNP fluctuations is very weak. On balance, there is no obvious reason for expecting movements in the total debt-GNP ratio to lead systematically either to booms or to busts.

All economic indicators contain some information that is useful in assessing the future course of the economy and in guiding policy. But the foregoing analysis suggests that the debt-GNP ratio is probably not an especially useful indicator for guiding monetary policy. Because it focuses on only one side of the balance sheet, it is unlikely to be a reliable predictor of either future financial distress or economic fluctuations. As the recent experience with monetary targetting has taught us, reliance on any simple aggregate is unwise. Friedman is correct in noting that conventional monetary aggregates also examine only one side of the balance sheet. Like credit aggregates, they do not provide a very satisfactory basis for conducting monetary policy.

One way to see the problem with making use of a credit aggregate in setting monetary policy is to consider a basic question. In which direction should the knowledge that debt growth has been rapid in recent years influence policy? To the extent that it occasions fears of spreading default, the appropriate macroeconomic policies are expansionary. To the extent that credit growth presages rapid growth in nominal GNP, unexpectedly, as Friedman argues has been true historically, large growth may call for contractionary policies to raise interest rates and reduce debt growth.

This ambiguity sharply distinguishes credit and monetary aggregates. A finding that money has grown rapidly may or may not be an indication that policies to reduce its growth are in order, depending

on whether the money demand function is thought to have shifted. But it is difficult to imagine circumstances in which rapid past growth of money would suggest that more expansionary Federal Reserve policies were called for. On the other hand, rapid growth in the credit aggregates can easily occur in situations, where very expansionary policies are appropriate, because of the risk of financial panics.

As the example of the Depression makes abundantly clear, the Federal Reserve has a crucial role to play as lender or deposit insurer of last resort. Declines in confidence can be both contagious and self-fulfilling in a tightly knit financial system like that of the United States. The willingness of the Federal Reserve to act decisively to preserve confidence is crucial to the maintenance of stability. While crucial to stability, the willingness of the Federal Reserve and the government more generally to take actions to restore confidence in times of crisis no doubt encourages private sector risk-taking. This is part of the case, noted in the introduction, for regulatory policies directed at financial stability. It is very unlikely, however, that by tracking the debt-GNP ratio or any other financial aggregate that monetary policy can do much to maintain stability.

### **The federal deficit problem**

As Chart 1 illustrates, the behavior of the private sector in taking on debt during the 1980s has been consistent with long-term historical trends. On the other hand, recent years have seen a sharp departure from long-term trends in the behavior of the federal deficit. The downwards trend in the ratio of the national debt to GNP, which continued essentially without interruption during the 30 years following World War II, has been reversed in the 1980s. The ratio of outstanding government debt to GNP has risen sharply from 37 percent in 1980 to 53 percent in 1985, and is likely to continue to increase for the next two years even on very optimistic projections. It is this behavior that gives rise to the "Reagan parabola" in the graph of government debt-GNP ratio.

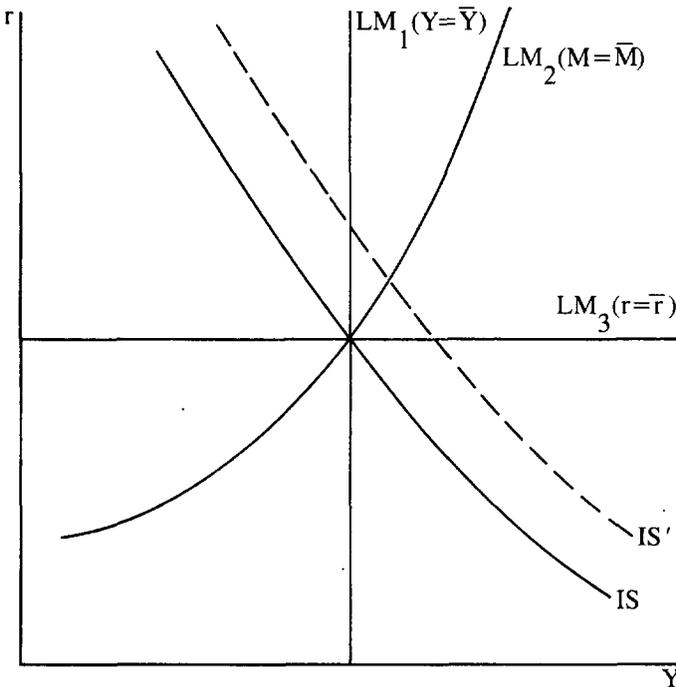
It is important to clarify the dimensions in which the federal deficit represents a serious economic problem. Unlike the debt of the private sector, federal debt has almost unlimited backing—the government's capacity to tax. The risk of explicit default by the federal government is not an important one for the foreseeable future. Nor is there much reason to fear that the private sector will lose confidence and become

unwilling to hold federal debt. Rather the continued growth in federal indebtedness is primarily a problem because of its impact in distorting the composition of GNP and reducing its growth in the long run. I begin by considering the federal deficit's impact on the level and composition of GNP and then suggest that through its effects on interest rates and the composition of economic activity, the federal deficit may indirectly exacerbate the debt problems of the private sector. The distorting effects of federal debt on the composition of GNP has probably caused more financial distress than the build-up of private debt in recent years.

*Federal deficits and the level of economic activity*

Economists have long debated the pure effects of expansionary fiscal policies. Opinions have fluctuated through time, though it is fair to

**FIGURE 1**  
**Fiscal Policy Effects**  
**Under Alternative Monetary Policy Assumptions**



say that the consensus estimate of the fiscal policy multiplier has declined fairly steadily since World War II under the influence of increasing evidence of the interest sensitivity of aggregate demand and the interest insensitivity of money demand. The increasing recognition that expansionary policies lead to price increases has also contributed to reductions in estimates of the fiscal multiplier.

The relevance of these debates about pure fiscal policies to the analysis of actual deficit policies is questionable. The impact of deficits depends critically on what monetary policies accompany them. A homely analogy illustrates the point. Suppose one were interested in the effect of making a car more powerful on the speed at which it would be driven. What should be held constant, the degree of pressure the driver applies to the accelerator, the setting of the transmission, or the speed limit the driver respects? Clearly the question of the effect of a more powerful car on driving speed is meaningless without a specification of what is to be held constant.

As illustrated in Figure 1, the fiscal multiplier can vary between zero and quite substantial values, depending on what monetary policy holds constant in the face of deficits. If the Federal Reserve acts to maintain the level of nominal GNP, fluctuations in the deficit will have no effect on the level of output. On the other hand, if they act to maintain the level of interest rates, the multiplier is likely to be quite large. On the assumption that they maintain the level of the money stock, standard analysis suggests that the multiplier will have an intermediate value.<sup>3</sup>

Academic controversies about the effects of fiscal policy have centered on the magnitude of the multiplier on this last assumption that the money stock is held constant. It is far from clear that this is a very realistic assumption about the monetary policy response to changes in federal deficits in the current policy environment, where monetary policy is no longer directed at pegging the monetary aggregates.<sup>4</sup> The difficult issue for the analysis of fiscal policy is

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<sup>3</sup> Mankiw and Summers (1986) note that the standard analysis of the effects of tax induced deficits like those we are not experiencing depends on the implausible and empirically unsupported assumption that income and not consumption is the proximate determinant of the transactions demand for money. If this assumption is not maintained, it is possible for the multiplier to be negative when the money stock is held constant.

<sup>4</sup> The relevance of the constant money assumption in the past is also highly questionable. In the pre-1970 period, monetary policy sought, at least to some extent, to peg interest rates. Even when monetary policy was explicitly tied to the monetary aggregates, the existence of fairly broad target ranges for the money stock and adjustments for base drift allowed for changes in the money stock in response to fiscal policies.

deciding what alternative reaction function is more plausible to use for monetary policy. My preference is for the assumption that the Federal Reserve seeks to maintain a nominal GNP target in the face of fiscal shocks. That is, it offsets any expansionary impact of deficits with contractionary monetary policies. This assumption is appropriate if monetary policy is selected to balance economic growth and inflation. Fiscal expansions that do not shift the tradeoff between inflation and growth will not lead to the choice of a different level of GNP.

Even if the assumption that the Federal Reserve acts to stabilize nominal GNP in the face of changes in deficits is not completely accurate as a predictive theory, it is still a useful benchmark for the analysis of fiscal policy. It permits isolation of the effects of deficits on the composition of GNP. In the long run, when wages and prices are flexible, these effects are likely to be the primary consequences of fiscal policies.

#### *Fiscal deficits and the composition of GNP*

The effects of fiscal deficits on the composition of GNP are a subject of continuing controversy. If GNP remains constant following an increase in government deficits, some other component of spending, consumption, investment, or net exports must be crowded out. The conventional view embodied in most textbooks is that increases in government deficits—arising from tax cuts, for example—increase the demand for goods. If monetary policy maintains a fixed level of output, interest rates rise to choke off the additional demand created by deficits. Increased interest rates reduce investment demand. They also lead to capital inflows from abroad, which cause an exchange rate appreciation that, in turn, leads to increases in import demand and reductions in export demand.

This view of the effects of budget deficits has been challenged in recent years by Barro (1974) and a number of other authors. Their counterargument is often referred to as the Ricardian Equivalence Proposition.<sup>5</sup> They suggest that increases in budget deficits lead instead to reductions in consumption as households save in anticipation of future tax liabilities. Their argument runs as follows. In the long run, the present value of the government's tax receipts must equal the pre-

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<sup>5</sup> While Ricardo laid out the argument, he concluded that it was unlikely to be valid in practice. My views on the Ricardian equivalence proposition are laid out in detail in Summers (1985), on which the subsequent discussion draws heavily.

sent value of its expenditures. Deficit-increasing reductions in taxes today, with expenditures held constant, necessarily entail increases in taxes tomorrow. The present value of the taxes that will be collected from consumers is unaffected by a tax change. This means that their wealth is unchanged and, therefore, that they should not alter their consumption decisions. Instead, households should save the whole of any tax reduction in anticipation of future tax liabilities. In this case, there will be no increase in the demand for goods and so interest rates will not rise when the government deficit increases.<sup>6</sup>

Much of the discussion of the Ricardian Equivalence Proposition has centered on whether or not persons currently alive are likely to be able to use debt to impose burdens on future generations, thereby making themselves wealthier and leading to increases in spending. Proponents of the Ricardian equivalence view have stressed the possibility that any altruistic parents will tend to offset any burdens imposed on future generations by increasing their bequests. Skeptics have dismissed this possibility. In all likelihood, however, intergenerational transfers are not of great importance in determining the effects of changes in government deficits.<sup>7</sup> The typical adult consumer has an expected life span of about 35 years. If the government runs a deficit, most of the burden of servicing the resulting debt will be borne in his lifetime. Hence, the opportunities for passing burdens on to future generations are relatively limited and so are unlikely to cause deficits to have large effects on consumption spending.

The most serious problem with the Ricardian Equivalence Proposition is its extreme assumptions about consumers' rationality in foreseeing future tax changes. Even where future tax changes have been legislated, consumers appear not to take account of them in making their consumption decisions. This is well illustrated by recent experience. In the summer of 1981, a three-year program of substantial reductions in income taxes was enacted and government spending was slashed. If consumers acted in a forward looking way, one would have expected consumption to surge immediately and then not to change much at all when the tax cuts actually took place. In fact,

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<sup>6</sup> This analysis is exactly correct for the case of a change in taxes or a permanent change in government spending. The Ricardian equivalence view allows for the possibility that a transitory increase in government spending will affect national savings and interest rates in the short run.

<sup>7</sup> The point made here is developed more fully in Poterba and Summers (1986).

the personal savings rate was higher in 1981 when the tax cuts were anticipated than in 1982 and 1983 after they took place. Similar patterns have been observed when other tax changes were announced in advance. If consumers do not take account of tax changes that have already been legislated, it seems most unlikely that they consider tax changes that will ultimately be made necessary by government deficits.

While the Ricardian Equivalence Proposition seems implausible, its validity is ultimately an empirical question. More generally, in considering the effects of budget deficits, it would be useful to have estimates of the effects of deficits on each of the components of GNP. The starting point for an analysis of this question is the national income accounting identity:

$$(1) D = G - T = PS + NFI - I$$

where  $D$  represents the total government deficit,  $PS$  is private saving,  $NFI$  is net foreign investment, and  $I$  is domestic investment. This identity demonstrates that, with GNP held constant, increases in federal deficits must raise private savings, draw funds in from abroad by crowding out net exports, reduce investment, or have some combination of these effects. I estimate the effects of increases in deficits on the composition of national output by fitting reduced form equations of the type:

$$(2) Z_{it}/GNP_t = a_i + b_i(D_t/GNP_t) + c(\text{Cycle}) + u_i$$

where  $Z_i$ ,  $i=1-3$  represent components of GNP and  $\text{Cycle}$  represents a vector of variables intended to control for cyclical conditions. The coefficients  $b_i$  measure the extent to which deficits affect each national income component. In alternative specifications,  $\text{Cycle}$  contains controls for contemporaneous and lagged real growth, and for these variables and contemporaneous and lagged inflation.<sup>8</sup> The equations are estimated by using the total government deficit as reported in the National Income Accounts. The sample period was 1950-1985. The

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<sup>8</sup> For estimates of a wider range of specifications over a slightly shorter sample period than used here with broadly similar results, see Summers (1986). Corroborating evidence from econometric model simulations is also reported. Because of the inclusion of cyclical controls, very similar results are obtained using either actual or cyclically adjusted budget deficits. With the annual data used here, the inclusion of lagged deficits also has little impact on the results.

**TABLE 2**  
**Deficits and the Composition of GNP**

	<u>Real GNP Growth as Cyclical Control</u>	<u>Real GNP Growth and Inflation as Cyclical Controls</u>
Investment	-.674 (.088)	-.605 (.098)
Nonresidential	-.297 (.075)	-.299 (.081)
Residential	-.272 (.086)	-.282 (.086)
Inventory	-.143 (.053)	-.074 (.047)
Private Savings	-.061 (.113)	-.019 (.129)
Net Foreign Investment	-.320 (.095)	-.364 (.108)

Note: Coefficients indicate the effect of a \$1 increase in the deficit of the federal government and state and local governments on the indicated variable. The estimated equations relate the percentage of GNP accounted for by the indicated sector to a constant, a time trend, the percentage of GNP of the combined budget deficits of the federal government and state and local governments, the contemporaneous and twice)lagged values of real GNP, and, for the second column, the contemporaneous and once)lagged value of the change in the GNP deflator. All equations are estimated for the period 1950-85 except for nonresidential and residential investment, which, due to data limitations, are only estimated for the period 1950-84. Standard errors are in parentheses.

equations are not corrected for autocorrelation in order to focus on the "low frequency" effects of budget deficits. Results are reported in Table 2.<sup>9</sup>

Both specifications produce similar results regarding the effects of budget deficits. Increased budget deficits calls forth only a negligible amount of extra private savings. Put differently, they crowd out only

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<sup>9</sup> The major difference in the results when a correction is made for autocorrelation is that deficits are estimated to have a large impact on savings and a smaller impact on net exports.

very little consumption expenditure. The data easily refute the prediction of the Ricardian equivalence view that deficits lead to dollar-for-dollar increases in private savings.

The estimates suggest that, historically, the primary burden of government deficits has fallen on private investment and net exports. Each dollar of deficit reduces investment by about 60 cents. The three components of investment, nonresidential, residential, and changes in inventories are reduced by approximately equal amounts—about 20 cents apiece.

The results also confirm the prediction that increased deficits crowd out net exports by attracting foreign capital inflows. However, the effect appears relatively modest; only about 25 cents of net exports are crowded out by each \$1 increase in budget deficits. This is quite likely the result of the relatively long sample period used in the estimation. The coincidence of large budget deficits and large current account deficits at present suggests that, in the current flexible exchange rate environment, budget deficits have somewhat larger effects on net exports. Consequently, their effects on aggregate investment are probably somewhat smaller than these estimates imply.

These estimates confirm the conventional view that deficits have their primary impact on investment, with secondary impacts on the foreign trade sector of the economy and on private savings. For this pattern of responses to fluctuations in the deficit to be observed, deficits must tend to increase real interest rates. This suggests that deficits have potentially serious consequences for economic growth. In assessing these costs, it is important to recall that deficits are not an alternative to tax increases or spending cuts. Rather, they simply postpone these actions and increase the size of the adjustment that will ultimately be necessary.

### *Federal deficits and financial stability*

The arguments suggesting that federal deficits distort the composition of economic activity carry the implication that they may pose threats to financial stability. To the extent that they raise real interest rates, highly leveraged borrowers are put under increased financial pressure. The importance of this effect is difficult to gauge.

Probably more serious are the large sectoral dislocations associated with increased budget deficits. Financial health depends more on the balance sheet position of the worst-off parts of the private sector than

it does on the aggregate private sector balance sheet. Policies, such as those pursued recently, that lead to large shifts in the composition of output, increase the demand for some products at the expense of others. From the point of view of total demand, the shifts may be neutral but almost certainly the adverse shocks create more financial distress than the favorable ones alleviate. The financial distress of the agricultural sector of the economy, for instance, is in substantial part the result of the crowding out of agricultural exports by the strong dollar.

If this distress and many of the problems faced by the manufacturing sector are to be ameliorated, profitability needs to be enhanced. The most direct way of assuring this is reductions in federal deficits.

### **Financial stability and the tax structure**

The overall level of tax collections determines the level of the federal deficit and so has ramifications for financial stability through its effects on the composition of demand. Changes in the overall level of tax collections do not have a direct effect on the private sector's incentive to take on risky debt, but these incentives are directly affected by the structure of the tax system.

Table 3, drawn from the work of Eugene Steuerle (1985), illustrates a fundamental and little recognized feature of the tax system. Total tax collections on interest income are substantially negative in the United States. Steuerle's calculations suggest that in 1981 tax deductions for interest exceeded tax payments on interest income by almost \$30 billion.

This reflects primarily two factors. Most importantly, borrowers tend to be in higher tax brackets than lenders. For example, corporations, do a great deal of borrowing while a substantial amount of debt is held by tax-exempt organizations, pension funds, and other tax-favored savings vehicles, and foreigners, none of whom pay taxes on interest income. Moreover, underreporting appears to be much more serious for interest income than for interest deductions.

The fact that total interest tax collections are negative means that the tax system is subsidizing the use of debt finance. When a transaction can be structured in a way that enables a high-bracket taxpayer to make and deduct interest payments to a low or zero-bracket taxpayer, the Treasury loses revenue. Transactions that can be structured this way are therefore subsidized. Tax arbitrage can account for the way in which many transactions are structured.

**TABLE 3**  
**Estimated Taxes Paid on Interest Income in 1981**  
**(billions of dollars)**

<u>Type of Payer or Recipient</u>	<u>Taxes Paid</u>
Interest paid:	
Nonfinancial corporations	-48
Sole proprietors and partnerships	-18
Other individuals who pay interest	-31
Interest received:	
Nonfinancial corporations <sup>a</sup>	19
Individuals <sup>b</sup>	38
Businesses <sup>c</sup>	7
Financial intermediaries	4
Total	-29

Source: C. Eugene Steuerle, "Tax Arbitrage, Inflation and the Taxation of Interest Payments and Receipts," *Wayne Law Review*, vol. 30 (Spring 1984), p. 1007, as reprinted in Steuerle (1985), *Taxes, Loans and Inflation*, p. 55.

<sup>a</sup> Includes a small amount from financial noncorporate business

<sup>b</sup> Includes receipts of estates and trusts

<sup>c</sup> Services to businesses

### *Taxes and corporate debt equity decisions*

An obvious example is provided by the issuance of corporate debt.<sup>10</sup> For simplicity, consider initially a corporation whose future stream of profits is riskless. It is clear in this case that, in the absence of tax considerations, the labelling of claims on the corporation as debt or equity will be a matter of complete indifference. But the choice of a means of finance is consequential, given the tax system. When the firm relies on equity finance, its cash payments to shareholders are not deductible. But, when it relies on debt finance, interest payments to bondholders are tax deductible. If the taxation of debt and equity income at the individual level were identical, individuals would require the same rate of return on both debt and equity

<sup>10</sup> The discussion here explicates the so called "Miller Model" of the determination of corporate capital structure. See Miller (1977) for more details.

securities. In this case, corporations would all rely on debt finance. However, equity is tax favored at the individual level because capital gains are taxed preferentially. This means that individuals will require a higher pretax rate of return on debt than on equity, with the differential depending on their tax bracket.

The ultimate debt-equity ratio actually selected by corporations will depend on the tradeoff of the tax advantages to deducting debt at the corporate level, against the tax advantages of holding equity at the individual level, and any associated bankruptcy risks. Under current tax rules, there are few if any taxpayers for whom the tax advantage to holding equity securities exceeds the corporate advantage to being able to deduct interest payments. Therefore, debt-equity result largely from a balancing of the tax advantages to debt finance against the associated risks. In the absence of the tax advantage to debt, corporations would find it profitable to issue less debt and take on fewer risks.

I have highlighted the effects of the tax system on the choice of corporate debt-equity ratios. Similar logic may be applied in other situations. Consider a stock trader considering margining his holdings to purchase more stock. If the interest deductions he receives were exactly matched by interest taxes paid by the holder of his debt, the issuance of debt would have no effect on total tax collections and the tax system would provide no inducement to leverage. All the tax savings provided by the deductability of interest would be offset by the higher interest necessary to compensate debt holders for their tax burdens. On the other hand, if, as Table 3 suggests, debt issuers are typically in higher tax brackets than debt holders, the tax system provides an incentive to leverage. The crucial point parallels the analysis of corporate debt-equity ratios. The tax incentive to debt depends on the difference between the tax rates of borrowers and lenders. Because this difference is normally positive, the tax system provides incentives for the private sector to take on more leverage than it otherwise would.

It is difficult to gauge the quantitative significance of tax incentives on private sector financing decisions. One piece of evidence suggests, however, that it may not be very large. The last decade has seen reductions in tax rates on individuals, expansions in the availability of tax sheltered savings, and sharply higher interest rates, all of which should have provided significant impetus to the use of debt. But as Charts 2, 3, and 4 illustrate, there has been little or no acceleration

in the long-term trend towards the increased use of debt over this period.

### *Tax reform and financial stability*

It is unlikely that the tax incentives toward the increased use of private debt will be reduced very much by the tax reform package currently working its way through Congress. While tax reform will reduce marginal tax rates on both firms and individuals, it is unlikely to reduce the difference between the tax rate on borrowers and the tax rate on lenders by very much. Indeed, because the corporate rate will rise relative to the rates of tax on high-income individual taxpayers, it is likely that the incentive for corporations to issue debt will be increased. This effect will be enhanced by increases in capital gains taxes, which will make equity securities less attractive. Reductions in after-tax corporate profits will reduce internal finance and so will also tend to raise reliance on debt.

While whatever tax reform bill is passed is likely to contain limits on the deductibility of interest for various purposes, it is far from clear that these will, in fact, bind for many taxpayers. Many will find it easy to rearrange their borrowing—by increasing their home mortgage for example—and so avoid any limits contained in the law.

To reduce the tax incentive to use debt finance, it is necessary to reform the tax system to narrow the spread between the rate at which interest is deducted and taxed. This is likely to be very difficult within the context of an income tax system that exempts a great deal of interest income from taxation. Reforms that move in the direction of a consumption tax and disallow all interest deductions probably offer the best hope of reducing the tax incentives favoring debt finance. But such reforms are not likely to be enacted in the near future.

### **Conclusions**

This analysis of debt problems and their interaction with macroeconomic policies suggests that ensuring financial stability is primarily a microeconomic policy problem. There is relatively little that aggregate fiscal or monetary policies can do to insure financial stability other than trying to maintain economic stability. Nor, despite widely expressed concerns about the increases in various debt ratios, is there cause for generalized concerns about excessive leverage at present. Given the economic record of the past decade, aggregate private sector balance sheets appear surprisingly healthy. The problems that exist

are largely sectoral and so call for microeconomic rather than macroeconomic remedies.

While financial stability is not a critical macroeconomic policy problem at the present time, there is a compelling case to be made for reducing government budget deficits. Budget deficits have little effect on the overall level of output in the current policy environment but badly distort the composition of output away from the investment and export sectors of the economy. The longer the delay until action is taken to reduce deficits, the larger will be the tax increases or spending cuts that will ultimately be required. Prompt action to reduce federal deficits would enhance both financial stability and economic growth.

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# Commentary On “Debt Problems and Macroeconomic Policies”

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*Alan S. Blinder\**

Before I read Larry Summers’ thoughtful paper on the domestic debt non-crisis, I had the vague impression that worries about explosive growth in the ratio of the Friedman measure of credit to gross national product (GNP) were excessive because:

- (1) Most of the growth came from government debt, not private debt.
- (2) If there are more debt liabilities, there must be correspondingly more credit assets.
- (3) More credit may well be good, not bad, for the economy for a variety of reasons.
- (4) Financial distress seems not to be generalized, but rather concentrated in sectors—like farming and energy—which have suffered from specific adverse shocks.
- (5) And finally, the ratios of other credit aggregates to GNP were never as constant as was the Friedman measure—which received so much attention precisely for this reason.

Each of these beliefs save the last (about which more presently) was ably supported in Larry’s paper, which leaves me little to disagree with. And that, of course, raises the danger that this will be a boring discussion. I will try to avoid that by highlighting some points of difference, for I do think that Larry leaves out some aspects of the debt problem that should be mentioned. But this academic quibbling should not obscure the basic message that Larry’s views and my own are very similar.

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\*I thank Joshua Gahn for research assistance.

I will organize my remarks around five basic questions asked and answered by Summers.

### **Why has the debt ratio risen? What does it mean?**

Larry points out that while the time series plot of Friedman credit relative to  $Y$  (henceforth,  $FC/Y$ ) shows a sharp break with historical experience in the 1980s, the corresponding plot of private borrowing relative to GNP does not; it simply continues its upward march. So, in Larry's view, there has been no explosion in private debt. What happened, instead, is that the formerly steady downward drift of government debt relative to GNP was reversed, and so no longer offset the rise in private debt. Larry is inclined to view it as a coincidence that, relative to GNP, government debt was falling as fast as private debt was rising before 1980. And he buttresses this view with time series regressions showing little if any systematic negative relationship between the two.

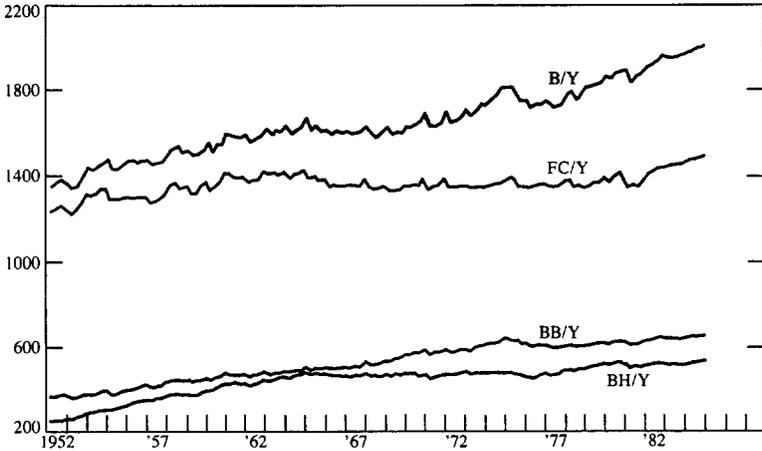
I am inclined to agree and would add two related observations. First, the ratio of  $FC/Y$  was not constant, but rather rising rapidly, during the 1952-61 period. It was only constant during the 1960s and 1970s. (Ben Friedman will no doubt point out, correctly, that 20 years is nothing to sneeze at.)

Second, as I mentioned, other measures of credit were always growing faster than GNP, even in the 1960s and 1970s. For example, Chart 1 shows the behavior of a broad measure of total borrowing in U.S. credit markets that I have developed elsewhere, called  $B$ .<sup>1</sup> Except for a brief period in the late 1960s, when unanticipated inflation reduced the real value of debt while real GNP boomed, the ratio  $B/Y$  has always grown. The 1980s look no different from earlier history. (Regrettably, I have not yet brought this series beyond 1983.) The chart also shows the ratios to GNP of total borrowing by households ( $BH/Y$ ) and by nonfinancial businesses ( $BB/Y$ ). Business borrowing relative to GNP certainly shows an unbroken upward march. Intriguingly, household borrowing relative to GNP shows a pattern similar to Friedman credit: growth until 1965, a decade or so of constancy, and then resumption of growth.

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<sup>1</sup> The series is described in Blinder (1985). It is broader than Friedman's credit measure in that it includes foreign as well as domestic borrowers, some borrowing by financial institutions, and a broader array of financial instruments than Friedman allows (e.g., especially trade credit and large time deposits).

**CHART 1**  
**Ratios of Credit Aggregates to GNP**



Larry stresses that private and government debt are fundamentally different. That is true. But he goes a bit too far when he says that any debt of the private sector must be balanced by an equivalent private asset because “private debt is a purely inside obligation.” In fact, in 1983:IV (the last quarter of my data), foreigners and the government together accounted for fully 21 percent of total lending in U.S. credit markets. This percentage must be higher today.

**Does the rising private debt ratio pose a macro problem?**

Summers says no. First, it is net worth, not debt, that matters for solvency questions. Second, whatever financial problems we have are sectoral not macroeconomic. But Friedman seems to disagree. (It is nice to see that diversity still thrives at Harvard after 350 years!) Here I am going to be one of those awful two-handed economists and argue that Larry goes too far in claiming that Ben is a worrywart. I have two reasons.

First, man does not live on stocks alone; flows also matter. Higher real interest rates probably imply lower optimal ratios of private debt to GNP. At least I felt more comfortable with a huge mortgage when real interest rates were negative than I would now. Even if the suggested negative relationship between real interest rates and optimal

debt ratios is not accepted, it is certainly true that higher real rates imply higher probabilities of default for any given debt-GNP ratio. Since real rates are much higher in the 1980s than in the previous three decades, the fact that private debt-GNP ratios have continued their inexorable upward march may be worrisome. When I read Larry's paper, I vowed to compute the ratios of household and business interest payments to the relevant income flows to see if they were rising faster in the 1980s than before. Fortunately, Ben Friedman's paper arrived the next day and saved me the work (see his Chart 2). Nominal household interest payments rose from 2.5 percent of disposable income in 1953 to 7.6 percent in 1984, though without any noticeable acceleration of this trend in the 1980s. I trust, however, that if real interest payments were used instead, the rise in the 1980s would be far greater. Business interest payments relative to earnings rise dramatically on Friedman's chart starting in the late 1970s, and now exceed 50 percent for nonfinancial corporations and 30 percent for noncorporate business. I think these numbers are more relevant to the issues of financial distress and macro stability than Summers apparently does.

The second reason is related to the first. If Irving Fisher (1933)—or my colleague Ben Bernanke (1983)—were here today, he would probably let the words "debt deflation" pass his lips. When inflation falls more rapidly than expected, borrowers are saddled not only with higher-than-anticipated real interest payments but also with higher real repayments of principal. Some will be unable to pay. This has certainly happened to some substantial extent in the United States in the 1980s and has contributed in no small way to the rise in debt defaults shown in Friedman's useful Table 6. It is a story, I think, that is not unknown within the boundaries of the Kansas City Federal Reserve district.

Rising real interest rates and debt deflation pose general macro problems, not sectoral ones. They are part of the legacy of conquering inflation through tight money. I think Summers pays them too little respect.

### **Is debt useful as a macroeconomic indicator?**

Larry is skeptical. He points out, first of all, that a rise in debt could be either a positive or a negative indicator of economic activity. True. He also says that "credit availability theories would sug-

gest investigating much narrower aggregates linked to the parts of the financial system where credit might plausibly be rationed," rather than using Friedman credit. Again I agree and can report the following. Take each component of total borrowing (as I have measured it) for the period 1952-83, deflate by the GNP deflator, and detrend. Then the contemporaneous correlations with real GNP, using quarterly data, are as follows:<sup>2</sup>

Consumer credit	0.80
Mortgage credit	0.64
Security credit	0.61
Loans (by banks and others)	0.57
Trade credit lending	0.44
Bonds	0.29
Commercial paper	0.13
Large CDs	0.08

This ranking, I think, accords quite well with Larry's expectations.

As a second question, we can ask what sort of credit aggregate (in nominal terms, now) is the best predictor of future nominal GNP movements. I tried the following:

Total borrowing	0.246
Friedman credit:	0.032
Bank credit:	0.027
Borrowing by households:	0.025
Borrowing by nonfinancial business:	0.104
Intermediated borrowing by households: <sup>3</sup>	0.046
Intermediated borrowing by nonfinancial business: <sup>4</sup>	0.190

In each case, using quarterly 1953-83 data, a Granger causality test was run using four lags of nominal GNP and four lags of the credit aggregate. The results of F-tests for excluding the credit aggregate are shown in the listing above by reporting the marginal significance levels. (I was surprised, given Ben Friedman's well-known results, that bank credit edged out Friedman credit.) The general message in these results is more or less as Larry and I expected: credit subject to rationing generally has more predictive power than open-market credit.

<sup>2</sup> Blinder (1985), Table 7.

<sup>3</sup> Borrowing in the forms of consumer credit, mortgages, loans, and trade credit.

<sup>4</sup> Borrowing in the forms of mortgages, loans, and trade credit.

### **Does the rising government debt ratio pose a macro problem?**

Summers' answer here is a resounding yes, though he adds that the problem is not that large government deficits either increase the fragility of the private financial system or influence the level of GNP. Instead, Larry insists, the real problem is that large deficits have a profound effect on the composition of GNP, especially by crowding out investment. I'd like to demur somewhat from each of these points.

The first demurrer is actually Summers' own; but you may have missed it since it goes by in a single paragraph. Since I think it's quite important, I'd like to call it to your attention.

Larry argues cleverly that the sectoral imbalances caused by large government deficits raise the variance of the distribution of financial health in the economy. Since it is only the lower tail of this distribution—the part where default is a real possibility—that matters for financial distress, the federal deficit therefore raises financial fragility. This story rings true—loudly true. Surely, the financial distress in the farm belt and the export-damaged parts of the manufacturing sector are traceable in no small measure to the Reagan tax cuts.

Larry argues that fluctuations in government deficits have little impact on GNP—not for Barro-type reasons, but rather because the Fed is targeting nominal GNP and, therefore, offsetting the impact of fiscal policy on aggregate demand. I think that is probably roughly right, though a bit exaggerated. But I think it is also a very recent policy stance for the Fed. It certainly does not characterize 1980-83 very well. How long it will last is anybody's guess. Well, as I look around the room, perhaps not anybody's. But I hesitate to enunciate it as a general principal.

Finally, I have some troubles with the view that government deficits mainly crowd out investment. First, it has proven quite difficult econometrically to detect systematic and strong effects of deficits on interest rates. And if deficits do not push up real interest rates, it's hard to see how they could damage investment. Here, I am not saying I disagree with Larry, only that he should qualify his conclusion a bit more.

Second, I think he gives insufficient emphasis to the likelihood that crowding out has shifted lately from investment to net exports. Table 1 is taken from a recent paper of mine (Blinder, 1986), but you have all seen similar tabulations. Compare the average of 1984 and 1985 with the average for the 1970s. It shows that fixed investment as a

**TABLE 1**  
**Composition of Real Final Sales**  
**(percent)**

<u>Component</u>	<u>Average</u>						
	<u>1970-79</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
Consumer expenditures	63.2	63.2	63.2	64.3	65.4	65.4	64.8
Fixed investment	15.8	16.3	16.2	14.8	14.9	16.4	16.6
Business	10.8	11.8	12.2	11.5	10.5	11.5	11.9
Housing	5.0	4.5	4.0	3.3	4.5	4.8	4.7
Government purchases	20.3	19.4	19.4	20.1	19.8	19.9	20.4
Net exports	0.8	1.2	1.1	0.8	-0.2	-1.6	-1.9
Exports	9.1	12.8	12.6	11.3	10.4	10.4	9.3
Imports	8.3	11.6	11.5	10.5	10.5	12.0	11.2

share of real final sales was actually higher by 0.7 percentage point even though consumption's share was higher by 1.9 points. What was crowded out, apparently, was net exports, whose share of real final sales fell by about 2.6 points. This is a very different story from Summers' regressions which, as he says, are dominated by pre-1980s data. It is a story that helps explain why the American public has been so complacent about the deficits. If investment as a share of GNP had declined by 2 percent, all hell would have broken loose! And, in view of the high degree of international capital mobility, it also helps explain how deficits can cause severe crowding out without causing large apparent increases in real interest rates.

### **Does the tax structure encourage excessive use of debt?**

Summers says yes — which, of course, is the right answer. And he uses this answer to get in yet another plug for his favorite tax: the consumption tax. I do not disagree with Larry but would, instead, use the same pretext to get in a plug for my favorite reform: indexing the income tax.

Larry is correct that any income tax will subsidize debt financing because people will arrange things so that borrowers are in higher tax brackets than lenders. No income tax reform will be able to prevent this entirely since there will always be different marginal rates; at a minimum, there will always be untaxed lenders. However, I think Larry underestimates the good that will be done by the new tax bill.

First, as he knows, the amount of extra borrowing induced by the tax system depends on the gap between the marginal tax rates of lenders

and borrowers. The compressed structure of marginal rates will shrink this gap. After all, a 33 percent tax rate really is 34 percent lower than a 50 percent tax rate. Second, I don't think the limits on interest deductions will be quite as irrelevant as Summers says, though they surely will be avoided to some extent.

A consumption tax would end the tax distortion in favor of debt, as Larry says. But indexing would eliminate a good deal of it without overthrowing the basic framework of income taxation that we have just worked so hard to improve. How much of the job would indexing do? That depends on the relative sizes of real interest rates and expected inflation since the distortion under the income tax applies to the nominal rate and indexing would just reduce the base of the distortion to the real rate, not eliminate it entirely.

Actually, if you work through the algebra, the fraction of the over-borrowing problem cured by indexing turns out to be  $\dot{p}/i^*$ , where  $\dot{p}$  is the (actual=expected) inflation rate and  $i^*$  is the hypothetical nominal interest rate that would prevail in the absence of tax distortions. This ratio is bigger than you think, even with today's high real rates, because  $i^*$  is necessarily smaller than the actual nominal interest rate under present tax laws,  $i$ . Specifically, the ratio of  $i/i^*$  can be shown to be  $1/(1-t)$ , where  $t$  is a weighted average of the tax rates on borrowers and lenders.<sup>5</sup> Thus, the fraction of the problem cured by indexing is  $\dot{p}/i(1-t)$ , which is large even if  $i$  greatly exceeds  $\dot{p}$ . For example, let  $i=0.08$  and  $\dot{p}=0.04$  (a real rate of 4 percent). Then  $t=0.25$  implies that indexing cures 67 percent of the problem. That sounds pretty good to me.

## Conclusion

I agree with Larry that rising debt-to-income ratios are worrisome primarily when the denominator is falling rather than when the numerator is rising—and that such occurrences usually have sectoral, not macroeconomic, origins.

But I would add, as he did not, that rising ratios of interest obligations to income are a general macroeconomic headache, even when they come from the numerator, and that they can pose threats to financial stability. The solution here is obvious: the Federal Reserve should

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<sup>5</sup> The weights depend on the semi-elasticities of lending and borrowing and are equal if these elasticities are equal.

reduce real interest rates. I will bet our hosts have heard that before, even from me. And they will hear it again.

In addition, sectoral imbalances caused by the effects of federal deficits on relative prices like real interest rates and the terms of trade are quite serious. And, they interact with financial fragility problems in ways that I had not thought of until I read Larry's paper. I thank him for pointing it out. Now, if only someone would tell President Reagan.

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# Commentary on “Debt Problems and Macroeconomic Policies”

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*Phillip Cagan*

There is general agreement that debt in the U.S. economy relative to income or gross national product (GNP) has grown enormously in recent years, and perhaps dangerously. I shall comment on Summers's answers to the two questions, “why has it grown?” and “so what?” It helps to consider “so what?” if we can first understand why.

## **Why?**

Summers quite properly differentiates federal government and private debt. The risk of default differs substantially, being virtually nonexistent for federal debt. Furthermore, he concludes that federal debt has not reduced private debt issues, contrary to the idea that an offset between federal and private debt could explain the long stability in the ratio of total debt to GNP. Let me comment briefly on that.

The correlation coefficients in his Table 1 show that total government debt has no systematic negative relationship to deviations of private debt from trend. The implication of no effect is less than conclusive, however. His Table 2 correlations, presented for a different purpose, show that federal deficits reduce private investment and raise saving, though less than dollar for dollar. If much of private debt is generated to finance investment expenditures, Table 2 would appear to imply, even though it is based on flows, a corresponding negative relationship between stocks, contrary to the Table 1 result of no relationship. But Table 2 is not without its problems too. Standard theory implies that any observed effect of deficits on investment occurs through an intermediate effect on interest rates. Yet there are more studies in the literature (at last count) showing no such effect than

there are studies that claim to find it. How do we cut our way out of this maze of contradictory findings?

Since federal and private debt are substitutes to an extent, an increase in the supply of federal debt should partially but not inconsequentially increase the interest cost and reduce the supply of private debt. Historically, however, before the 1980s, such an effect was dwarfed by other cyclical developments so that quantitatively it is a "needle in a hay stack." Our econometric tools often cannot find pitchforks much less needles and cannot always be taken seriously. Therefore, I think it is best to conclude that federal debt crowds out private debt to some extent, though not necessarily by enough to explain the past constancy of the ratio of total debt to GNP.

According to Friedman's Table 1, the government, including state and local entities, accounted for almost half the total increase in U.S. debt from 1980 to 1985. The increase in federal debt requires a political explanation, which seems straightforward. The private increase, however, requires an economic explanation that is not so simple.

As Summers and Friedman point out, the net worth of the private sector has changed little relative to GNP; that is, assets stand behind the growth of liabilities. Businesses and households have borrowed to acquire assets rather than to finance consumption, although household consumer durables formed nearly a third of the increase in their part of tangible assets. We should remember that, during the 1970s, the public sought hedges against inflation and nonequity financial assets held by the private sector, excluding financial intermediaries, actually fell relative to the market value of tangible assets. Then in the 1980s, this shift to tangibles reversed and the ratio of financial to tangible assets for the whole economy is now almost back to the normal level represented by the 1960s.

This reversal mainly reflects a rise in the market value of tangibles, and partly because of this rise, borrowing has favored debt over equity to restore the desired ratio of financial to tangible assets. Nevertheless, this reversal does not explain the continuing growth of debt relative to income. Household debt relative to income has trended upward for many years. Yet Friedman's Chart 2 shows household interest payments as a percentage of personal disposable income at only 7.6 percent in 1984, with no major change in the upward trend in the past three decades. This steady upward trend can probably be explained by demography, an increase in homeownership and appliances per household, and the credit card revolution. It has far to go before it threatens the financial stability of the economy. Moreover, it should

ease as lower interest rates work through the mortgage stock.

It is the growth of debt and interest payments of business that stands out. In Friedman's Chart 2, this growth begins in the mid-1960s with the Vietnam inflation and escalates with disinflation in the 1980s. Summers points out that the ratio of business debt to GNP has long followed an upward trend with little significant deviation. Although interest payments grew even faster after the mid-1960s, which may have happened only because interest rates rose, that leaves unexplained the continued high interest payments in the 1980s as rates declined sharply.

First, why the upward trend in business debt? Summers cites the tax advantages of debt. Corporations have gradually shifted from equity to debt financing. The additional growth of noncorporate debt, I presume, reflects mainly the tax advantages of real estate investment. And state and local governments also have a tax angle. As Friedman notes, they have sold tax-exempt municipals to invest in higher yielding Treasuries. Summers, nevertheless, questions the quantitative importance of taxes for corporate debt on grounds that further tax advantages in the past decade did not accelerate the shift to debt. But taxes may explain part of the upward trend in the corporate debt ratio, which otherwise would not have continued rising if the set of tax advantages had remained unchanged. As further explanation for part of the recent rise in the corporate ratio, we have the junk bonds, though they may reflect more than a tax advantage. As I understand it, those crazy zero-coupon junk bonds find a market with financial intermediaries that want to report large accounting incomes and can shift the dangers of default to government insurance. That, incidentally, represents a hazard for the taxpayer rather than a direct threat to financial stability, and pleads for a reform of government insurance programs rather than new restrictions on security issues.

Friedman informs us that almost all the increase in corporate debt from 1980 to 1985 reflected mergers, acquisitions, and leveraged buyouts in the final two years. We can attribute a good part of this mania of corporate reorganization to the maladjustments produced by inflation. For reasons not entirely clear, the market value of equity did not keep up with inflation, and the ratio of the market value of firms to their capital replacement cost declined sharply after 1972. It thus became much cheaper to buy old than new capital. The value of this ratio, known as Tobin's  $q$ , fell as low as one-half, and economic logic tells us that something unusual was bound to result from this unprecedented situation. It is one of many legacies of the escalating

inflation of the 1970s.

Based on these conjectures, corporate reorganizations and their junk bond progeny will subside as Tobin's  $q$  approaches unity. The ratio had recovered to 60 percent at the end of 1985 and improved considerably further with the market's 20 percent rise so far in 1986. In addition, the new tax law of 1986 should restrain the growth of real estate debt, and the unchanged tax advantages of corporate debt should put a limit on the debt-equity ratio, though when is unknown. In any event, as my colleague Herb Stein points out, if a trend cannot, by economic logic, go on indefinitely, it will eventually stop! Of course, to paraphrase the issue of this conference, the question is, under what circumstances will it stop?

### **So what?**

Let me turn to Summers's answer to "so what?" If the increased debt has assets behind it as indicated by stable net worth ratios, most issuers are not insolvent and presumably are reasonably protected against default. Yet the increased leverage produced by shifts from equity to debt can result in cash flow and liquidity problems. Friedman notes that the liquid asset holdings of corporations have not increased to match the growth in debt, and the liquid asset position of noncorporations has deteriorated. He fears that the periodic need for monetary restrictions faces increased risks of precipitating liquidity crises, which gives the Federal Reserve less elbow room to combat inflationary pressures.

Looking at these same data, Summers appears to be less pessimistic. Obviously, there is room for disagreement on the future consequences. Forecasting financial crises ranks on a par with economists' ability to predict the stock market. Although the dangers of overindebtedness are clear enough and foster pessimism, a review of the data gives some grounds for guarded optimism, though presumably not complacency. Let me list four:

- (1) The government debt is safe, though its growth carries undesirable burdens on the economy of other kinds, which I return to in a moment.
- (2) The net worth of households and businesses has not deteriorated. Although some could be short of liquid assets, the danger of an unsatisfactory allocation between short and long-term assets differs from the danger of excessive total debt.
- (3) Holders of junk bonds must know the risks and be prepared for them. Therefore, default need not produce externalities for finan-

cial markets, though part of the damage may fall on taxpayers through insurance programs.

(4) Debt problems have already taken their toll for several years as a result of overborrowing during inflation in the 1970s and disinflation in the 1980s. Bankruptcies have been running far above normal, particularly in the farming and oil-related sectors, not to mention the demise of thrift institutions and the unservicable international debt of many foreign countries. These actual and near bankruptcies are affecting banks, but we have had no spreading financial crisis. So far, the financial system appears capable of weathering these disasters if they do not happen all at once but slide down gradually, especially if well lubricated with government subsidies.

I am inclined to agree with Summers that our excessive debt poses micro rather than macro problems and should be addressed as such, particularly the incentives to issue debt rather than equity. Treating the two equally in the tax system, such as making dividends tax deductible, would work wonders. While we are concerned here with potential financial crises that may never materialize, the economy has already paid dearly for the micro problems of overindebtedness. In addition to the distress in farming and oil and the Third World, Treasury debt issues from the U.S. budget deficit produced a massive trade deficit that has exacerbated the farm problem and pushed many U.S. foreign-competing industries to the wall. Having faced these micro disasters, surely monetary policy will not transform them into a macro problem by adopting an inflationary bias to avoid the default of a few junk bonds. At least, I hope we have our priorities straight. Extracating the economy from 15 years of escalating inflation has been no picnic. Monetary policymakers will not want to face the necessity of going through that experience again.

### **Consequences for monetary targeting**

Of course, policymakers can make mistakes. As a final point, let me comment on the problems of conducting monetary policy. The unpredictable behavior of monetary velocity, particularly since 1980, has increased the possibility of unintended policy outcomes. It is interesting to note that Henry Simons, an earlier University of Chicago guru on monetary policy issues, lamented the growth of debt as inimical to a sound monetary system, but it was the growth of short-term debt that concerned him. He wanted a financial system composed of money and long-term debt only, so that the public was unlikely

to want to shift between money and close substitutes, which create unpredictable changes in the demand for money. Simons did not see long-term debt as posing a problem for the conduct of monetary policy because it was not held for liquidity and because defaults were not a major problem if they did not disturb the money stock. How times have changed. No one mentions the growth of short-term debt anymore.

Yet, it is short-term debt that has created problems for monetary targeting and made the conduct of policy more difficult. While the recent growth of the debt-GNP ratio seems to suggest that this growth is related to the decline in monetary velocity and that the change in behavior of monetary velocity seems not to reflect simply the growth of short-term debt, I do not see a connection between the growth of debt and money. The fact that the public is holding more debt does not imply an increased demand for money. The different behavior of M2 and M3 velocity suggests different forces at work on liquid rather than long-term assets. Indeed, the decline in monetary velocity since 1980 appears attributable to the decline in the opportunity cost of holding money, particularly interest-bearing NOW accounts. I find in my work that the problem of estimating a money demand equation that can be used for prediction in the 1980s results from the poor fit of the equation to the second half of the 1970s. That was a period of change, and we need a decade or two beyond those years to estimate a new equation. Whether money or debt will sometime find favor again as targets for monetary policy are unrelated questions. I think money will. I have serious doubts about debt.

## Overview

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*Stephen H. Axilrod*

I will be commenting mainly from the viewpoint of macro policy, which just about makes me the third commentator on the last panel. But I will also attempt to bring in some of the other aspects of the debt problem that have been discussed here in these two days.

Debt, and its relationship to other economic variables, such as income, is not a concept that can be easily employed to provide direction for macro-economic policy. I do not think of debt as, for instance, a policy handle like one might think of the money supply, although it less serves that function these days—or as one might think, on the fiscal side, of the high employment budget deficit or surplus. Rather, I tend to think of debt more as one among the many economic variables you assess for the insight it gives into current economic and financial circumstances and processes. You look at its trends, cyclical behavior, and current tendencies to help in analyzing the economy and in deciding on how whatever policy instrument you have at hand is to be used. Debt is only one aspect of the economy among many; I doubt that it has a unique status as might be confirmed by stable or highly predictable historical relationships to GNP or other key variables.

With regard to the value of debt as a policy tool, I should add that when Ben Friedman was first doing all of his work on the subject, it had some implications, of course, for work within the staff of the Federal Reserve. I do not mean merely that Ben took up a considerable amount of the time of our Flow of Funds Unit in providing data that he needed. We also attempted some of our own research in that area. As I remember it, the results of one analytic approach showed that debt was much more a coincident than a leading indicator in relation

to the economic cycle—in contrast to measures of money, most of which showed more of a leading than coincident role. So that fortified my view that debt should be viewed basically as one analytic device among others rather than as a policy handle or a unique policy variable.

If changes in debt are coincident with changes in gross national product (GNP), one might argue that if you could control debt, you could control GNP. However, there is no practical way to control debt as a whole directly in our economy. Control would have to be indirect through, say, interest rate policy, which basically influences debt through effects on spending. So in the end you are talking about how to control GNP, not debt as such, and therefore, raising all the basic problems in that regard, which have been the subject of economic discussion from time almost immemorial.

In any event, I should quickly say that debt developments have effects that policy cannot ignore. Not all these effects stem from the inadequate macro-economic policies of the past that might have encouraged excessive borrowing or lending or from policy measures taken later to rectify those problems. Rather, some debt problems stem from underlying structural changes that are imbedded in economic expansion, developments in financial technology, and adaptations to a changing competitive environment in the national and world economies.

The international debt problem strikes me as one that comes in large part from the inadequate macro policies pursued in the developing and developed countries in the 1970s—policies that, on the one hand, encouraged countries, particularly the less developed countries, to mortgage their futures on the thought that debt burden would forever be light in real terms and, on the other hand, encouraged banks in the developed countries to get into a “go go” attitude on the thought that prices and markets would expand forever. But there were also structural elements. Large institutions, goaded by expanding international competition in banking and fighting for market shares, engaged in risky lending policies. This engagement led to a degree of cooperation among central banks and banking supervisory authorities in the major countries, but in my view, cooperation was late in starting and difficult to achieve.

In the United States, the banking system also had a difficult time in adjusting to structural changes implicit in deregulation of interest rate ceilings. The deregulation was clearly necessitated by the rise in interest rates generated out of the inflation of the 1970s, but deregula-

tion was something that should have been done in any event on economic efficiency grounds. After years of suppressed, controlled deposit rates but free lending rates, there was, I believe, "surplus" profits in the banking system, although evidence is probably unclear on this point. To the extent there were surplus profits, you would have to expect those profits to be competed out as deposit ceilings were lifted. One consequence would be a significant decline in the number of banks.

That decline is being accomplished through mergers and acquisitions. The problem is that we are having a hard time finding good large banks to buy the smaller weak banks, and we are having a worse time finding good large banks to buy the weak large banks. In effect, an orderly decline in number occasioned by deregulation is being compounded in difficulty by the layering on top of it of the need to merge banks that are in danger because of loans made during the inflationary period and the period of "go-go" banking.

Debt problems in the energy and agriculture area as they affect both lending institutions and borrowers are also to a great extent structural. In the energy area, problems have evolved out of the conservation that developed from the earlier oil price hikes that subsequently helped keep oil prices and production down. In agriculture, we have had something of a revolution in production, which probably was not properly assessed by the agricultural producers and the agricultural lenders—although the speculative, inflationary environment of the 1970s also was clearly a main force behind overexpansion of farm lending.

Partly for structural reasons, debt problems and some areas of financial weakness are going to endure for some time, though I believe they will continue to be reasonably well contained without significant adverse systemic effects. Such problems are also going to be intensified in the degree that we continue to need to maintain relatively high real interest rates to combat pressures of inflation and inflationary expectations. As those pressures ease off, nominal and also real interest rates can and should come down, easing debt and financial problems to a degree.

I would take the rise in the debt-to-GNP ratio over the last few years in a way as evidence of the persistence of inflationary pressures. Summers has shown by fitting a trend line—though starting, as Ben has pointed out, in a dubious place—that private debt has expanded about as expected while government debt expansion has had its ups and

downs, mainly ups in recent years, of course. Yet the U.S. fiscal stimulus has had large disadvantages in that it has squeezed out, on Summers' estimate, domestic investment and to a degree internationally-oriented industries—though I am sure we all agree, and he agrees, that these estimates understate the extent to which internationally-oriented industries have been squeezed out.

But if at least some domestic investment has been squeezed out in recent years, how do you account for the increase in private debt at about a little more than trend? Perhaps it is all rapid expansion in consumer debt. But an obvious possibility is that once the economic situation began to improve toward the end of 1982, private debt, to anthropomorphise the concept a little, really wanted to go up by more than trend to make up for earlier depressed spending. It was held back from rising more than trend, one might then assert, by the high real interest rates that prevailed on average over the 1983-85 period.

Without these high rates and the accompanying high exchange rates, inflation and spending financed by private debt would have been even greater because, I take it, inflationary expectations had lingered on at relatively high levels, probably much higher than it looks to us now in retrospect when we see 3 to 4 percent price increases for several years. It took that experience to bring inflation expectations down.

In that context, I would not play down the expansion of the federal debt as a macro policy problem, as Summers seems to, on grounds that monetary policy could in any event maintain growth in the nation's income or because federal debt does not adversely affect market behavior since, in practice, it is free of default risk. Rather, the sharp expansion in the overall debt ratio propelled, it is right to say, by the federal government debt can, in my view, be taken as one sign of the remaining inflationary pressures in the economy, with the actual rate of inflation held down in part by the appreciation of the dollar over the period. The federal debt expansion might be viewed, at least to a degree, as a "proxy" for the private debt that wanted to surge but could not because of the high real interest rates of the period. Such rates were the product of the growing budget deficits and also of the need for a degree of monetary restraint to contain the inflationary pressures that would have otherwise developed.

On a related tack, I would also want to argue that rapidly growing federal debt, particularly in that period when private debt is also expanding rapidly, interacts with monetary policy through its effect on inflationary expectations. While the public does not bother itself

with economists' stability conditions, they still realize, I believe, that rapidly expanding federal debt cannot go on forever without overburdening the tax system. Something will happen. Perhaps the public will believe that there is no risk of formal default. But they see such things as changes in law that adversely affect cost of living provisions for retirees. Because it seems like a breach of "contract" by the government, that sort of occurrence, I believe, takes the edge off of confidence in the federal debt. This type of attitude is also illustrated in doubts about the viability of the social security system, irrational as we may think such doubts to be.

The ostensibly more sophisticated people may tend to think the government will reduce its debt burden in another way—through inflation, which, to my mind, is a form of default. It is not a formal default, but it reduces the real value of the debt. Thus, a rapid expansion in debt relative to GNP is very likely to keep inflationary expectations higher than otherwise, forcing the monetary authorities to deal with a worse unemployment-inflation trade-off.

As a result, whether the authorities have a price objective or an objective expressed as growth in nominal income, real income is going to be affected adversely if inflationary expectations are stronger than otherwise. This effect on real income will alter the nature of the macro policy decision. It will require reassessment of what near-term economic objectives should be, of how the objectives might be attained, the time path over which lower price increases may be sought, and the extent to which economic weakness need, or should, be risked. These choices are much less difficult when inflationary expectations are low.

Ben Friedman suggests that as debt rises relative to income and as debt problems from international and domestic sources permeate the depository system, an inflationary bias may be imparted to monetary policy. If there were to be such a bias, that would be a good reason to keep debt problems under control in the first place. But more pertinently, the debt problems are mainly the result of the inflationary bias of monetary policy in the 1970s; they were not the cause of such a bias. Policy had an inflationary bias before the debt problems became evident for reasons that would probably take a shrewd sociologist to understand as well as a psychologist specializing in economists' drives toward wrong economic projections. And if monetary policy attempts to deal with debt problems and financial difficulties by creating a bit more inflation and lowering real interest

rates at least temporarily, we will in the end run the risk of having to deal with another financial problem—unless banks, other lenders, and the political powers of nations in this highly competitive and integrated world show more self-restraint than experience to date would seem to suggest.

Financial difficulties could have been alleviated to a degree by a different macro policy mix—one with a less expansionary fiscal policy so that real interest rates would have been less high than otherwise. An expansionary fiscal policy was needed to help pull us out of the recession, but I think it went at least a stage and a half of a tax cut too far. Still, the financial problems and instabilities of recent years could not have been entirely avoided, partly because real interest rates also needed to be high over the period to help suppress inflation and inflationary expectations and partly because of the structural changes noted earlier. Thus, the persistence of financial instability can be viewed at least in part as a product of the continued need to combat inflation and also as some evidence of the waning inflationary bias of the authorities.

The policy of curbing inflation has had a considerable degree of success, though obviously more is required before the market becomes convinced that either reasonable price stability or a long-run inflation rate below the area of 3 to 4 percent per year is in prospect. Over the period since late last year, the sharp downward break in oil prices helped reduce inflation expectations and, together with apparent legislative progress in reducing the U.S. budget deficit, set the stage for substantial declines in nominal interest rates and to a degree real rates. Inflation expectations are quite fragile, however—as may be seen from recent upward movements in long-term interest rates in reaction to signs that the oil cartel may succeed in holding prices and to doubts about progress in reducing the budget deficit.

Policymakers at the Federal Reserve have a most difficult judgment to make with respect to inflation expectations. If they have been reduced sufficiently, the pressure can and should be taken off market interest rates, encouraging real rates to decline in the short term. For example, if inflation expectations have been reduced to what is consistent with at least an interim price increase objective, then real interest rates can be lower and the economy encouraged to grow enough to bring unemployment nearer to the natural rate. Whether real interest rates come down because basic inflation expectations (as would prevail at the natural rate of unemployment) have been reduced or because

the economy at the present time may be on the weak side, a drop in interest rates should have a beneficial side effect, relieving many of the debt and financial stability problems.

I hope I have said enough to suggest at least that there are many strands to the question of debt and financial stability and that they are by no means entirely independent of macro policies. The threats to our financial stability in recent years have stemmed in good part from previous macro policies and from the policy approaches needed to undo macro errors of the past, not to mention some partly misguided policy mixes in the present. In that process, financial instabilities arise. Some problems, but not all, will be resolved if inflationary expectations can be kept suppressed and lowered and if nominal and also real rates can be kept low or lowered.

In that context, I would stress again that fiscal restraint has a strong role to play in lowering interest rates, and I feel uneasy when people say we should have less fiscal restraint because the economy may look weak. I would argue that we probably need at least what the Gramm-Rudman law promised. That will permit a more stimulative monetary policy and lower nominal and real interest rates stemming from the direct effect of the smaller deficit on markets and the beneficial indirect impact on inflationary expectations.

I do not want to leave you with the idea that financial instabilities do not also arise independently of macro policies. They do, and from the perspective I would like to add my bit of support to comments by Henry Kaufman and Peter Cooke—Peter having the more realistic, and Henry having the more idealistic, view of what can be done in the area of international cooperation in regulatory and supervisory policies. Peter's view is undoubtedly right. I would hope, though, that a little more could be done—that efforts could be carried beyond banking issues, where some little progress has been made by the major countries meeting at the Bank for International Settlements, and extended to other financial institutions and markets as well.

In that respect, it is clear to me that central bankers ought to take the lead because it is their policies that are the most at risk from market instabilities and it is their discount windows that are needed to protect economies and markets from liquidity crises. At this point, it might be desirable to evaluate problems that may be associated with central bank lending to relieve liquidity pressures, even though such lending works in a sense to resolve problems. Such an evaluation may

help in understanding why it is important for central bankers to become intimately involved in keeping a financial system generally stable.

When I was at the Federal Reserve, I spent some time trying to assess, as a contingency planning exercise, what would happen if there were huge demands on the discount window from failing or illiquid institutions. I had in mind Bagehot's view that it is the duty of a central bank in a liquidity crisis to lend and lend and lend again. Starting from that premise, it was not difficult to conceive that borrowing at Federal Reserve banks would reach on the order of \$30 billion. In recent years, for instance, Continental Illinois Bank alone borrowed some \$5 to \$6 billion.

One of the first questions raised by so large an expansion in central bank lending and bank reserves is its inflationary potential. Clearly, such expansion has very little, if any, such potential in the short run, given the circumstances of the bank reserve growth. And over time, you could entirely offset the expansionary effect on bank reserves and money through open market sales of securities. But in the short run, it would not seem advisable to offset all the expansionary effect. Because the borrowing reflects liquidity problems, it would appear desirable to let the money supply rise more than otherwise, at least temporarily, to accommodate to greater demands for liquidity in the economy.

Reaching such a conclusion did not seem very hard. The hard part was assessing the likely reactions of market participants. My judgment was, and is, that their responses would be adverse to the economy. Others here have mentioned that, under the circumstances, those who withdraw funds from institutions in difficulty would put their money somewhere else. So no funds are "lost." True enough, but that overlooks price effects in the process. In particular, money can easily go abroad, not only foreign funds invested here but also U.S. funds. That is not lost money, but it would have significant effects on the dollar exchange rate, which would drop sharply under those circumstances. We have wanted, at times, to see a drop in the dollar, but not one that occurs under near-panic circumstances and reflects loss of confidence in the currency. That will not benefit domestic production, because the producers themselves will also, in my opinion, be participating in the loss of confidence.

When the market perceives borrowing at the Fed is running around \$30 billion—realizing it is normally \$2 to \$3 billion in periods of tight money—doubts about the viability of the whole financial system

are likely to become greater. That is very likely to have adverse effects on domestic spending. All of this is difficult to prove, and certainly the situation would be much better with a central bank able to lend than if there were no lender of last resort. Still, I suspect there would be a dropoff in consumer and business spending—in technical jargon, a downward shift in the IS curve, with, I suspect, the potential for a fairly sharp shift.

That is a very brief and cursory review of some of the broader aspects of this problem. I trust, these conjectures will remain hypothetical and will not be tested in practice. It is obviously an “iffy” area, but that only leads me to believe we would be a lot better off with a financial system that is not prone to large liquidity crises and pervasive instabilities that put the central bank under such pressures. That is one reason—apart from matters of investor safety, protection from fraud, adequate financial disclosure, etc.—for some little (not too much) supervision and regulation, with strong central bank inputs and, in today’s world, considerable international cooperation.



## Overview

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*John G. Heimann*

Discipline plays an important but sometimes ambiguous role in the financial world. It is helpful to realize that there are two sorts of discipline in finance, that of the government and the marketplace. One of our speakers highlighted the dilemma of discipline by asking: "What would you have done about the Lockheed, Chrysler, Financial Corporation of America, and Continental Illinois crises?"

It is useful to differentiate between the types of discipline because phrases like government discipline can be somewhat misleading in the real financial world, even though these phrases may have specific meanings, both conceptually and philosophically.

First, there is a difference between the role played by the business community—broadly defined as commerce—and the special role played by the banking community. Some differentiation has to be made between the two when one talks about discipline in a final sense.

Second, there is the question of depositor and investor discipline. While, theoretically, "depositor discipline" sounds reassuring, the way it works in practice in a financial world of some 14,500-plus commercial banks is more problematic. Public information about the top 100 to 150 banks and bank holding companies is fairly broad and deep, but for the most part, the information available to depositors at smaller institutions is modest at best. Enforcing depositor discipline by making the depositor lose more than an insured amount is not a practical solution.

Investor discipline is a practical solution for institutions about which there is sufficient information for investors to make critical judgments. Many publicly rated banks are followed by bank analysts and the like. But the great fault of the smaller individual banking institutions in

the United States is that investors and depositors do not have access to that sort of detailed information. In a smaller community, the investors with access to that information tend to be members of a close-knit group. Hence, the concept of investor discipline does not work with the same facility as it would in larger institutions.

The question of discipline forces us to consider the purpose of deposit insurance. Is its purpose to protect the bank? To protect the depositor? To protect the financial system? Or some combination of the three? While none of these clarifications has taken place, you have in the meantime a regulatory apparatus that, in my opinion, is doing the best job possible. I think Continental Illinois represents an evolutionary step from First Pennsylvania, in that our regulators came up with what might be called the supervisory "neutron bomb": the shareholders are destroyed, the managements are destroyed, the directors are destroyed, but the institutions are able to continue functioning, thereby preventing systemic collapse. This is an area needing much more attention.

Governments have a number of indirect means of encouraging discipline. Governments exercise control, if you will, through tax laws, accounting standards, and a variety of other laws that affect the way banks handle, say, the lesser developed country debt problem. As Peter Cooke has pointed out, there are great differences between nations' underlying rules that make direct governmental regulation difficult to achieve. So there are forms of direct discipline from the supervisory framework. Government may exercise discipline indirectly through tax laws.

The question of discipline leads us straight to the altered nature of the entire financial services industry. The forces that have been changing the international financial system—of which the American system is an integral part—are fundamental. Among them are the institutionalization of savings, technology, deregulation, and of course, the history of inflation and volatility in markets, interest rates, and exchange rates. All these forces, none of which has alone been preeminent, have together shaped a new international financial system, of which we are part and through which discipline will be exercised.

Let me briefly expand on just a few of those forces. The institutionalization of savings occurs as the management of savings shifts from the individual to the institution. The increasing choice of sophisticated managers of savings to deal through counterparties rather than through agencies is forcing change on the traditional financial

intermediary system. Issuers look to the intermediaries to bid, rather than to act as agents in a traditional syndicate form. This change has driven the intermediary system into the search for increased amounts of capital to service the needs of the issuers and takers of securities. And with the advent of the Big Bang, that search has caused consolidation in the financial services industry, both here and in London, for example.

The effects of technology have been phenomenally important in the financial system of the world. Mortgage-backed securities, for example, could not exist without data processing. (It is worth noting that trading in mortgage-backed securities in 1985 was greater than all of the trading on all of the stock exchanges of the world.) By improving communications, technology has created enormous velocity and volatility in the market.

Let me cite just one example of our transformed world. Currency swaps makes it possible to borrow in any currency and then switch, or swap, to the currency one needs. The issuer's only concern is terms, meaning the lowest possible net cost. Discrete markets, then, begin to disappear. You create a global debt market different from the domestic debt market. Access to the global debt market is for the largest, most creditworthy issuers.

This transformation creates, in turn, a whole host of potential problems in terms of how markets operate during periods of stress or crisis—periods with which, thankfully, we have had little experience. In this process, you have the blurring of distinctions between financial institutions that Henry Kaufman and others have talked about in the last few days. We do not understand what those distinctions or their blurring will mean in times of crisis, or economic downturn. Most of these trends have developed in the last few years, a time of relatively good financial and economic conditions worldwide.

One result of all this change has been volatility in markets. The question Kaufman and others raise is, "What is happening to the guardian of credit, and what are the end results of securitization?" What happens to the quality of banking companies as they continue to reduce or sell, through securitization, their better assets—that is, sell what they can sell to earn a profit?

Not many banking organizations will securitize those assets which cause them to take a loss. Increased leverage results in the system because of the unprecedented availability of ways to involve different parties. There are those who argue, and I am inclined to agree with

them, that the interest rate swap is really a form of credit bootstrapping. In the long run, all this leads to a weakening of the commercial banking system. The flow of prime-quality business out of commercial banks into the capital markets drives commercial banks to two courses of action. One way is to expand loans to smaller, lower quality companies. The other—the preferred route most major banks have taken—is to recapture the business they have lost by becoming capital markets participants themselves. The commercial paper market is an example of that course.

The end result is that discipline for the debt that has been created is probably going to be exercised in new, not totally familiar ways. What I am putting forth is the concept that we are in the process of seeing a revolution in the financial services industry.

For the most part, the supervisory authorities have neither the power nor the responsibility to view the situation as a whole. We need, both internationally and certainly in the United States, a redefinition of the financial system in terms of how it is to function, and who is to oversee what. That also means a redefinition of the supervisory structure in the United States, an idea I have supported since 1975, when I was superintendent of banks for the state of New York.

What is the best way of handling the mountain of debt, and what happens when the due day comes? What would be the best structure for the financial institutions that own or service the debt? Answering these questions should, I think, be considered foremost among the challenges facing banking in the years ahead.

## Overview

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*L. William Seidman*

Indebtedness in the United States has increased dramatically—reaching a level that some consider alarming. Debt relative to income has expanded in virtually all sectors of the economy. For the four years ending in December 1985, growth in U.S. government debt outpaced gross national product (GNP) nearly 12 percent; household debt increased six percent faster than GNP, and business debt grew about three percent faster. Combined federal and private debt now amount to 173 percent of GNP.

The significance of increased debt is a matter of some controversy, as shown by comparing the papers prepared by Professors Friedman and Summers. We can all agree, though, that higher debt burdens increase the vulnerability of borrowers to adverse financial events. The current problems in our farm and energy sectors highlight the dangers of “too much” leverage.

The great danger is that heavy debt levels will turn a mild or normal business downturn into a severe recession. In this scenario, an economic slowdown causes some highly leveraged firms to default on their obligations. Accompanying layoffs cause defaults among some leveraged households. The cycle of defaults and production cutbacks could feed on itself and make recovery much more difficult than it would have been with lower debt levels.

Professor Friedman views the accelerated borrowing as a sharp break with prior U.S. economic behavior. Professor Summers argues that the past stability of the debt ratio was a coincidence—that increases in private sector debt were offset by an independent reduction in U.S. government debt, from the high levels of World War II.

Whether one views the simultaneous growth of federal and private

debt as an alarming new development or merely a coincidence, the question remains: how dangerous are the increased debt levels to the financial system and the economy as a whole? Perhaps I can best contribute to the discussion by focusing my remarks on the apparent vulnerability of the banking system in this higher debt environment. I will conclude with some general views regarding appropriate public policy actions.

### **Bank performance**

Reasonable men may disagree over the implications to the financial sector presented by the rising levels of private and public debt. The scenario of snowballing defaults would not seem to bode well for banks — the “debt owners.” Could the industry withstand such pressures? How strong is the industry?

Here, the news is mixed. Bank equity capital levels have increased in recent years—reducing the industry’s own reliance on, and exposure to, leverage. I think banks are becoming more innovative, better managed, and looking for new ways to increase efficiency, expand business, as well as diversify risks. However, no one can dispute that some measures of the industry’s performance are far from reassuring.

Banks have been failing at rates not seen since the advent of federal deposit insurance. Over the 40-year period from 1941 to 1980, only 262 banks failed. Since 1980, over 400 banks have failed. Last year’s record of 120 bank failures will soon be eclipsed as 97 banks have already failed this year, and we expect another 40 to 60 more. Next year, will likely be as bad or worse.

The size of the failing banks is also increasing dramatically. For the 30-year period up through 1970, assets held by failed banks totaled \$560 million. Since then, assets held by such banks, excluding Continental Illinois, have exceeded \$40 billion, an average of \$3 billion per year.

While failure statistics reflect past problems in the banking industry, other measures provide a clearer view of what lies ahead. A leading indicator of bank failures is the number of problem banks. Currently, the Federal Deposit Insurance Corporation (FDIC) has classified 1,411 banks as “problems.” This compares with 1,140 at the end of 1985 and 848 the year before that. In fact, the number of problems has about quadrupled since 1981.

Other indicators portray a similar trend. Bank earnings relative to average assets have declined noticeably in recent years. This has

occurred despite an increase in capital levels, which should have a positive effect on bank return on assets. Also, as Mr. Kaufman points out, the number of large bank holding companies whose debt is rated AAA has decreased from 14 ten years ago to only one today.

Bank earnings are also much more volatile. Once, almost all banks operated profitably—save for new banks just starting out. Today, many banks, including many established banks, are in the red. In 1980, less than four percent of all insured commercial banks finished with negative earnings. That percentage has steadily increased—rising to 11 percent in 1983, 14 percent in 1984, and over 16 percent in 1985.

To a considerable extent, this variance in bank performance can be attributed to geographical differences. For example, only 10 percent of the banks east of the Mississippi River lost money last year, while 22 percent of those to the west were unprofitable. Similarly, 86 percent of the bank failures in 1985 and 1986 have been in states west of the Mississippi River.

There are also significant differences between the performance of small versus large banks. Over 25 percent of commercial banks with under \$25 million in total assets lost money last year. The return on average assets for banks in that size category was less than 40 percent of what it was for all other commercial banks. Until a few years ago, smaller banks consistently outperformed their large competitors.

The banking industry also faces significant asset problems. The levels of nonperforming assets are high and rising (Table 1). This is despite rising net chargeoff rates, which have more than doubled over the past five years, and are ten times what they were 30 to 40 years ago (Table 2). Moreover, nonperforming loans do not include a lot of international loans, which, as Professor Dornbusch and Mr. de Vries point out, are still a matter of considerable concern. The prospects for major declines in nonperforming and chargeoff levels do not appear very bright—at least not in the short run.

Historically, there has been an inverse relationship between the performance of the economy, as measured by real GNP, and bank loan losses. In the post-World War II period prior to 1982, the level of chargeoffs at commercial banks lagged changes in real GNP by about three quarters. Well, three quarters have long passed since we came out of the last recession—and loan chargeoff rates are still going up. I would say one more historical relationship has proven itself unreliable during this unique economic period.

Looking at chargeoffs by loan type indicates that bank asset prob-

**TABLE 1**  
**Nonperforming Assets**  
**and Net Loan Losses (\$ Billions)**

	<b>Nonperforming Assets*</b>	<b>Net Loan Losses</b>
	<b>\$</b>	<b>\$</b>
1986†	56.6	7.0
1985	51.0	13.1
1984	49.5	10.7
1983	46.0	8.4
1982	45.3	6.6
1981	NA	3.8

† First half

\* Includes loans 90 days or more past due or on nonaccrual status and foreclosed real estate.

**TABLE 2**  
**Historical Net Loan Charge-Off Ratios**

<u>Year</u>	<u>Ratio</u>
1934	3.421
1935	1.610
1936	0.875
1937	0.309
1938	0.585
1939	0.419
1940-44	0.072
1945-49	0.058
1950-54	0.063
1955-59	0.068
1960-64	0.146
1965-69	0.171
1970-74	0.304
1975-79	0.473
1980-84	0.520
1985	0.804
1986*	0.826

\*First Half

lems are not confined to just one or two categories. Net chargeoff rates for real estate loans have more than doubled since yearend 1982. The same is true for commercial and industrial loans. In 1985 alone, net chargeoff rates for farm and consumer loans jumped by over 50 percent from the year before.

### **Reasons for declines in bank performance**

How can we explain this deterioration in bank performance—a deterioration that is particularly troubling since, in general, economic conditions have been favorable over the past several years? One obvious factor is that economic performance has not been favorable for all sectors of the economy. The agricultural and energy sectors have been exceptionally weak and are in the midst of a painful adjustment. These adjustments are not confined to the nonfinancial firms—the banks that serve these sectors are affected as well. The impact of these sectoral weaknesses on some of our nation's banks has been accentuated by the inadequate level of asset diversification. Banks, bounded by geographical or product constraints, were unable, and perhaps not anxious, to expand their borrower scope. One can only hope the painful adjustment experience of such banks will not be lost on those of us—banker, lawmaker, regulator—that determine the scope of future business options.

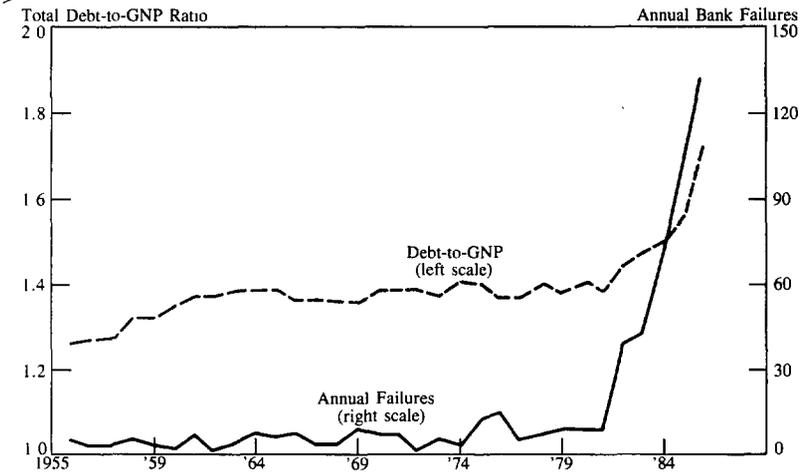
Another factor impacting current bank performance is the business environment that has quickly become much more competitive. The deregulation of interest rates, the entrance of new competitors, and the disappearance of some traditional banking markets have undoubtedly taken their toll on many banks. Pressure on interest margins has intensified and there is some evidence that quality standards have been relaxed in order to preserve spreads.

Finally, borrowers and lenders are adjusting to drastically lower inflation — deflation in some sectors. Debt repayment becomes much more onerous in moving from an inflationary to a noninflationary environment. The value of the dollars to be repaid, relative to the assets they bought, rises significantly. Buying now and paying later becomes much harder.

How does the increase in overall debt fit into the picture? Clearly, it makes matters worse. Mr. Kaufman considers the increased debt and simultaneous decline in corporate equity positions as glaring contributors to the erosion in credit quality. Clearly, economic weaknesses

are exacerbated when high levels of debt are present. A 1985 FDIC study indicated a relationship between the levels of corporate debt burden (measured by the ratio of after-tax nonfinancial corporate debt service burden to nonfinancial corporate cash flow) and the level of bank failures. Over a 15-year horizon beginning in 1970, increases in corporate debt burden led increases in bank failures by roughly five quarters and accounted for about 62 percent of the variation in bank failures. While not completely explanatory, the relationship is statistically significant—and appears to be continuing (Chart 1).

**CHART 1**  
**Insured Commercial Bank Failures**  
**and the Ratio of Total Debt to GNP, 1955-1986**



To summarize, recent performance and conditions in the banking industry can be explained to some degree by more competition, sectoral weaknesses, and disinflation. But increased levels of debt in the nonfinancial sector also contribute to increasing numbers of nonperforming loans and resulting instability in the banking system.

### Policy options

In terms of devising long-range regulatory and legislative actions to help meet current banking problems, there are no easy answers. As Professor Eisenbeis has pointed out, there are many outdated pieces

of bank legislation that need revision. In that regard, the liberalization of geographic restrictions on banks is a positive development. The gradual relaxation of product constraints also is desirable. Both will help banks achieve greater asset diversification.

There are also certain actions that can be taken to reduce the incentive that the federal deposit insurance system creates for banks to engage in excessive risk-taking. The implementation of a risk-related deposit insurance premium system is one such measure. However, the issues involved in reducing excessive bank risk-taking by moving toward greater levels of so-called "market discipline" are complicated and have significant implications for the stability of the banking system.

Certainly, discipline is necessary, but how much, on whom, and when are the relevant questions. A balance needs to be drawn. Too little discipline may cause instability, but the risks of too much discipline are far more threatening. I am a strong believer that where fraud or insider abuse is detected, punishment should be swift and severe. Similarly, those who take excessive risks with depositors' money should pay for their mistakes. However, I am equally convinced that we should not be insensitive to the problems of innocent victims.

As this relates to the stability of the banking system and the handling of bank failures, the FDIC is making, and will continue to make, every effort to arrange merger-type purchase and assumption transactions as opposed to liquidations through deposit payoffs. On such transactions, depositors are protected but stockholders and management—those closest to the bank's problems—pay a heavy price. The impact on others is reduced. Banking services are continued. The risk of panic and uncontrollable instability is lessened.

Regarding the handling of problem institutions, I believe it is incorrect to view the concept of forbearance as something that always and everywhere may lead to higher costs in the long run. Where problems are more the result of adverse economic conditions than mismanagement or insider abuse, there is no point in trying to "teach the industry a lesson." The need is to help find a way across the low point, with minimum damage to the system.

Thus, we at the FDIC favor "capital forbearance," where bank management appears capable and there is reasonable hope for a return to viability. This will prove to be more cost effective than liquidating banks in a fire-sale environment.

Has the level of debt compromised the FDIC's ability to make good on its announced intention to protect depositors whenever possible? So far, the answer is no. The fund is healthy (\$18 billion net worth), and it continues to grow. It has not joined the current trend to borrow its way to heaven. Even at current levels of bank failures, the fund should show a modest \$0.5 billion gain this year. But, there is a level of defaulting debt that would jeopardize that ability. One thing is certain, the current trend line in bank failures cannot be extended for many more years without trouble. The climb it evidences is too steep.

Perhaps it is reasonable to say the same thing about the trend line depicting debt to GNP. It cannot continue to go up at this rate for many more years — the climb is way too steep.

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